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**The stone sculpture of Costa Rica: The production of ideologies
of dominance in prehistoric rank societies**

Graham, Mark Miller, Ph.D.

University of California, Los Angeles, 1985

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The Stone Sculpture of Costa Rica:
The Production of Ideologies of Dominance
in Prehistoric Rank Societies

A dissertation submitted in partial satisfaction of the
requirements for the degree of Doctor of Philosophy
in Art History

by

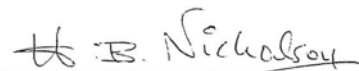
Mark Miller Graham

1985

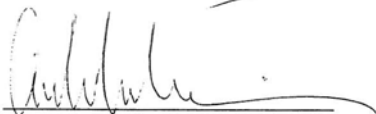
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Cecelia F. Klein



H.B. Nicholson



Arnold G. Rubin, Committee Chair

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1985

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PUBLICATIONS AND PRESENTATIONS

- Graham, M. M. (1985, February). Prehistory and politics in Costa Rica. Paper presented at the meeting of the College Art Association of America, Los Angeles, California.
- Graham, M. M. (1983, January). Traditions of Costa Rican stone sculpture: meaning and function in the early traditions. Paper presented at the Los Angeles County Museum of Art, Los Angeles, California.

- Graham, M. M. (1981). Traditions of Costa Rican stone sculpture. Between Continents/Between Seas: Precolumbian Art of Costa Rica, edited by Elizabeth P. Benson, pp. 113-134. Abrams, New York.
- Graham, M. M. (1980, December). An art historical framework for jade in Costa Rica: the problem of unprovenienced artifacts. Paper presented at the meeting of the American Anthropological Association, Washington, D.C.
- Graham, M. M. (1980, December). Trial reinterpretation of jade from Costa Rica. Paper presented at the Conference on Mesoamerican and Central American Jade: Technical Analyses and Cultural Implications, Dumbarton Oaks Center for Pre-Columbian Studies, Washington, D.C.
- Graham, M. M. (1979, April). Symbolic agriculture: utilitarian sources of elite art in Guanacaste Province, Costa Rica. Paper presented at the meeting of the Society for American Archaeology, Vancouver, Canada.
- Graham, M. M. (1979, April). A new look at Mesoamerican influence on Costa Rican art. Paper presented at the meeting of the Latin American Studies Association, Pittsburgh, Pennsylvania.

ABSTRACT OF THE DISSERTATION

The Stone Sculpture of Costa Rica:
The Production of Ideologies of Dominance
in Prehistoric Rank Societies

by

Mark Miller Graham

Doctor of Philosophy in Art History
University of California, Los Angeles, 1985
Professor Arnold G. Rubin, Committee Chair

This study reconstructs and explains the evolution of stone sculpture in Costa Rica from ca. A.D. 1-1550. The modern state of Costa Rica closely corresponds to the prehistoric core area of functional stone sculpture, which is marked by the emphasis on elaborately carved maize grinding stones or metates. The basic problem is to account for the retention of utilitarian forms in stone sculpture intended for mortuary and other ritual functions of elite men.

This required a new chronology incorporating recent archaeological data. The formal sources of the early

traditions of sculpture are then specified through comparison with other metate traditions, and ethnographic data are used to reconstruct the carving techniques. The most likely formal and technological sources are in Preclassic Mesoamerica, and Mesoamerican jade carving techniques were used in carving metates and stone maceheads. The iconographic analysis of Costa Rican jade provides a framework for the analysis of the contextually related stone sculpture. The two early traditions in northern Costa Rica are shown to have begun from a shared Mesoamericanized cultural base and later diverged in situ. These data in turn provide a basis for analyzing the early traditions in southern Costa Rica. The late traditions in most of Costa Rica are marked by a geocultural reorientation toward northern South America that is reflected in the wide distribution of Chibchan languages at the time of Conquest.

A structural-materialist theory of ideologies of dominance in rank societies is used to formulate a hypothesis of gender inequality as a code of power based on the sexual division of labor. Metates, as tools of women's domestic labor, were a symbol of subordination that elite men transformed into the symbol of their dominance.

1. INTRODUCTION

1. Archaeological and Art Historical Approaches to Costa Rica

In Prehispanic times the people of Costa Rica developed traditions of stone sculpture that are unique in what Sanders and Price (1968:49-51) define as Nuclear America. Only in Costa Rica was there such a predominance of artistic forms based on utilitarian objects: axes, celts, maceheads, metates (food grinding stones), seats and tables. These types of functional stone sculpture are derived from tools used in warfare, food production and food processing. The progressive technical and artistic elaboration of these tools created some of the most spectacular traditions of stone sculpture in Nuclear America. Features of these stone working and lapidary technologies were also applied to the production of independent figural and geometric stone sculpture, leading to types of full-round, three-dimensional sculpture which are rare in other areas of Nuclear America.

Notwithstanding the artistic and technical achievements of Costa Rican stone sculpture, Americanist archaeology and art history still seem reluctant to accept both Costa Rica and its art production as worthy of study. In order to explain art history's long-standing aversion to the art of Costa Rica and the rest of the Intermediate Area, it is necessary to review the history of archaeological research in Costa Rica.

In this century there have always been a few dedicated scholars concerned with the prehistory of Costa Rica: the names of Jorge Lines, Carlos Balser, Carlos Aguilar and Doris Stone are familiar to many. In the wider history of Americanist research, however, Costa Rica and its neighbors have become, by definition, marginal to Mesoamerica and the Central Andes, the so-called "high culture" areas of Nuclear America.

The definitions of Mesoamerica by Kirchhoff (1943) and of the Central Andes by Bennett (1948) as the high culture areas of Nuclear America represented watersheds in scholarly attitudes toward what has since become known as the Intermediate Area. Before Mesoamerica and the Central Andes had been thus elevated, pioneering excavations and museum studies by such scholars as Carl V. Hartman (1901, 1907), Samuel K. Lothrop (1926, 1937, 1942), John A. Mason (1945), Dorothy Popenoe (1934, 1936) and Doris Stone (1938, 1941, 1943) had brought southern

Central American archaeological research near the forefront of Americanist scholarship. After the 1940s, and except for the publication of already completed work, the nature of archaeological research in southern Central America changed dramatically. Until the late 1950s there was a hiatus in extensive foreign research in Costa Rica. When work did resume in the late 1950s, under the auspices of the Institute for Andean Research, an explicit aim was to investigate the Guanacaste-Nicoya region of northwestern Costa Rica precisely because it was thought to mark the southernmost boundary of Mesoamerica (M. Coe 1962). The alleged "marginality" of this area had by then become an operative fact, and the high culture model a dominant paradigm in American archaeology.

The wide acceptance of the high culture paradigm has had unfortunate consequences for archaeological research design in Costa Rica. Not only did it provide an important justification for an increased emphasis on Mesoamerican and Andean influences in Costa Rica, but it also led directly to a conceptual partition of the country into Mesoamerican and Andean spheres of influence. Local cultural adaptations and interactions were essentially ignored. Archaeological research of the 1960s clearly reflected the dominance of the high culture paradigm. Archaeologists who approached Costa Rica from

this perspective were largely concerned with the discovery of cross-datable foreign influences, which led to continued emphasis on ceramic sequences. Historical explanations of foreign influences, on the other hand, were rather superficial, sometimes invoking vague migration legends or mysterious sea journeys to account for suspected foreign traits in culture and art.

Such, in broad outline, was the nature of archaeological research in Costa Rica until the 1970s. That decade saw the publication of two surveys of southern Central American archaeology, by Claude Baudez (1970) and Doris Stone (1972), and two surveys of Costa Rican archaeology, by Luís Ferrero (1975 [revised 1977]) and again by Stone (1977). The first three volumes, by Baudez, Stone (1972) and Ferrero, relied heavily on the high culture spheres of influence as organizing principles, based on Kirchhoff's (1943) definition of the southern boundary of Mesoamerica as separating the Guanacaste-Nicoya region from the rest of Costa Rica. Olga Linares (1971, 1973), in her reviews of Baudez and the first volume of Stone, strongly criticized such cultural partitioning on the grounds that it tended to obscure local adaptations to ecological conditions. Perhaps as a consequence, in her second volume, Stone retreated somewhat from her earlier emphasis on foreign influences.

While these surveys of southern Central American and Costa Rican prehistory were more or less committed to the high culture model as an explanatory tool, field archaeologists during the 1970s appear to have grown increasingly dissatisfied with that paradigm. A new generation of archaeologists working in Costa Rica, particularly the North Americans Frederick Lange and Michael Snarskis and their student assistants (both North American and Costa Rican), were leaning closer to research designs and theories derived from the "new" or processual archaeology. (In neighboring Panama, Richard Cooke and Olga Linares had adopted similar strategies.) Perhaps the most important consequence of this theoretical reorientation has been progress in our understanding of local and regional interaction, which from the beginning was one of the keystones of processual archaeology. Significantly, virtually all of this recent and ongoing archaeological research in Costa Rica was either approved or directed by the National Museum, a clear reflection of widespread national efforts to take control of the recovery of their national cultural patrimony.

The current decade promises to continue this rethinking process. In 1980, the School of American Research in Santa Fe, New Mexico, convened an Advanced Seminar on the archaeology of southern Central America,

under the careful organization of Frederick Lange and Doris Stone, with Gordon Willey as discussion chair (Lange and Stone 1984). Its purpose was to assess and synthesize the great amount of new data from the previous decade's work, and to define some of the major research problems for the future. One significant result is that the prehistory of the southern frontier regions of Mesoamerica is now seen to be far more complicated than earlier scholars such as Kirchhoff could have foreseen.

Although the work of many archaeologists is still organized according to the high culture paradigm, one can argue that in its present formulation the paradigm has probably outlived its usefulness as an explanatory tool. Because this paradigm depends on a rigid definition of culture areas and spatial boundaries, it does not provide an adequate framework for the goals of processual archaeology (see, e.g., Friedel 1979).

The high culture paradigm has been a handicap to art historians as well. Precolumbian art history, from the period of its academic birth in the 1940s and 1950s, has remained almost totally committed to studying the art of the high cultures. That this commitment has remained implicit and thus unjustified has in no way lessened its authority over the actual practice of Precolumbian art history. Today, there is still little art historical literature on Costa Rica and its neighbors in the

Intermediate Area, and the latest revision of the standard survey of Precolumbian art history still devotes less than twenty pages to this entire area (Kubler 1984). Now that archaeology in Costa Rica has begun to challenge the high culture paradigm, Precolumbian art history will be able to exploit a new and qualitatively superior data base. In Costa Rica and elsewhere, Precolumbian art historians are being equipped to question some of their traditional approaches.

2. Theoretical Links Between Precolumbian Archaeology and Art History

The discipline of art history traditionally has taken a narrow view of art, limiting itself to empirical analyses of selected aspects of art production, principally form (style), iconography, the appraisal of artistic qualities (connoisseurship), and the biography or psychology of the art producer. This tradition of art historical scholarship is rooted in the study of Western art, particularly the classical tradition from antiquity to the Renaissance. It has also become the main methodological foundation for the art historical study of all non-Western art, including that of Precolumbian America. Within Precolumbian art history, the defense of these historically contingent traditional methods as a

theory of art history seems inevitably to place art history in an antagonistic relation to American archaeology and other social sciences. Ironically, today the art historical mainstream (as exemplified, e.g., by the topics of sessions at recent annual meetings of the College Art Association) seems increasingly to be moving in the direction of social art history, a still ill-defined tendency to seek explanation and inspiration outside the traditional methods of art history, in the broad relationships between art and society.

George Kubler, one of the pioneers of Precolumbian art history in the United States, has set the tone for many arguments between art historians and social scientists. In his argument, the problem arises because anthropologists do not consider art as something outside of culture. Kubler (1984) contends that "aesthetic activity" is ultimately not bound by culture but lies in part outside of it. His argument for the superiority of an idealist conception of art over materialist approaches flows from an intentional disregard of materialist theory and practice. The materialist tradition in art history is presumed not to exist, and archaeologists thus receive a distorted view of art history when they accept Kubler's contention that art historical thought and work are inherently opposed to the aims of social science.

Materialist historians of Western art, from Frederick

Antal to Nicos Hadjinicolaou (1978) and Michael Baxandall (1980) have tried to conceive of art history as if it were a social science, in which interpretation is grounded in the social and historical conditions which determine how art is made, used and exchanged. Apparently, an entrenched bias against materialist art history has allowed some scholars to argue that Precolumbian archaeology and art history must be antagonistic in either theory or practice. This antagonism seems almost entirely a phenomenon of Precolumbian art history, which, as Cecelia F. Klein (1980) has documented, was born as a conservative reaction to archaeology's rediscovery of cultural materialism.

One of the most incisive critiques of traditional art history in this country has come from Kurt Forster, who has called for more self-consciousness about the premises and theories which, whether admitted or not, motivate and justify the practice of art history in the West. For Forster (1972:464), a "critical history of art" is above all concerned with art as a form of ideology:

The only means of gaining an adequate grasp of old artifacts lies in the dual critique of the ideology which sustained their production and use, and of the current cultural interests that have turned works of

art into a highly privileged class of consumer and didactic goods.

Precolumbian art history may find some value in these ideas. The overwhelming predominance of idealist approaches in Precolumbian art history, whether in style or iconography, is the result of a generation of scholars more committed to description than to any interpretation of art in materialist terms. Similarly, few Precolumbian art historians have grasped the connection between formalist and acontextual scholarship, and the international traffic in looted and smuggled Precolumbian antiquities that fills museums and private collections with treasures that need to be studied without reference to their archaeological and social contexts. On both points of Forster's critique of ideology, Precolumbian art history stands to benefit from their critical application.

The goals of a critical, materialist Precolumbian art history can further be argued to be complementary to those of the new archaeology. Gordon Willey and Jeremy Sabloff (1980:185-186) have defined the approaches of the new archaeology in this way:

The first of these approaches was a predominantly evolutionary point of view...The second approach is

that derived from general systems theory--in effect, a systemic view of culture and society. The third approach most characteristic of the new archaeology is its application of deductive reasoning.

...The evolutionary position of most new archaeologists--although not always overtly formulated--assumes the technical-economic realm of culture to be the primarily determinative one in change, with the social and ideational realms changing in secondary relation to it.

The core of this new archaeological thought attempts to synthesize diachronic (historical) and synchronic (processual) approaches to culture, proceeding from an evolutionary model that provides the natural starting point for a materialist history of art. "Traditional" art history has explored art almost entirely in the ideational realm, in practice defining art as an epiphenomenon, with occasional and grudgingly admitted links to the material bases of society; hence, the persistent attempts to "interpret" art in terms of religion, which in materialist terms amounts to explaining one ideological expression with another. Although not always overtly stated, materialist art history views art as occupying a unique place in the structure of society: because art is frequently the most

enduring material expression of the ideational realm, and is produced within the technical-economic realm, it is a significant bridge and mediator between the technical-economic and the ideational realms. Far from being epiphenomenal, then, art is a direct link between the material base of society and its ideological expressions (status, religion, ritual, etc.). From a materialist point of view, traditional idealist art history can never be more than a partial art history.

This formulation of the systemic position of art in culture and society, however schematic, reveals three dynamic social sectors that call for an expanded domain of art history: art production, art exchange and art use. By art production is meant the social conditions under which art is made, including the available materials and techniques, and the historically determined formal (stylistic) and iconographic traditions that impinge upon the process of production. Art exchange includes commercial and ritual transactions involving art, and in the widest sense comprises the appropriation of art by non-producers of art. Art use naturally refers to the social contexts of art, embracing not only function, but also the social character of the individuals, groups and classes who use art, and at whom that use is directed.

This outline for a materialist art history argues

that the understanding of art can best proceed from an understanding of the place of art in society. From this point of view, it follows that the locus of meaning in a work of art is less in the object itself than in the relation between the object and its social context. As practiced here, a materialist art history would attempt to reproduce the original links between art as material production, and art as ideational/ideological production. The inherently complex nature of these links, acting back and forth between the organizations of society and the structures of culture, precludes unitary, dogmatic arguments, rejecting both vulgar reductionism (e.g., protein deficiency as an explanation of Aztec human sacrifice), and as well the epiphenomenal reductionism that grinds art into an unreflective by-product of "real" social and historical concerns.

3. A Materialist Approach to the Stone Sculpture of Costa Rica

Stone sculpture that is predominantly functional in origin and use is a "macrotradition" that distinguishes the art of the southern Central American core area (southern Nicaragua, Costa Rica and western Panama) from that of the surrounding borderlands and from that of Mesoamerica and the Central Andes. For a materialist

approach to this art, the natural starting point is an investigation of the local lithic technologies from which the various traditions of functional stone sculpture emerged. With that as a basis, we can then proceed to investigate the development, function and meaning of Costa Rican stone sculpture within its local and regional contexts. This, in turn, will be the basis for the second stage of a materialist approach, which is to situate these traditions of stone sculpture within the larger history of Precolumbian art.

This approach calls for a new attitude toward the "canon" of traditional art historical techniques. In this investigation, the primary data are not art historical as traditionally defined, but archaeological; emphasis is on archaeological context and lithic technology, as well as prehistoric social organization. These primary data provide the reconstructed context within which art historical analysis becomes meaningful. In this way, the traditional art historical techniques are relegated to their proper status as partial means toward the end of a social and processual understanding of art. Of vital importance here is the attempt to develop a materialist interpretation, probing the relationship between visual imagery and the material base of society, while other ideological expressions such as religion are seen as structurally related or convergent

expressions rather than ultimate explanations.

II. THE CHRONOLOGY OF STONE SCULPTURE IN COSTA RICA

1. Lithic Technology and Stone Sculpture

Archaeologists divide lithic production into two categories. Chipped and flaked lithics, typically using igneous rocks, are made with percussion techniques and represent an earlier and predominantly utilitarian technology for the production of piercing and cutting tools such as projectile points, blades, choppers, scrapers and drills. Ground and polished lithics, typically made from igneous, metamorphic and sedimentary rocks, are finished with abrasive techniques. This latter technology is conventionally treated as the production mode of stone sculpture.

In Nuclear America, ground stone technology began with tools and implements associated with plant exploitation: axes, mauls, mortars, pestles, manos and metates. The antiquity of this technology is considerable, going back at least to the Early Archaic period El Riego phase (ca. 7000 B.C.) in the Tehuacán Valley of Mexico (MacNeish et al. 1967). In an evolutionary sense, the production of simple ground stone

tools was the primary technological base for the emergence of figural sculpture in the Early Preclassic periods in Mesoamerica and the Central Andes. In those areas, from ca. 1200 B.C. on, figural sculpture traditions emerged and began to develop independently of the instrumental ground stone traditions which were their technological base. One measure of the uniqueness of Costa Rican stone sculpture was the continued close relationship between ground stone tools and figural sculpture. In Costa Rica, the instrumental and figural traditions were never fully separated. This resulted in a distinctive hybrid tradition of figured (anthropomorphic and zoomorphic) versions of tools, or what Haberland (1973) has called "functional stone sculpture."

Since functional stone sculpture remained the core lithic tradition in Costa Rica, this chronological summary will focus on the development of that tradition. The periodization used here is that established for southern Central America in 1980 by a School of American Research Advanced Seminar (Lange and Stone 1984; Snarskis 1981). The new periods are:

Period VI	(A.D. 1000-1550)
Period V	(A.D. 500-1000)
Period IV	(1000 B.C.-A.D. 500)

Period III	(4000-1000 B.C.)
Period II	(8000-4000 B.C.)
Period I	(?-8000 B.C.)

For our needs here, Period III and Period IV must be subdivided. Late Period III, the first really to concern us, will be the span from 2000 B.C. to 1000 B.C., broadly coeval with the Early Preclassic period in Mesoamerica. The crucial Period IV will be divided into early, middle and late units of 500 years each. Thus Early Period IV, from 1000 B.C. to 500 B.C., can be broadly equated with the Mesoamerican Middle Preclassic period; Middle Period IV (500 B.C.-A.D. 1) with the Late Preclassic and Late Period IV (A.D. 1-500) with the Protoclassic and Early Classic.

There are three accepted archaeological regions of Costa Rica: Guanacaste-Nicoya or northwestern Costa Rica; the Central Highlands-Atlantic Watershed region; and the southern Pacific or Diquís region (see maps, Figures 1-4). In Costa Rica, archaeological synthesis has traditionally stopped at the regional level, reflecting a focus on ceramic changes that may or may not be relevant to the development of stone sculpture. Accordingly, this chapter is organized according to periods rather than regions. There are two advantages to this approach: synchronic relationships between regions should emerge

more clearly, and the empirical validity of the regions themselves, previously defined largely on the basis of ceramics, can be tested with regard to stone sculpture.

The primary purpose of this chronological work is the identification of traditions of stone sculpture and tentative descriptions of their local origin and development. This concept of a tradition is adapted from American archaeology, where, as defined by Willey and Phillips (1958:37), "an archaeological tradition is a (primarily) temporal continuity represented by persistent configurations in single technologies or other systems or related forms." From an art historical standpoint, this concept provides a useful way to organize the seemingly chaotic variety of stone sculpture in Costa Rica. In what follows, then, these traditions are defined and described. The Appendix contains a detailed explanation of this chronology.

2. Late Period III (2000-1000 B.C.)

The Archaic stage in Middle American archaeology has been conveniently defined by Barbara Stark (1981) as a period that begins with incipient sedentism and plant cultivation, and ends with fully sedentary agricultural communities with ceramic industries. In Mesoamerica, the Archaic period in the Tehuacán Valley spans ca. 7000-2500

B.C. Whatever the actual time period of an areal Archaic stage, it represents the evolutionary bridge between Paleo-Indian hunter-gatherers, and the fully sedentary agricultural communities that became rank societies in the Preclassic or Formative period. In Mesoamerica and the Central Andes, the first rank societies began to appear after 2000 B.C.

One measure of the evolutionary "lag" in Costa Rica is that archaeologists there are still searching for evidence of an Archaic stage that must have occupied the gap between Paleo-Indian hunter-gatherers and village farmers, the latter not evident until after 1000 B.C. The data are better in western Panama, where the Tropical Forest Archaic period is represented by the Talamanca (4800-2300 B.C) and Boquete (2300-300 B.C.) phases. The predominantly chipped stone tools of the Talamanca phase are gradually supplemented in the Boquete phase by much more costly (in terms of labor) ground stone tools such as axes and celts, reflecting stepped-up forest clearing for planting, probably of root- and tree-crops (Linares 1980b:237-238; Ranere 1980b:119-121). Lange (1984:169, Figure 7.3) has reported sites with possibly Archaic lithics and no ceramics near Bahía Salinas on the border between Nicaragua and Costa Rica, indicating that the lithics may be similar to those of the Talamanca phase in western Panama. Still, the continuing inability to

locate definitely Archaic remains in Costa Rica is puzzling, especially given the increased and improved research in recent years.

3. Early Period IV (1000-500 B.C.)

For this period there is finally evidence of sedentary agricultural societies. In Guanacaste-Nicoya, there are no firmly associated lithics, but ceramics of the Loma B phase at Bahía Culebra probably reflect sedentary farming groups. The data are clearer in the Atlantic Watershed. There, Snarskis (1976, 1978, 1981, 1984) has defined two coeval archaeological complexes, La Montaña and Chaparrón, which reflect sedentary agricultural societies. The La Montaña complex is thought to have a "southern" cast, and to have been based on root- and tree-cropping. Ceramic griddles may have been used to cook manioc cakes. The Chaparrón complex, on the other hand, is thought to have ceramic affinities with southern Mesoamerican Early and Middle Preclassic traditions, but still associated with root- and tree-crop subsistence. Neither La Montaña nor Chapparón so far give any hints of special-purpose ground stone production. No foreign objects have been found in contexts datable to this period.

It is somewhat ironic, then, that the oldest known

foreign artifact and probably the oldest preserved "art" object in Costa Rica is an Olmec-style hollow ceramic "baby" of the type diagnostic of the San Lorenzo Olmec, dating ca. 1200-900 B.C. (Ferrero 1977:Lámina XIIa). Reportedly found by looters near Sardinal in Guanacaste-Nicoya, this object could theoretically indicate an actual Olmec presence in Costa Rica at that time, which precedes the development of jade carving in the La Venta Olmec horizon. Robert Sharer (1984:71-72) has recently suggested that the Olmec actually introduced jade exchange in Costa Rica at the beginning of this period. However, since all Olmec-style objects known from Costa Rica are portable and were valued exchange items in Mesoamerica, there is no need for real Olmecs ever to have been in Costa Rica. Until we have firmer evidence than portable objects, nearly all of them found by looters, a more skeptical attitude about Olmec presence in Costa Rica seems preferable.

4. Middle Period IV (500 B.C.-A.D. 1)

This period, too, is somewhat puzzling because of gaps in the archaeological record. The La Montaña and Chaparrón complexes of the Atlantic Watershed apparently ended after 500 B.C. Near the end of this period, the Atlantic Watershed El Bosque complex seems to appear

quite abruptly, with more sites and with manos and metates that indicate the practice of maize cultivation. In Guanacaste-Nicoya, local phases of the Zoned Bichrome ceramic tradition began in this period, and although diagnostic utilitarian lithics are rare, the high quality of the ceramics probably reflects sedentary agricultural societies. In the Central Highlands and the Diquís region, utilitarian lithics thought to be associated with maize cultivation also appear during this period. Haberland (1984), Linares (1980b) and Snarskis (1984) all agree that this period witnessed a rather rapid shift from horticulture to seedculture, evidenced in the great increase in the number of sites and the presumed rise in population, and the wide distribution of forest-clearing tools and grinding stones. Only in Guanacaste-Nicoya is there any reason to doubt the existence of seedculture since, as Lange (1984:173) stresses, direct artifactual evidence of subsistence practices continues to be too rare to allow firm conclusions.

Still, the patterns are clear. Middle Period IV marks the local beginnings of the evolutionary processes that will lead to rank societies, labor specialization and high-quality art production.

5. Late Period IV (A.D. 1-500)

In the first part of this period, the emergent rank societies of Guanacaste-Nicoya and the Central Highlands-Atlantic Watershed created mortuary complexes for the elite that were based on cult versions of grinding stones, clubs and digging sticks, and axes. In the latter part of this period and the early part of the following period, these elite cult objects reached their greatest technical elaboration. In southeastern Costa Rica and western Panama, the pace may have been a bit slower, with the production of stone sculpture at Barriles not beginning until the second half of Late Period IV.

In Guanacaste-Nicoya and the Central Highlands-Atlantic Watershed, the early tradition cult complexes consisted of decorated tripod metates, perforated stone maceheads and axes of jade or common greenstone (Figures 5, 12; BC Numbers 16, 23, 46, 49). At Barriles, a small but important group of stone sculptures is limited to decorated tetrapod metates and figural sculpture on shaft bases (Figures 13-17). In the Diquís highlands, isolated remains of Barriles style have been reported. Near the end of this period, the stone sculpture and lapidary work of Guanacaste-Nicoya and the Central Highlands-Atlantic Watershed began to diverge from their

common base, with imagery of aggression becoming increasingly important in the latter region (e.g., BC Numbers 139, 146).

6. Period V (A.D. 500-1000)

In all regions, this is the period of greatest change, witnessing the end of the early traditions of stone sculpture, and the eventual adoption of social patterns that continued until Contact. In Guanacaste-Nicoya, the most technically complex cult metates were made in the first half of this period, probably in the final two centuries of the early tradition (BC Numbers 72, 73, 75-77). By ca. A.D. 800, the early tradition had ended, bringing with it a nearly complete end of functional stone sculpture, save perhaps the hourglass-shaped seats (BC/BS Numbers 99, 100).

In the Atlantic Watershed, the first half of this period also marked the climax and end of the early tradition. The great flying panel metates were the most important cult objects, their imagery selectively quoted in maceheads and jade ornaments. Near the end of this period, small saurian-masked stone figures appeared, heralding the great development of independent figural sculpture in Period VI (BC Numbers 196, 197).

In southeastern Costa Rica and western Panama, the

changes were no less significant. The chiefly center of Barriles in the Chiriquí highlands came to a traumatic end in the first half of this period, with the site overrun and the ruler images symbolically mutilated. Probably before the end of Barriles hegemony in the highlands, a stone sculpture complex of foreign inspiration began to appear in the Diquís lowlands. This Palmar subtradition has its closest affinities with the San Agustín tradition of Colombia, and may represent the initial penetration of Chibchan-speakers into Costa Rica, bringing with them expertise in goldworking (Figures 18, 19). By perhaps A.D. 800, the Diquís tradition proper of stone sculpture began, with a symbolic focus on composite human-jaguar beings.

7. Period VI (A.D. 1000-1550)

The cultural characteristics of Period VI began to emerge in the preceding period. In Guanacaste-Nicoya, Period VI essentially marked the end of functional stone sculpture, while ceramics reveal considerable evidence of Central Mexican religious influence.

In the Central Highlands-Atlantic Watershed, this period saw a remarkable flowering of stone sculpture at chiefly centers such as Guayabo de Turrialba and Las Mercedes. Functional stone sculpture burst forth in a

profusion of tetrapod figure-decorated metates, mortars, bowls and seats, unified by the predominance of feline images (Figures 21, 22). Completely new categories also appeared, such as the elegant thin grave markers, and heavy Mesoamerican-inspired chacmool figures (Figure 23; BC Numbers 202, 203). A late horizon of feline effigy metate-thrones and circular seats or offering tables spread through the Diquís region, and into Panama as far east as Veraguas province.

8. Conclusions

The early traditions of stone sculpture in Guanacaste-Nicoya and the Central Highlands-Atlantic Watershed emerged at approximately the same time in early Late Period IV. Both were based on the figural decoration of several categories of functional artifacts: maize grinding stones, perforated stones or "maceheads," and axes. In both regions these new art objects formed a tripartite mortuary assemblage with high status associations. As perhaps the most important visual symbols in these emergent rank societies, they suggest that in both regions there was a fundamental link between elite control of vital economic and social activities, and the growth of sufficient social complexity to support (demand?) specialized art

production of restricted distribution.

A third early tradition, centered at Barriles in the highlands of western Panama, began perhaps a bit later. Barriles continued the cult focus on metates, although in different format, and introduced monumental figural sculpture, probably the earliest such examples in southern Central America. The apparent pattern of emergence of these early traditions indicates a local north-to-south movement. The next task is to determine the technological and formal sources of the artifacts that make up these early traditions.

A widespread late tradition of stone sculpture emerged only in the Central Highlands-Atlantic Watershed, and led to a late horizon of stone sculpture as far east as Veraguas province in Panama. Technologically, this late tradition was an outgrowth of the early tradition, but its formal sources remain to be determined.

III. THE TECHNOLOGICAL AND FORMAL SOURCES
OF COSTA RICAN STONE SCULPTURE

1. Introduction

As we saw in the previous chapter, utilitarian lithic traditions did not become widespread in Costa Rica until late in Middle Period IV, just before A.D. 1. The Central Highlands-Atlantic Watershed Pavas I and El Bosque A phases, and the Guanacaste-Nicoya Chombo, Orso, Catalina and Monte Fresco phases, all reflect a stage of sedentary life that almost certainly was based on seed-cropping. These communities provided the socio-economic context for the emergence and development of the early traditions of stone sculpture in those regions, a process that seemingly occurred abruptly and with few signs of local preparation.

While in Costa Rica the archaeological record is still largely silent about this social process, the picture in western Panama is more illuminating. There, the long record of the Tropical Forest Archaic period (4800-500/300 B.C.) shows rather clearly the shift from foraging to root-crop horticulture, which according to

Linares (1980b:237) is evident by 2300 B.C. in the appearance of ground stone axes and celts. The remainder of this Archaic period in western Panama is characterized as a long period of "previllage adaptation" by sedentary groups relying on vegeticulture (tree- and root-cropping) and diversified foraging. This Tropical Forest Archaic period ended in western Panama between 500 B.C. and A.D. 1. As Linares (1980b:240) describes it:

Settled village life based on maize agriculture did not have an autochthonous or gradual development in western Panama. This cultural system seems to have developed full-blown, and to have expanded all over the lower montane and highland plains, sometime between 500 B.C. and A.D. 1. Whereas the Tropical Forest Archaic is represented by only a few sites, there are dozens of sites with Scarified Ware of the La Concepción complex, and at least a hundred Early Bugaba phase sites, along the courses of major rivers of Chiriqui province. Not only do ceramics appear for the first time at these sites, but also a sophisticated ground and polished stone tool industry that included numerous celts, and grinding implements (e.g., manos and metates) associated with maize agriculture.

The data from western Panama suggest that the seeming abruptness of the appearance of the sedentary agricultural village in Costa Rica might have some basis in reality, and that it may not be merely a function of an incomplete archaeological record. The La Montaña phase of the central Atlantic Watershed is identified by Snarskis (1981:40) with tree- and root-cropping, and thus parallels the Boquete phase in western Panama. Moreover, Snarskis (1981:40) characterizes the ceramics of the coeval Chaparrón phase of the northern Atlantic Watershed as "most like the Conchas-phase ceramics (Middle Formative) from the Pacific coast of Guatemala both in form...and in decoration." This is congruent with Linares' (1980b:241) conclusion that the immediate source of the intensified seed-culture system of western Panama was also from the north, from Costa Rica:

In short, while Monagrillo phase maize may have been introduced from Mesoamerica or from South America, it looks as if the much later maize found in the Scarified-Bugaba phase...was part of a rapid but localized expansion of seed-crop agriculture (and/or agriculturalists) from the adjacent area of eastern Costa Rica, starting about 500 B.C. The introduction of the maize-bean crop system during the second half of the first millenium B.C. triggered a rapid

transition from a small-group (extended family?) way of life based on root-crop cultivation supplemented by hunting and gathering in the Boquete phase (2300 B.C. to 300 B.C), to a fully sedentary existence in sizable farming (multi-family?) villages with some degree of craft specialization, and by A.D. 400 the germ of a site hierarchy.

Finally, the mortuary data of Late Period IV in Guanacaste-Nicoya also describe an increase in cemetery size and amount of offerings from north to south.

For Middle and Late Period IV, then, we have three regional sets of archaeological data that rather clearly converge to support and amplify Linares' thesis about the emergence of the sedentary agricultural village in western Panama. However, while from western Panama this process may seem "localized," the addition of the Costa Rican data implies that this was a more extensive process that embraced much of Costa Rica, and not just western Panama. The archaeological data are clear about the intrusive nature of the utilitarian ground stone industries of Late Period IV, and about the employment of those tools in an expansive seed-culture system. There is likewise no question but that the early traditions of stone sculpture were preceded by those utilitarian lithic industries. This chapter will thus explore the process

of creating stone sculpture from tools, beginning with the technology of ground stone production.

2. The Technology of Ground Stone Production

There are three basic methods of reconstructing a prehistoric industry: inference, replication and ethnoarchaeology. Data from each of these will be employed here.

Brian Hayden and Margaret Nelson (1981) have recently described and analyzed the contemporary use of chipped stone tools to make metates and manos by Mayans in the Guatemalan Highlands. They state that these contemporary chipped and ground stone traditions have "remained virtually intact" since the Conquest, and they think that these traditions are essentially the same as those of prehistoric times (Hayden and Nelson 1981:885). While some metal tools are now used, the authors' principal informant used only stone tools. What follows is a brief summary of the work of Hayden and Nelson.

Chipped stone tools of dense basalt and metamorphic greenstone are used to quarry, rough-out and finish metates and manos of porous (vesicular) basalt, the preferred material for grinding stones.

The chipped stone tools are of three sizes, which vary according to function: two-handed choppers or

cleavers (weight 2 kg) for roughing-out and apparently also for quarrying; one-handed choppers (1 kg) for the intermediate shaping; and pecking or abrading stones (.5 kg) for the final finishing. The two chopping tools, because they are forcefully used to subtract the material, must be periodically resharpened by percussion flaking to restore the cutting edge. These tools are thus gradually "consumed" by retouch to the point where they are no longer useful. The abraders, however, are slowly worn into an oblate shape that obliterates the original flaked facets, and they apparently need little or no retouching. While the choppers are held directly in the hand, the authors report the discovery of hafted ground stone mauls associated with prehistoric burials at the metate quarry sites. In their judgment, this basic tool kit for ground stone production is adequate for special-purpose ground stone also, with some modifications in the size, end-form and material of the tools. They imply that the transition from making tools to making "sculpture" was technologically fairly direct, and that the greatest change would have been a longer and more detailed finishing process. Each of the three types of tools, the two choppers and the abrader, corresponds to a discrete stage of work, and these natural subdivisions could have been reflected in the division of labor among different specialists, perhaps working in

different places.

The basalt for the grinding stones comes from two sources: outcrops which are actually quarried, and riverbed boulders which are selected and gathered. Roughing-out and shaping are done at the source, while the final finishing occurs in the patio near the carver's house. Tool discard seems generally to correspond to the spatial separation of the work process. The authors report that "stone suitable for commercial manufacture of manos and metates is found only in a few restricted areas within the region," and they suggest that prehistoric inhabitants of this region controlled the production and distribution of grinding stones (Hayden and Nelson 1981:893). With this ethnoarchaeological model, we can now turn to a general description of ground stone technology in Costa Rica.

3. Ground Stone Technology in Costa Rica

Throughout the periods of ground stone production (utilitarian and special-purpose) in Costa Rica, from Late Period IV through Period VI, the favored materials were volcanic rocks. In Guanacaste-Nicoya and the Central Highlands-Atlantic Watershed, andesite and basalt were employed almost exclusively for ground stone; the major exception was the use of close-grained stones such

as quartzite and calcite for maceheads in Late Period IV. In the lowlands of the Diquís region, where volcanic rocks are scarce, granite and sandstone appear to have been the most common materials.

Because no systematic work has yet been done on the exact sources of rocks used in the lithic industries of Costa Rica, only general inferences are possible at this time. In areas of relatively recent vulcanism, volcanic ejecta can be found exposed (Guanacaste, Tilarán and Central cordilleras). Particularly in the upper reaches of streams and rivers that drain the volcanic cordilleras, water-borne boulders and cobbles are abundant, and this supply may have precluded any need for large-scale quarrying except in special circumstances. The distribution of rocks suitable for ground stone production was not uniform, however, and the control of such sources can be assumed to have been an important component of the total organization of any lithic industry.

In Costa Rica, the archaeological identification of the tools used to produce ground and polished stone is also problematic and tentative. The best evidence, such as it is, comes from the central Atlantic Watershed and by cautious extrapolation from western Panama (Snarskis 1978; Ranere 1980b). In Costa Rica, the most significant technological changes in the lithic industries must

logically have occurred in Middle or Late Period IV, when the La Montaña and Chaparrón lithic complexes of the Atlantic Watershed (and their presumed though unknown counterparts in Guanacaste-Nicoya) were replaced by the new ground stone industries associated with the rise of sedentary agricultural villages. Seemingly simultaneously, these new ground stone industries associated with intensified forest clearing and seed-culture are accompanied by the emergence of functional stone sculpture based on utilitarian prototypes. It is at this point that the archaeological record becomes silent.

In the contemporary Highland Maya lithic industry reported on by Hayden and Nelson (1981, see summary above), the heavy work of roughing and shaping is done with two-handed and one-handed chipped stone choppers or cleavers respectively. In Snarksis' (1978:89-96) data from the central Atlantic Watershed, however, comparable cleavers are associated only with the La Montaña phases of Early and Middle Period IV, preceding the emergence of the El Bosque ground stone industry. Similar choppers or cleavers are also reported by Ranere (1980c) for the preceramic horticultural Boquete phase (2300-300 B.C.) of western Panama, but again are absent from later phases. It thus appears more probable that the La Montaña and Boquete choppers/cleavers were employed in some activity

related to horticulture, and not in the production of ground stone tools.

In the El Bosque phase of the central Atlantic Watershed, there are no reported choppers or cleavers comparable to those discussed by Hayden and Nelson (1981). The most common large chipped stone tools of this phase are double-bitted waisted axes of slate, designed for hafting. According to Snarskis (1978:153):

Their lack of sharpness or hardness would seem to preclude their use in activities other than clearing of scrub vegetation and weeding. Their sheer numbers (thousands have been found throughout the Turrialba Valley) and wide distribution argue against their use as weapons.

The use of these axes as clearing tools is congruent with our model of rapidly expanding agriculture in Late Period IV, but does not explain what tools could have been used to make the needed ground stone clearing and food processing tools.

The situation is not much clearer for western Panama at this time. There, in the Bugaba phase (A.D. 200-600) the standard land clearing tools were ground and polished stone celts, but there is no direct evidence of how or where metates were made (Ranere 1980b:135). At this

point, the ethnoarchaeological model of Hayden and Nelson seems to lose relevance, because important tools cannot be identified in the archaeological record. There may be two reasons for the apparent inapplicability of this model: different tools may have been used here; and the sites where the roughing-out and shaping occurred have not been identified or excavated. With regard to the latter, the project in western Panama of Linares and Ranere provides important negative evidence. Ranere (1980b:134-135) has suggested that both celts and utilitarian metates were made at quarry workshop sites, because he found evidence only of celt resharpening in the excavated habitation sites, and no evidence of metate production even at the ceremonial center of Barriles. Ranere adds that both utilitarian metates, and the "ceremonial metates" and other sculptures at Barriles, were often made of the same kind of volcanic rock, but that these latter "were undoubtedly made 'on site.' "

Snarskis provides some positive support for the idea that different tools may have been used. He suggests that a drilling technique was used in the roughing and shaping of special-purpose tripod metates of the El Bosque phase:

Judging from the shape of these supports on metates found both in the Turrialba valley and the Línea

Vieja, the isolation of each support was first achieved by drilling holes into a block of solid stone at points which correspond to the four corners of each support, each of which was roughly square in section. These holes were then linked by other cuts and the final shape of the leg was either squarish or roundish, depending on the extent of the final grinding [Snarskis 1978:155].

The drilling technique would obviously help to explain the absence of chopping tools in the El Bosque phase. Snarskis does not attempt to specify the kind of drill that could have been used in metate production. It is plausible, however, that drilling techniques which are easily identified in maceheads and jade carving of the early tradition were also employed on volcanic rocks. The central perforation in hardstone maceheads was commonly made with a tubular drill that produces a biconical core and an hourglass profile for the perforation (See BC Number 43).

Such tubular drills were probably made of bamboo or bone, and used with a granular abrasive such as sand or crushed quartz. The drill could have been turned by a bow pump. The distinctive imprint of tubular drills is especially evident on a macehead from Guanacaste-Nicoya in the Instituto Nacional de Seguros collection in San

José (BC Number 46): a deep circular channel describes the auditory meatus of the skull, and the deepset "eyes" retain a ground-down portion of the core left by a tubular drill. The same macehead shows that a solid drill was used to mark the hinges of the jaw, and that the deep channel separating the upper and lower jaws was made with string- or cord-sawing. The latter technique uses an adhesive-coated fiber with abrasive granules, and is a distinctive technical feature of Costa Rican lapidary work (Lothrop 1955; Easby 1968). Solid drills also were employed in lapidary work, for suspension holes and to provide the "starter holes" for string-sawing. Solid drills were probably made from thin shafts of hardwood such as chonta palm, and used with an abrasive or perhaps with a chert "bit." Thus, in scale, material and technology, hardstone maceheads seem to be a significant bridge between lapidary work and stone sculpture in the early traditions of Costa Rica.

In functional stone sculpture belonging to the climactic phase of the early tradition in Guanacaste-Nicoya, the use of drills and cord-sawing is evident in the openwork-carved tripod metates. A metate in the Instituto Nacional de Seguros collection (BC Number 75) has drilled holes, roughly biconical in profile, in the avian effigy head and in the rear supports; the longer openings in the supports show the

distinctive marks of cord-sawing, "starter holes" that are joined by a narrow and wobbly channel. Identical technical features characterize string-sawn jade pendants from the Atlantic Watershed (cf. BC Numbers 75, 176).

It is likely that functional stone sculpture of the early tradition in the Central Highlands-Atlantic Watershed was produced with similar techniques, even though "tool marks" are less obvious. Based on the data presented above for Guanacaste-Nicoya, it is possible to describe an ideal process for the carving of the famous "flying panel metates," from roughing to finishing:

- 1) The boulder or quarried block is roughed out, perhaps by using drill holes with wedges to produce the "envelope" from which the plate, supports and figure will be subtracted.
- 2) Working from a template, the solid stone "envelope" is reduced to the approximate maximum dimensions by finer drilling, percussion fracture and pecking (this may be the final use of any heavy percussion technique, because of the very low tensile strength of stone).
- 3) Drills are used to further reduce the envelope to the approximate outlines of the figures projecting from the supports.
- 4) A series of smaller drill holes is used to block out the flying panel figures and the support

figures.

- 5) Drilling and cord-sawing further reduce the figures and supports.
- 6) The metate is finished with light pecking and grinding, incision, polishing and painting.

This model is hypothetical, but it probably does bear some resemblance to the reality of prehistoric stone carving in Costa Rica. It is evident that the stone technology of Guanacaste-Nicoya is related to, and probably was directly influenced by, the lapidary technology that Lothrop and Easby have so well described for the Atlantic Watershed. It should not be surprising that the even more advanced stone carving tradition of the Atlantic Watershed would also have incorporated lapidary techniques, especially in the carving of flying panel metates. What does seem surprising, however, is the apparent degree of technological distance between the "ceremonial" functional stone sculpture, i.e., the ornate metates, and the utilitarian food processing tools that were their formal prototypes. The emergence of functional stone sculpture in Costa Rica does not appear to have been based on a direct application of utilitarian ground stone technology, as predicted by the Hayden and Nelson model, but rather on a more complex adaptation of the lapidary techniques that were employed in the carving of hardstone ceremonial axes and maceheads.

Now, it is generally thought that the initial development and dissemination of an advanced lapidary technology in Mesoamerica occurred during the Middle Preclassic period, and is specifically attributed to the technology and style of jade carving of the La Venta Olmec horizon. Both Easby (1968) and Graham (1980) have argued, that the Costa Rican jade and hardstone axe-tradition was inspired by the Olmec tradition. As the chronological data show, there now seems little possibility that Olmec lapidary technology could have been introduced into Costa Rica by the Olmecs themselves, as Michael Coe (1968) once proposed. However, there is likewise little to recommend the view of Pohorilenko (1981:309) that the La Venta Olmec tradition "could not have been ancestral to, have influenced, or in any way have been responsible for, the development and cult of the Costa Rican axe gods." While Pohorilenko may be correct in arguing that the immediate source of the intrusive lapidary tradition in Costa Rica was southern Mesoamerican lapidary work, it was precisely these Post- or Epi-Olmec stone carving traditions that in the Late Preclassic period both transmitted and recast the technologies, styles and themes of Olmec stone and jade carving. In contrast to Pohorilenko, one could suggest that the presence of actual Olmec jade objects in Costa Rica, when they already had heirloom status, induced a

conscious attempt to imitate both the technology and the meaning of Olmec jade. This may be a more plausible explanation for the deliberate revival in Costa Rica of the Olmec "axe-god" theme.

It now appears that an intrusive Epi-Olmec lapidary technology also contributed significantly to the emergence of functional stone sculpture in Costa Rica in Middle Period IV, ca. 300 B.C., and later. A derived lapidary technology as the basis for functional stone sculpture also helps to explain the makeup of the early tradition mortuary complex, because the components--axes, maceheads and metates--can now be seen to represent varying degrees of lapidary technology, or of such a technology applied to a range of materials. Further, the spatial inventiveness and complexity of functional stone sculpture may have been derived from the string-sawing technique of lapidary work, a technical influence more easily explained if elite control of lapidary production had been extended to functional stone sculpture.

This new thesis that the technology of functional stone sculpture was derived from an intrusive Epi-Olmec lapidary tradition also has significant bearing on any consideration of the organization of art production. It is well-known that in Mesoamerica elite groups controlled the production, use and distribution of jade, and there is no evidence that the situation in Costa Rica was any

different. It would not be surprising if in Costa Rica functional stone sculpture had also been drawn into similarly elite-controlled systems of production and distribution. This thesis then assumes further significance because of the strong likelihood that the production and distribution of utilitarian axes and metates were also controlled by the elite, as suggested by Ranere (1980b) for western Panama. The early tradition mortuary complexes in Costa Rica may thus have represented at the level of ritual behavior and ideology a central fact of economic reality, that the elite controlled access both to real tools and their symbolic counterparts.

4. Typology and Distribution of Metates in Nuclear America

Because the metates of Costa Rica are perhaps the most complex items of functional stone sculpture, in technology as well as imagery, it seems desirable to attempt to locate their basic forms within a typology of metates in Nuclear America. Such an attempt has never been made, but it seems especially important in the present context because the formal and utilitarian sources of the Costa Rican ceremonial metates have never been convincingly identified. This is all the more

necessary because even recent literature continues to reflect uncertainty about the degree to which ceremonial metates may have functioned as thrones, and how this may affect the interpretation of meaning (Lange 1984; Snarskis 1984). Moreover, it must be an explicit premise of a materialist approach to functional stone sculpture that the interpretation of meaning should begin with data that will allow for the possibility that utilitarian form and function may be significant determinants. Hence, because ceremonial metates were primary image carriers and symbols in the early traditions of functional stone sculpture, conventional iconographic investigation can have little validity unless firmly tied to the data of historical typology. Finally, such an approach can test the relationship between tools and art postulated by George Kubler (1984:39):

The true tool has only one function, and only one meaning. Many tools of course come under close scrutiny as works of art, because of their high degree of useless elaboration. Conversely, many objects of ornamental purpose have a residue of functional form. I have therefore included under the rubric of ornamental forms large numbers of utilitarian objects. Their elegance and symbolic

value are self-evident. In the history of European art they would be called decorative arts'; here they are taken to be closer to the core of aesthetic activity, and classed as modes of sculpture and painting. The ordinary tool is to a work of art as everyday speech is to music, but some tools are like songs.

We have here a programmatic statement that conveys the essence of an idealist approach to Precolumbian art history. While Kubler rightly recognizes the instrumental nature of much Precolumbian art, he dichotomizes tool function and artistic elaboration ("useless decoration") into separate and unrelated spheres of activity, reference and meaning. Thus, in his treatment of functional stone sculpture in southern Central America, Kubler (1984:334-340) ignores any possibility of determinant relations between the imagery of functional sculpture, and the instrumental forms that carry them. To separate unembellished tools from embellished tools of the same kind solely on the basis of their aesthetic or formal complexity is to ignore an aspect of the productive process, while to classify them only as tools is similarly to overlook the (unexplained) transformation of the tool to aestheticized tool-symbol. The task of a materialist approach is to reweave the

whole cloth of art production that is rent by the idealist attempt to move aesthetic activity out of culture; it must attempt to analyze functional stone sculpture holistically, as the aestheticization of tools and labor, and as visual evidence of social processes that attempt to project aesthetic ideologies into realms of economic activity. It has been precisely the "intermediateness" of functional stone sculpture, its refusal to be bound by normal categories of tools or art, that has defeated attempts at categorical and one-dimensional interpretations.

The formal precedents of the decorated metates of the early traditions of stone sculpture in Costa Rica were undecorated, but apparently special-purpose, tripod metates that typically occur in funerary contexts. In the Guanacaste-Nicoya tradition, the decorated metate was based on a tripod with a laterally curved grinding plate without a lip or rim, with conical or slab legs, and was used with an overhanging mano (i.e., a mano that was wider than the grinding plate). In the Central Highlands-Atlantic Watershed region, the early tradition of stone sculpture is also marked by the progressive elaboration of tripod metates, beginning with a slightly different type of undecorated special-purpose metate. While the progressive elaboration of the tripod metates of these early traditions can be charted locally within

Costa Rica, the undecorated prototypes appear in both regions as components of intrusive ground stone assemblages, without known local antecedents. Thus, since there are no non-southern Central American traditions of decorated metates, the formal sources must be sought in foreign traditions of undecorated tripod metates.

No legged metates, tripod or otherwise, are known before ca. A.D. 1000 east and south of central Panama. Therefore, the eastern Intermediate Area and other areas of South America can be eliminated as formal sources of the Costa Rican traditions. If this is so, then "southern influences" may have been minimal in the formation of the early traditions of decorated metates in Costa Rica. It is by default, then, that we must look to Preclassic Mesoamerica for tripod metate traditions that could have been the formal sources of the early Costa Rican traditions.

The great heartland Olmec site of San Lorenzo, Veracruz, so far provides the earliest dated context for tripod metates in Mesoamerica. The archaeological data in M. Coe and Diehl (1980) reinforce suggestions presented above concerning the material basis of symbolic values of tripod metates in Costa Rica.

In all Preclassic phases at San Lorenzo (Chicharras through Nacaste, 1250-700 B.C.), footed metates (bipod or

tripod) are a distinct minority, constituting only 23 out of 220 examples, or 10.5 percent of the excavated samples. Since San Lorenzo was distinctly a ceremonial site group and not an urban center, all domestic tools found there must have been associated with one of three social contexts or groups: support households, elite households, or supra-household ceremonial labor. Since the great majority of Preclassic metates at San Lorenzo are strictly utilitarian basin metates, without supports and with simple shapes, the ratio of footed to basin metates may just possibly provide a rough index of the proportion of support households to elite/ceremonial contexts.

The footed metate in Mesoamerica thus appears from the beginning to have been intended for the preparation of maize for the elite and/or in a ceremonial context, and the special-purpose nature of the footed metate would thus suggest that relatively more labor in metate production is correlated with elite/ceremonial maize preparation. The subsequent formal and symbolic elaboration of footed metates, predominantly tripod, thus appears to have been firmly grounded in the maintenance of elite households and/or ceremonial food preparation. We do not know, however, if these early footed metates were deposited in funerary contexts, because none of the San Lorenzo metates was so identified; almost all were

apparently discarded, and found as fragments in fill and overburden. One cache of metates, excavated by Drucker in 1946, was reported by M. Coe and Diehl (1980:34-35).

Since scarcely any rocks suitable for lithics are available at or nearby any of the major heartland Olmec sites, it has been known for some time that virtually all ground stone artifacts found in the Olmec heartland must have been made from rocks imported from either the Tuxtla Mountains near the Gulf of Mexico, or from the uplands that divide the Isthmus of Tehuántepec. Williams and Heizer (1965) reported on the discovery of Cerro Cíntepec in the Tuxtla Mountains as a source of basalt for the San Lorenzo monuments. M. Coe and Diehl (1980) include the thin section analyses by Luís Fernández that have further specified the compositional range of the basalts used at San Lorenzo, and his general correlation of basalt types with artifact categories. Fernández identified three basalts at San Lorenzo, classified as Cerro Cíntepec Types A, B, and C; while only Type A has actually been located at Cerro Cíntepec, Types B and C are considered to be similar enough to warrant their designation as Cerro Cíntepec basalts.

At San Lorenzo, Cerro Cíntepec Type A basalt accounts for 84 percent of the carved monuments sampled, 9 percent of the metates, and 29 percent of the fragments unattributed to category. Type B accounts for 16 percent

of the monuments, 64 percent of the metates, and 71 percent of the fragments. Type C is represented only in the metates, accounting for 27 percent. The thin section analyses thus show that Cerro Cíntepec Type A basalt was the preferred material for monuments, while Type B was preferred for metates, and Type B also occurs in the fragments in similar proportion, suggesting that they are primarily of tools rather than monuments. Accordingly, the analysis of the fragments, which were located beneath the overburden near Laguna 5 by magnetometer survey, led Coe and Fernández to suggest that the fragments might indicate the presence of a workshop for metates and manos. The inverse source correlation between monuments and fragments likewise led Coe and Fernández to suggest that monuments were brought to San Lorenzo essentially finished, after having been made at still unknown production center(s), nearer the Cerro Cíntepec source. The San Lorenzo data thus suggest that some metate production occurred at the site itself. While this might reflect a highly decentralized production system in which each site produced its own ground stone tools, we must still contend with the importation of the raw material, and this makes it difficult to imagine each farming village of the San Lorenzo support zone in control of its own tool production, from source to distribution. While not conclusive, the data at hand suggest that San Lorenzo

itself controlled the Cerro Cintepec sources, and hence the access to tools, a situation that certainly is consonant with the economic and political authority of San Lorenzo in the heartland region.

It would be difficult to overestimate the importance of the San Lorenzo data as regards the significance of special-purpose metates in Mesoamerica, since perhaps the art-historically most important Early Preclassic site also marks the earliest known appearance of footed metates. The footed metates at San Lorenzo are clearly special-purpose tools that, though undecorated, were almost certainly used for elite and/or ceremonial maize preparation. At least some metates were apparently produced at San Lorenzo, and the site may well have produced and distributed metates to its own support settlements. The inferred presence of metate production at San Lorenzo suggests that elite control of the production and distribution of agricultural and subsistence tools was a function of increasing social complexity in Preclassic Mesoamerica. While we have seen that, in the case of the jade axe traditions, direct historical links between the Olmec and the societies of Costa Rica are not likely, the Olmec may again have been the originators of artifacts and concepts that were subsequently elaborated in the early traditions of Costa Rica.

The data from San Lorenzo concerning special-purpose metates are supported by those from other sites and regions of Mesoamerica. In the Valley of Mexico, the profusion of metate types can be reduced, for our purposes, to basin or slab metates, and footed metates that are predominantly tripod (Tolstoy 1971). Footed metates do not appear in the Valley of Mexico until the Middle Preclassic Zacatenco phase (dated by Tolstoy 850-400 B.C.); Zacatenco-type metates are typically stubby-footed tripods, but with a definite rim surrounding the grinding plate, indicating their use with non-overhanging manos. The Zacatenco metates provide a suitable prototype for the rimmed metates of the early tradition in the Atlantic Watershed of Costa Rica.

Some Tlatilco metates are also footed, but with less distinct rims, and may be comparable to the footed metates of San Lorenzo, though apparently also Middle Preclassic in date. The Late Preclassic Ticomán metates have slightly concave grinding plates, rather than a distinct rim; their square legs, in contrast to the conical legs of the Zacatenco type, may be prototypical of the slab leg metates of the later part of the early tradition in Guanacaste-Nicoya.

While phase-by-phase distribution figures are not available for the Preclassic Valley of Mexico, it is apparent that here, too, footed metates were in the

minority and were essentially special-purpose. In the Classic period, metates from Teotihuacán seem, not surprisingly, to be somewhat more standardized; the grinding plate is an oblong slab, either flat or longitudinally curved, and apparently usually without supports; footed versions have either truncated conical legs or square legs. Overhanging manos first appear in the Valley of Mexico during the Classic period, designed for use on flat or single-curved grinding plates, with the edge wear pattern producing the "dog bone" or "rolling pin" shape of the mano. According to Tolstoy, this Classic type of metate and mano continues into the Postclassic period. The Valley of Mexico typology generally corresponds to the San Lorenzo Olmec typology, but with a noticeable lag at the beginning, and there is nothing that would counter Olmec priority in the creation of footed metates.

The Valley of Mexico also provides an example of special-purpose tripod metates accompanying a well-documented site-unit intrusion in a foreign culture area: the presence of Teotihuacán(oid) metates in the Middle Classic graves of Mounds A and B at Kaminaljuyú, Guatemala (excavation data in Kidder et al. 1946). Here, the special-purpose function and elite/ceremonial nature of the Mesoamerican tripod metate are clearly evident, and both Borhegyi (1965) and Woodbury (1965) have

suggested that they were used for sacred/ceremonial maize grinding. Significantly, the more recent Pennsylvania State University project at Kaminaljuyú recovered "shaped metates" (a broad category that apparently excludes tripods) from residential contexts. Michels' (1979:113, 122-125) cluster analysis did not definitely associate these metates with elite households, suggesting instead that even simple shaped (basin) metates were indicators of a household's relative wealth, as opposed to those using unshaped (i.e., "boulder") metates, and adding that the "manner of food preparation may be restricted to a particular segment of the population of the site, thus making it a useful clue to social work."

Although neither Borhegyi (1965) nor Woodbury (1965) explicitly attribute the appearance of tripod metates in the Guatemalan Highlands in the Classic period to Teotihuacán or other "Mexican" intrusion, there is little doubt that this was indeed the case. Their own data do not indicate the presence of tripod metates in the Guatemalan Highlands until this time, nor is there any evidence of tripod metates in the Maya Lowlands until the Classic period. Further, W. Coe (1965) notes that of the three basic metate types of the Maya Lowlands--open-end trough, basin, and tripod--only tripod metates are consistently made of imported rocks (granite and limestone), whereas the others are made of local

limestone. The use of metates made from imported rocks in the Maya Lowlands further supports the elite/ ceremonial associations of tripod metates as seen in other regions. Thus, while Central Mexico was not the place of origin of tripod metates, it does appear in the Classic period to have been a "diffusion center" responsible for the introduction of tripod metates into the Guatemalan Highlands, and perhaps from there into the Maya Lowlands, with the status associations and the undecorated form remaining diagnostic features. There is no evidence whatsoever to suggest that the decoration of tripod metates originated in Mesoamerica.

While the Teotihuacán-Kaminaljuyú metate connection is important in that it provides an instance of the Central Mexican role in the diffusion of tripod metates in the Classic period, it is too late to account for the initial appearance of tripod metates in Costa Rica, because this occurred in late Middle or early Late Period IV. However, the Middle and Late Preclassic Central Mexican tripod metate traditions of Zacatenco and Ticomán may represent the ultimate prototypes of the Guanacaste-Nicoya and Atlantic Watershed tripod metate traditions. According to the phase dates of Tolstoy (1971:271), the Zacatenco (850-400 B.C.) and Ticomán (650-200 B.C.) phases have a 250-year overlap, from 650-400 B.C. However, even if the dates are right, direct contact at

such a distance seems unlikely. A more plausible scenario would involve a series of intermediate steps, as yet unlocated, in which special-purpose metates accompanied the expansion of maize agriculture into the southern frontier zones of Mesoamerica, perhaps along the Pacific littoral. At the most cautious, however, the comparative data on metates do suggest that the undecorated prototypes of the Costa Rican metates have a Mesoamerican origin. Given also the technological and formal evidence that Costa Rican jade industries were inspired ultimately by Mesoamerican traditions, the present argument is not a radical departure. Rather, for the first time, the source of the undecorated metates was sought, and the data point to Preclassic period Mesoamerica.

5. Conclusions

At the beginning of this chapter, data from western Panama were useful in clarifying and amplifying our understanding of the emergence of sedentary village life in Costa Rica, and in both places this process occurred rather rapidly in the centuries between 500 B.C. and A.D. 1. The Panamanian and Costa Rican data suggest that this process involved the expansion of seed-cultivators from north of Costa Rica, moving southward into western Panama, and that this intrusion was accompanied by new

ground stone industries that included the plain prototypes of the metates that were to be so elaborately decorated in the early traditions.

However, the analysis of present-day metate production methods in the Guatemalan Highlands indicates that tools and techniques of utilitarian metate production now in use are probably not relevant to an understanding of the production of decorated metates in Costa Rica. Instead, it seems more likely that lapidary techniques derived from Olmec-Olmecoid jade carving traditions were adapted to functional stone sculpture. For chronological reasons, Post- or Epi-Olmec lapidary traditions emerged as the best source of the new stone carving technology, indicating a Late Preclassic date for their emergence in Costa Rica. Finally, an attempt to locate the formal sources of the early Costa Rican metate traditions suggests that transitional Middle-Late Preclassic Mesoamerican special-purpose footed metate traditions are the only plausible source. The demise of Olmec culture in Mesoamerica may have been causally related to the intrusion of foreign groups into Costa Rica, thus accounting in very general terms for the rise of sedentary village life, seed-culture, and social complexity in these regions on and beyond the southern Mesoamerican frontier.

Throughout this chapter, categorical statements that

would preclude alternative explanations and sources have been avoided, in part because of wide gaps in areal archaeological sequences. Even with these qualifications, however, the evidence in support of these conclusions about the common foreign sources of the early Costa Rican traditions seems superior to any previous explanations involving assumed autochthonous origins, shaman's stools or manioc processing. Quite apart from the hoped-for solution of the problem of the formal sources of the early Costa Rican metate traditions, the value of this chapter lies in the confirmation of the material value of special-purpose metates in Mesoamerica. Additionally, the data regarding the formal sources of the Costa Rican metate traditions in no way support the partitioning of the country into opposing spheres of high culture influence. Ahistorical speculations about the uniqueness of Costa Rican metates have been replaced by a pattern of historical and formal relationships with Mesoamerican traditions that can serve as a framework for the analysis of their iconography.

IV. THE IMAGERY AND THEMES OF THE EARLY TRADITION IN GUANACASTE-NICOYA

1. Introduction

The primary objective of this chapter and the three following is, simply stated, the identification of subject matter with as much precision and objectivity as possible. The need for such elementary identification has long been evident; we need to know what is represented in a work of art before any thematic interpretations are possible. Frequently, too, the correct identification of a motif or theme provides a new basis for comparison that can in turn yield new interpretations. Wherever possible, such comparisons and interpretations will be cautiously pursued.

We may begin by noting Erwin Panofsky's (1955) distinction between iconography and iconology, because he insists on the methodological (i.e., practical) distinction between the identification of subject matter and its interpretation. Panofsky's original formulation of the "iconographic method" is rarely subjected to such scrutiny, however (Holly 1984). Such a critique is doubly

important in the present context because Precolumbian art history in the United States has so far evolved no theory of the interpretation of imagery of its own that has superseded Panofsky's famous "method."

For Panofsky, interpretation is a tripartite process that begins with the identification of "primary or natural subject matter," which he terms "pre-iconographic description." The intermediate stage, or iconographic analysis proper, is defined as the identification of "secondary or conventional subject matter, constituting the world of images, stories and allegories," derived from the scholar's knowledge of literary sources. The final (and most problematic) stage for Panofsky (1955:41-51) is "iconological interpretation," the revelation of "intrinsic meaning or content, constituting the world of symbolic' values," derived from the scholar's "familiarity with the essential tendencies of the human mind," or "synthetic intuition." According to Panofsky, then, the goal of this chapter would be "pre-iconographic description," but in practice this process rarely occurs without the second stage of analysis, the literary or textual interpretation of the image. And herein lies the problem for Precolumbian art history: Panofsky's method collapses without complementary textual or other sources to explain the images.

For Precolumbian art George Kubler (1984:39-40) has adopted Panofsky's scheme virtually intact while asserting that conventional meaning, Panofsky's iconographical analysis proper, is largely unrecoverable because of the absence of contemporary texts. In consequence, Kubler's position stresses the empirical and especially the idealistic nature of the interpretive enterprise; believing with Panofsky that iconographic analysis proper must depend on literary sources, Kubler (1973) also invokes Panofsky's (1955:43) "principle of disjunction," the historical divergence of representational and textual traditions that Panofsky believed marked the art history of the classical tradition in the West.

For Kubler, then, the influence of Panofsky's method led him to reject any possibility of an "art history without texts," and thence to reject any form of analogy of inference to help reconstruct or replace the absent text. There never were texts for prehistoric art, of course; in their place were human thought and behavior. The "prehistorian" of art can thus no more avoid analogy and inference in explanation than can the archaeologist of prehistory (cf. Binford 1983:15-17).

The interpretation of art in the absence of texts represents a fundamental challenge to Precolumbian art history, absolutely so because of the arbitrary nature of

signs: that which is signified has no necessary or predictable relation to its signifier (Coward and Ellis 1977). The investigator thus must resort to analogy and inference to supply or suggest the signified. An important criterion, therefore, is the plausibility of the analogy with respect to historical relations and contextual and structural comparability. The iconography of Costa Rican stone sculpture, of Moche ceramics, or of Teotihuacán mural painting, can never attain the appearance of certainty possible in interpreting Renaissance painting, but this fact cannot justify unconditional surrender to the absence of texts.

From the materialistic perspective adopted here, Panofsky's and Kubler's formulation of iconology as the revelation of "intrinsic meaning" via a "synthetic intuition" based on "essential tendencies of the human mind," must be rejected, not least because of its crude psychologism, and its claim to know universal aesthetic values. Nicos Hadjinicolaou (1978:47-49) has suggested that the major flaw in Panofsky's (and by extension in Kubler's) formulation of iconology as a theoretico-historical stance is the rejection of "ideological conditions and socio-ideological relationships," and hence of the materiality of all art production which binds it inextricably to a historically-prevailing social formation. Contemporary art historical practice

displays a growing tendency to abandon both the term and the concept of iconology in favor of some form of socio-ideological critique of the production, use and meaning of art (see, e.g., Baxandall 1980; Werckmeister 1982). The gradual penetration of materialist epistemological concepts into the mainstream of Western art history is radically changing the conception of meaning and the practice of interpretation, as art retrospectively becomes more and more "societized," and subjected to ideology critique.

In general, the artifact sample used here will be a selective one, with no attempt to compile a "complete" corpus of Costa Rican stone sculpture. The emphasis instead will be on authenticity and reliability. The recent exhibition catalog of Precolumbian Costa Rican art, Between Continents/Between Seas (Abel-Vidor et al.) is the natural starting point for such a sample, because the authenticity of these objects in collections in Costa Rica has been established, and because their provenience data are more reliable than those associated with objects in most foreign collections. The "core sample" will be supplemented by objects in Hartman (1907) and Mason (1945), both the first records of important early collections whose authenticity and provenience have long been accepted, and by objects in Ferrero (1977) who concentrates on Costa Rican collections.

A significant recent contribution to iconographic description is the systematic faunal identification by Michael Snarskis for the catalog cited above, with the expert assistance of Luís Diego Gómez Pignataro, director of the Museo Nacional de Costa Rica. References to these catalog illustrations and entries will hereafter be cited as BC followed by the catalog number of the object.

2. Jade

It is appropriate to begin the process of identification with works of jade and jade-like stones. In the previous chapter it was suggested that Middle to Late Preclassic Mesoamerican lapidary traditions were probably the principal source of the new technology of functional stone sculpture in Costa Rica's early traditions. First, there is persuasive evidence that the Costa Rican jade and hardstone axe traditions were deliberate imitations or revivals of the Olmec tradition and its filiations. These imitations might have been inspired by the appearance of Olmec "heirloom" jades in Costa Rica, events that also coincided with the appearance of new ground stone industries in Costa Rica. Second, Costa Rican jade traditions include a greater variety of imagery than does any single category of stone sculpture, so that any foreign iconographic influences

may simply be more common in jade. Third, foreign worked jade, predominantly of Lowland Maya manufacture, continued to arrive in Costa Rica throughout the span of the early traditions, thus providing some indication of the geographical and temporal extent of the exchange networks in which Costa Rica participated (Balser 1974).

The postulated and sought-after jade sources in Costa Rica itself have never been located. A recent geological survey of Guanacaste-Nicoya failed to locate either bedrock or boulder sources of any form of jade. Archaeological occurrences of jade in Costa Rica are overwhelmingly confined to mortuary contexts, with very little raw jade or manufacturing debitage (Lange et al. 1981). The Brookhaven National Laboratory neutron activation analyses of a small number of jade objects from the museum of the Instituto Nacional de Seguros in San José indicate tentatively that some Costa Rican jades, including "Olmecoid" spoons and glyph-bearing Classic Mayan celts, are compositionally comparable to the Guatemalan "Middle Motagua Valley source group" of jade reported on by Hammond and others (1977). A small minority of sampled Costa Rican jades was attributed to a "divergent" source, as yet unlocated. Lange, Bishop and van Zelst (1981:171) conclude that:

On the basis of statistical considerations, we cannot

exclude the possibility that many of the analyzed Costa Rican jade artifacts were manufactured from materials the sources of which were located in the Motagua Valley of Guatemala...the possibility of a Guatemalan jade source for Costa Rican artifacts has been strengthened.

While admittedly tentative, the results of the laboratory analyses have a number of significant implications. Thus, the great amount of jade in Costa Rica, coupled with the absence of known jade sources, represent a puzzling anomaly. Carlos Balsler's (1974) jade collecting activities in the 1960s and 1970s, while not archaeologically rigorous, have produced some seemingly reliable, or at least generally accepted, evidence for Mayan participation in Costa Rica's exchange networks. There is now also the possibility that these exchange networks might not have been confined to worked jade, but might have included raw jade from which were carved objects in the local styles of Costa Rica. Along with abundant evidence for the local reworking of imported jade, both Olmec and Mayan, there now emerges the picture of northern Costa Rica from ca. A.D. 1-800 as a "magnet" that attracted worked and possibly unworked jade from southern Mayaland. Given the high value of jade in Mayaland, it is curious that any Mayan jade should

have been diverted to Costa Rica. Moreover, foreign jade found in Costa Rica seems to have been transmitted directly from southern Mesoamerica: jade is rare in non-Mayan Honduras, extremely rare in Nicaragua, and also rare in southern Costa Rica and Panama. Hence, the transmission is more likely to have been "point-to-point," rather than "down-the-line," because there is no sloping "drop-out" pattern between Mayaland and Costa Rica.

It would seem obvious that the Maya "jade exchangers" must have been getting something of equivalent value in return from Costa Rica, but it is difficult at this point to speculate on what that "something" might have been. Environmental redundancy would seem to eliminate most of the perishable resources of the tropics, although Lange (1984) has suggested that dyed cloth, cacao and drugs may have been among the items traded. Since these are all perishable, this argument is moot without physical evidence. Unworked jade can likewise be dismissed, because there is still no evidence that Costa Rica had any local sources. During this period ca. A.D. 500-800, when jade use was declining in Costa Rica, the local manufacture of gold ornaments and the acquisition of foreign gold objects were just beginning, but just as this period largely postdates the jade traditions, it largely predates the gold traditions. Hence, although a

southern-gold-for-northern-jade network probably existed, temporal and spatial considerations preclude using it to explain the concentration of Mesoamerican jade in Costa Rica. We must admit that at the present time, we do not know why foreign jades were sent to Costa Rica.

Given the temporal depth of the Mesoamerican, especially Mayan, practice of diverting an apparently considerable amount of jade, worked and possibly unworked, directly to Costa Rica, it is reasonable to ask whether such ties have left iconographic traces in locally-made artifacts in Costa Rica. Comparative analysis of the subject matter should be able to determine whether such elements, if present, were superficial or substantive components of the local traditions.

The Symbolism of Jade

In Costa Rica, the carving and use of jade were coterminous with the early traditions in Guanacaste-Nicoya and the Atlantic Watershed, ca. A.D. 1-800. While some jade no doubt continued to circulate for a time after local production had ceased, graves of the Late Period (A.D. 1000-1500) are largely devoid of jade, which by this time had been replaced by gold and its alloys as markers of status and bearers of politico-religious

imagery. Early historical accounts and modern ethnography, so far as is known, contain no mention of jade. Our knowledge of the symbolism of jade in Costa Rica, then, must derive from comparative and contextual investigations.

There seems little question that the origin of jade carving in Costa Rica is intimately related to the Olmec tradition of the La Venta horizon, ca. 1000-500 B.C. Among the Olmec, jade was clearly a material of great, perhaps supreme, religious and political symbolic value (Covarrubias 1946; Stirling 1961). Jade ornaments were worn by the Olmec elite; axes and figures were buried in ceremonial caches deep beneath the plazas at La Venta; and jade objects were apparently given to other peoples to help establish the long-distance exchange networks which the Olmec needed to acquire jade and other commodities (Bernal 1968; M. Coe 1968; Drucker 1952, 1955; Drucker et al. 1959).

Since Olmec artists perfected the techniques of jade carving, the Olmec may have been the first to conceive of many of the symbolic values of jade that are known later for the Maya and Aztec. Indeed, the value-structure of Olmec jade far outlasted Olmec society: the mural painters of Teotihuacán depicted Olmec jade as an offering of the rain god (Miller 1973:Figure 324), and the Aztec included an Olmec mask in a ceremonial cache at

the foot of the Templo Mayor in Tenochtitlán (Stuart 1981:19).

The extraordinary esteem which the Aztec had for jade may have been inversely related to the amount of true jade they actually had, which apparently was very little. Based on his study of the linguistic contexts of Nahuatl words for jade in Sahagún's Florentine Codex, Marc Thouvenot (1977) concluded that jade was a metaphor for physical and moral perfection. For the tlamatinime, or philosophers, of the Aztec, jade was a symbol of sustenance, ideal beauty, fine moral character, and "people of purity" such as children, rulers, nobles, penitents and virgins. The stone called quetzal chalchihuitl, "green-jade-like-the-quetzal's-tail-feathers," was one of the most highly valued. For the Aztec, as apparently for many other Mesoamerican peoples, jade was also synonymous with water: Tláloc, the rain god, had as his wife Chalchiutlicue, "she of the jade skirt."

Jade was the "most cherished possession" of the Maya, in the words of J. Eric Thompson (1971:13), and probably had many of the same poetic and metaphorical meanings as for the Aztec, viz., water, rain, fertility, and life. Perhaps no Mesoamerican people used jade to the same extent to display high politico-religious status than the Maya, as testified by the stela images of their rulers

and their burial furniture (Digby 1972). Glyphic evidence provides additional information about Maya ideas about jade. The day sign Muluc means jade and water. The month sign Mol incorporates the Muluc day sign, with water droplets (Thompson 1971:49, 110). The 360-day year tun also means jade and rainy season. The directional glyph that indicates "count forward" or "count back" in Mayan dates is the personified form of Muluc, the xoc fish or shark (Thompson 1971:44, 78); this usage, as do the associations of the tun, suggests that jade/water in some way related to the cycle of time itself, as if "good time" were reckoned according to its rainy, fertile, life-giving and cyclical nature.

In Costa Rica, the production and use of jade are temporally bracketed by the Olmec and Maya traditions, and these were the sources of the only foreign jade found in Costa Rica. Given these historical connections, it is most probable that the symbolism of jade in Costa Rica was fundamentally like that in Mesoamerica. Certainly there is no archaeological evidence to the contrary: in Costa Rica, jade is invariably associated with high politico-religious status. We shall see to what extent the politico-religious imagery of Costa Rican jade might embody symbolic values known in Mesoamerica.

Axes and Celts

Utilitarian axes and celts can be functionally distinguished according to the method of hafting. Axes tend to be relatively short and squat, with a wide bit tapering to a narrow poll that is butted into a slotted shaft, so that pressure on the bit drives the poll into the shaft. Celts tend to be relatively slender, and were apparently designed to be lashed to the short end of an "L"-shaped shaft (see the suggested hafting of the Cerro de las Mesas celt in Drucker 1955:Figure 7).

The extent to which such functional distinctions were correlated with thematic categories in decorated axes and celts remains problematic. In neither Guanacaste-Nicoya nor the Central Highlands-Atlantic Watershed are there any clear thematic differences between axes and celts. Among the La Venta horizon Olmec, however, celts are predominantly decorated by incision (Joralemon 1971: 32-37, 170-172) while relatively few axe forms are incised (Joralemon 1971:Figures 136, 148, 181, 182, 184). A notable exception to the predominant incising of celt forms in the north may be the Cerro de las Mesas avian celt, but the Olmec manufacture of this celt has been questioned (Drucker 1955:Plate 36f; Easby 1968:79-80). The so-called votive axes of the La Venta horizon are often carved as full if schematic anthropomorphic

figures, with the head carved on the larger bit end, and the body, if indicated, carved or incised on the narrower poll end (M. Coe 1965:Figures 27, 28; Joralemon 1971: 162-168). Seemingly very few Olmec axes or celts are decorated with the poll end oriented to the top (Joralemon 1971:Figures 136, 184).

In Costa Rica, however, both axes and celts are invariably carved with the head at the poll end, with the body only an implied presence in the usually undecorated bit end (Figure 5). This consistent formal inversion of the Olmec format has an intermediate expression in the Olmecoid axe pendants from Playa de los Muertos, Honduras, where the blade or bit is at the bottom, and the large head is the top, in what would have been the poll (Easby 1968:Figure 62).

In Guanacaste-Nicoya, the most common type of jade object is the so-called axe god, either anthropomorphic or zoomorphic, which constituted about one-third of Hartman's (1907) collection of jade from Las Huacas (Lothrop 1955). Anthropomorphic forms made up about 75 percent of Hartman's collection, with the balance predominantly avian. Of the avian forms, Snarskis and Gomez P. have recently identified three species: quetzal, Pharomachrus mocino (BC Numbers 20, 27, 29); harpy eagle, Harpia harpyja (BC Numbers 24-26); and whippoorwill, family Caprimulgidae (BC Number 30).

The quetzal is distinguished by a centerline crest running from front to back, the harpy eagle by two lateral tufts (occasionally looking more like a cleft), and the whippoorwill by its wide, stubby beak and squat body, rendered more faithfully in Late Period IV Catalina phase Marbella Zoned Bichrome ceramic ocarinas (BC Number 3). While the whippoorwill identification may be somewhat tentative and restricted to Guanacaste-Nicoya, both the centerline crest of the quetzal and the lateral tufts of the harpy eagle are diagnostic traits that easily allow separation of these species, in the Atlantic Watershed as well.

Although there may originally have been distinctions in meaning between avian axes and avian celts, they are not so far apart. What is clear here, however, is the contrast between the prominent avian nature of "axe gods" in Guanacaste-Nicoya, and the rarity of avian motifs on Olmec motifs and "Olmecoid" axes and celts (Joralemon 1971:Figure 176). This is somewhat puzzling in view of the relative frequency of avian motifs, especially as head ornaments, in Olmec monumental art: e.g., macaw headdress ornaments on a colossal head, San Lorenzo Monument 2 (Joralemon 1971:Figure 6); harpy eagle headdress on the niche figure of Oxtotitlán Mural 1 (Grove 1970:Frontispiece); raptorial facemasks on the two sacrificers (?) of Chalcatzingo Relief II (Joralemon

1971:Figure 259); and a two-tiered raptorial headdress on the standing figure of the post-Olmec (?) Alvarado Stela (Joralemon 1971:Figure 11). Avian head ornaments in Olmec monumental art thus appear in elite politico-religious contexts, but this constellation of imagery appears to be separate from that of the axes and celts.

At Playa de los Muertos, Honduras, the late Middle Preclassic (?) axe pendants again are an intermediate expression, because one of them appears to be avian-headed; Easby (1968:Figure 65) also illustrates an avian axe from Guerrero with a centerline crest or tufts. Avian axes and celts are thus "Olmecoid" rather than Olmec per se, dating to the La Venta horizon and later, but apparently not part of the Olmec "votive axe" tradition.

Neither in Guanacaste-Nicoya nor the Atlantic Watershed do axes and celts show any trace of the Olmec "infantile feline," or of the "infantile toad-jaguar" that Furst (1981) has recently claimed to see. Zoomorphic axes and celts in Costa Rica appear, with a few problematic exceptions, to be entirely avian. The rulership connotations of Olmec raptorial head ornaments are evident, and may bear on the meaning of the harpy eagle in Costa Rican axes and celts, but the quetzal image remains puzzling. There are a few possible images of quetzal plumes attached to headdresses in Olmec

monumental art, e.g., Oxtotitlán Mural 1, and Chalcatzingo Relief 1 (Joralemon 1971:Figure 142), but there are no jade images of quetzals. Similarly, in Guanacaste-Nicoya there is one probable image of quetzal plumes in a headdress, on a metate of unusual style and iconography (BC Number 17). Whatever the significance of the quetzal in Costa Rican axes and celts, it did not carry over appreciably into other permanent media, and there is little evidence of the widespread use of quetzal plumes in elite costumes as, e.g., was so prominent at Teotihuacán and in Mayan art.

The predominance of anthropomorphic forms among the figure-decorated axes and celts of Guanacaste-Nicoya is another indication that the roots of this tradition go back to the votive axes of the La Venta horizon Olmec. Notwithstanding the scholarly focus on the composite feline or toad facial features of Olmec votive axes, the basic morphology of Olmec axes is always anthropomorphic; the placement of the head at the wide bit end, which makes the figure seem topheavy and ill-proportioned, supports the commonly perceived infantile nature of these axes. Olmec votive axes are predominantly of the full-figure type; the head generally receives a more pronounced three-dimensional treatment than the rest of the body, which is always more incised than carved (Joralemon 1971:Figures 162-168). "Half-figure" types, or

those with no indication of body parts below the head and shoulders, are rare.

Essentially the same full-figure/half-figure typology applies to the anthropomorphic pendant axes of Guanacaste-Nicoya and the Atlantic Watershed, but with important differences in composition. The half-figure axes of Costa Rica (under which is subsumed Easby's [1968] Olmecoid type) are true half-figures, unlike the Olmec axes, and the figure ends at the waist where the hands meet; the head and torso occupy the narrow poll half of the axe, while the body "disappears" into the bit half (BC Numbers 21, 22). Thus the Costa Rican half-figure axes are actually intermediate between the "head-and-shoulders" half-figures and the full-figures of the Olmecs. Similarly, the full-figure axes of Costa Rica, both in Guanacaste-Nicoya and in the Atlantic Watershed, always portray the figure above the preserved bit end of the axe (BC Numbers 33-35). Costa Rican full-figure axes thus likewise seem to be a compositional compromise, preserving both the full-figure trait of Olmec axes, and the emphasis on the undecorated and still functional cutting end of the Costa Rican axes.

Similarly with regard to iconographic motifs, the axe pendants of Costa Rica reveal a clear separation between traits derived from Olmec votive axes, and those derived from non-axe form traditions. Specifically Olmec votive

axe traits present in Costa Rican axes are: hands meeting or overlapping at the waist; cleft heads; plain headbands; and drilled eyes, nostrils and mouth corners (cf. BC Numbers 21, 32, 34-35; Joralemon 1971:Figures 162-168). Most of these traits are present in Easby's (1968:29) "Olmecoid" type, and there seems little reason to doubt that these traits were retained in Costa Rican axes largely because they are not specific to the composite infantile features of the Olmec votive axes. In effect, then, the Olmec traits that survive in Costa Rican axes are those that remained after the infantile features had been eliminated. This suggests that the elimination of the infantile features was a process relating to the reinterpretation of the Olmec axe form in Costa Rica.

This reinterpretation in Costa Rica included the addition of other iconographic traits whose sources apparently lay in other Olmec art traditions, and in Post-Olmec art as well. These traits are: "woven" serpentine tongues, "woven" headbands, mouth corner scrolls, and zoomorphic "alter egos" or headdress motifs.

Woven Tongues. The serpentine tongues with woven motifs on an "Olmecoid" axe from Guanacaste-Nicoya (Figure 5) and on a similar axe from the Atlantic Watershed (Easby 1968:Figure 4) indicate the diversity of

iconographic sources. The serpentine tongues here are similar to the bifurcated tongue that protrudes from the long-lipped agnathic belt mask worn by the figure on Kaminaljuyú Stela 11 (Quirarte 1973:Figure 81). The surface of the stela tongue has diagonal bands that Quirarte (1973:18) suggests are another serpent trait. However, on the two Costa Rican axes, the surface of the tongue is rendered as an interlaced or plaited band of three strands. The Kaminaljuyú comparison identifies the tongue as serpentine, but the difference in the surface motif and the non-agnathic mouth suggest that a different constellation of references and meanings may be associated with the pattern of the plaited band, which resembles the Mayan mat motif.

Thompson (1971:48) and Robiscek (1975) have stressed the association of the Mayan mat motif with political authority, pointing out that in Mesoamerican art, the woven mat is commonly reduced to minimally identifiable bands, or even to a kind of swatch sample, as if a small section of a mat had been snipped away. Cecelia F. Klein (1982b) has recently reconstructed the cosmological meanings of the mat and other woven objects, providing a more coherent explanation of the political connotations of such motifs. She argues that in Mesoamerica the plaited mat was one of several fiber artifacts that signified passage through the realms of the cosmos. In

Classic period Teotihuacán, the fiber object was a netted hoop, but "[by] the end of the Late Post-Classic period, the magical object appears to have been transformed into a mat or a woven throne" (Klein 1982b:22).

In the same context, Klein (1982b:25, 34 note 130), referring to Wauchope [1938:92-94]) notes that among the Post-Conquest Maya, the woven reed door is called the "mouth of the house." Implying considerable antiquity for this symbolism, Klein (1982b:Figure 14) illustrates an Olmec roller stamp design that shows a rectangular netted or plaited object in the gaping mouth of the earth god.

According to Klein, then, the mat as a symbol of political authority, as among the Post-Classic Maya and Aztec, was derived from its cosmological role as a symbol of passage through the realms of sky, earth and underworld. While Klein refrains from explicitly projecting this meaning of the netted or woven cult object back before the Classic period, the Olmec roller stamp suggests that this symbolic scheme was present in some form in the earliest complex societies in Mesoamerica, those of the Olmec and their neighbors.

In this new comparative context, the plaited serpentine tongues of the Costa Rican axes may have dual antecedents. The serpentine tongue is paralleled in the Izapan-style Stela 11 from Kaminaljuyu, where the tongue

emerges from the agnathic profile mouth of a saurian earth monster. The plaited motif occurs in the wide-open profile mouth of the Olmec earth monster. From this perspective, the iconographic antecedents of both the serpentine tongue and the woven motif may signify the entrance to the underworld through the mouth of the earth monster. Thus, iconographic comparison suggests that the axes may be related to earth monsters.

Both of these frontal half-figure axes have large gaping mouths, with the lips rendered as prominent concentric outlines; the even rows of bared teeth are flanked by deep conical drill pits. In both axes, the flattened nose with double outline, and the deeply drilled eye sockets, give the impression of a partly flayed face. However, both axes also have plaited or woven headbands or caps: the Atlantic Watershed example has the same plaited motif as on the tongue, while the other has an irregular pattern of hatched triangles. A second axe from Guanacaste-Nicoya (BC Number 22) has a plaited headband similar to the Atlantic Watershed axe discussed above, but without the serpentine tongue.

Mat Headbands. Umnistakable mat headbands are relatively common in Guanacaste-Nicoya ceramic figures of early Period IV (BC Numbers 93, 97), and in the Late Classic ceramic figures of Central Veracruz (Hammer 1971:Numbers 67, 68). In both traditions, the mat

headbands appear on males and females. In Early Postclassic incensarios from Alta Verapaz in the Maya Highlands, the head of Kinich Ahau, the sun god, has an openwork mat headband (Anton 1970:Plate 86). In this instance, the mat headband apparently signifies the movement of the sun through the underworld. In the other examples noted here, the meaning of the mat may be related to the funerary context of the ceramic figures, suggesting that here, too, the allusion is to cosmic passage.

At Bilbao, Guatemala, on the Middle Classic Monument 3, a scene of head sacrifice by a ballplayer, a diving god with a solar disk wears a mat element in the headdress (Parsons 1969:Plate 32a). Here, the appearance of the mat headband in the context of cosmic passage (descent) is explicit. On Tikal Stela 31, an early Middle Classic monument dating ca. A.D. 445, the ruler Stormy Sky wears two heads of the sun god on a belt decorated with mat and other plaited fiber or cloth elements (Jones 1982:Plate 51); here, the plaited motifs apparently signify space and time as they link the setting and rising sun.

The mat and other plaited motifs appear to have been fairly uniform symbols of cosmic passage among the Classic and Postclassic Maya. The occurrence of these elements in headbands makes this meaning explicit. The

Olmec roller stamp in which the mouth of the earth monster is filled with a mat or net element, perhaps representing the entrance to the underworld, suggests that aspects of this symbolic scheme may be traced to the Early or Middle Preclassic period.

Olmec carved monuments may also be relevant to this problem. La Venta Monument 13 depicts a figure wearing a woven "turban" (Joralemon 1971:Figure 4). Drucker (1981: 44-45) has recently identified this figure as a foreign traveller to La Venta. Olmec colossal heads are characterized by mutually distinctive head ornaments rendered as close-fitting skull caps. San Lorenzo Colossal Head 2 has such a cap, which appears to be made of woven strips of reed to produce a wicker-like openwork; three parrot heads are attached to the headband over the face (Joralemon 1971:Figure 6). There is general agreement that the colossal heads depict Olmec rulers, and Grove (1981:65-67) thinks that the headdress ornaments may be lineage or personal names, although he cautions that some rulers may be represented by more than one head. In any case, these two monuments show that woven headpieces are associated with the highest status within Olmec society, and perhaps with high status among the neighbors of the Olmec. If deceased Olmec lords were deified, as seems likely, then the headpieces would be contextually associated with cosmic passage, from earth

to sky.

In Costa Rica, the earliest appearance of woven and plaited motifs occurs in "Olmecoid" axes as mat-like tongues and headbands. Klein has shown that the Contact-period association of mats and other woven devices with cosmic passage can be projected back at least to the Classic period, and perhaps as far back as the Early to Middle Preclassic. Additional evidence shows that woven headpieces at least appear in Olmec sculpture, although their symbolic references remain more problematic. Since the Olmecoid axes of Costa Rica probably date to Middle Period IV, their mat-like motifs are intermediate between the Olmec examples and the better-known Classic and Postclassic traditions. From this perspective, the early Costa Rican examples appear as regional variants of a widely shared symbolic complex: at the most general level, these early Costa Rican mat devices probably signify both cosmic passage and elite status, even though their bearer's identity remains unknown.

"Alter Egos". Snarskis interprets the avian motifs, usually paired and in profile, on top of the head of anthropomorphic axes (BC Number 32) and other jade figures (BC Numbers 161, 162) as shamanic spirit-allies or alter egos. However, as we have just seen, an Olmec colossal head (San Lorenzo Colossal Head 2, Joralemon 1971:Figure 6) has parrot heads attached to the

headband. David Grove (1981:45-47) has interpreted these head ornaments as lineage or personal names, even though in that study he is generally sympathetic to the proposition that ethnographically-known shamanic ideology is relevant to the interpretation of Olmec monumental art. Given the other indications of ultimate Olmec influence on early Costa Rican jade carving, this parallel may not be coincidental. At this point, however, it may be premature to settle on one exclusive interpretation. These avian motifs could variously be read as "imaginary images" of shamanic transformations, with the spirit allies of the shaman made visible; as images of rulers and/or religious specialists with name or lineage signs; or even as mythological beings or "deities" which have no dependence on literal representation.

Snarksis has also suggested that some of the Costa Rican full-figures axes may represent bats, because of the way the small legs are bent in under the hips (BC Number 33), but Balser (1974:Lámina XXII, 1) thinks that the squatting or crouching pose may have been meant to show a person seated on a bench. Balser's idea actually accords better with the archaeological contexts, since jade axes were part of a mortuary complex including metates that may also have functioned as thrones or stools.

The invariable infantile content of Olmec votive axes, whether derived from were-jaguars, molting toads or something else, seems clearly to have been intended to express states of transformation and/or generation. The thorough elimination of infantile traits in Costa Rican axes, the development of an apparently new tradition of avian axes, and the possible recasting of anthropomorphic axes according to new ideas of status and cosmic passage, all testify to the transformation of the decorated axe tradition in Costa Rica.

Winged Pendants

In contrast to the vertically composed and worn axe and celt pendants of Guanacaste-Nicoya, winged pendants were horizontally composed and worn. Winged pendants are less numerous than axes and celts, and none has yet been found scientifically. Figure-decorated winged or laterally-flanged pendants in jade apparently were first made during the La Venta Olmec horizon, but those in the Olmec style are rare. Five Olmec examples have been published, each with a characteristic Olmec face with composite infantile features in the center, in relatively high relief. These are: a laterally flanged head from Oaxaca (Joralemon 1971:Figure 161); a flanged head with cross motifs on the flanges, from Yucatán (Joralemon 1971:Figure 230); a flanged head with feline incisors, of

unknown provenience (Joralemon 1971:Figure 231); a human (?) figure with bat wings, from Guanacaste-Nicoya (Easby and Scott 1970:Number 45); and a human (?) head with bat wings, from the Línea Vieja zone of the Atlantic Watershed (Pohorilenko 1981:Figure 5). Thus, of the five Olmec winged pendants, two were (reportedly) found in Costa Rica and both are composite bat forms.

Scholars have generally argued that Olmec winged and flanged pendants belong to a broad Circum-Caribbean tradition of horizontal winged pendants, the vast majority of which are not figure-decorated. Easby (1968:93) and Balsler (1974:24) suggest that the winged pendants of Costa Rica are a fusion of "northern" imagery with a "southern" pendant form.

Ten winged pendants are known so far from Guanacaste-Nicoya, including the Olmec style pendant noted above. Among the remainder the imagery includes bats, sharks, alligators, fish, mollusca, and the so-called beak-bird (BC Numbers 36, 37).

According to Easby and Scott (1970:Number 46), the only known Olmec images of bats are the two winged pendants from Costa Rica. The major difference between the two from Costa Rica is that the Guanacaste-Nicoya pendant is a winged full-figure, and the Línea Vieja pendant is a winged head-and-shoulders-figure, with the head in high relief and the shoulders incised on the

wings. Thus, the basic Olmec votive axe figural typology of half-figure and full-figure applies here. Otherwise, the two pendants are similar, with indisputable "classic" Olmec heads with infantile features, and scalloped bat wings. The *Línea Vieja* pendant has on the skull above the headband an incised maize cob (observed by Pohorilenko 1976:315; cf. Joralemon 1971:Motifs 81, 88). The maize cob is flanked by drilled pits, possibly references to the planting of maize with a digging stick. The Guanacaste-Nicoya pendant has a maize sprout in the center of the belt above the genital area (cf. Joralemon 1971:Figure 172, where maize sprouts from a cob growing out of the cleft head).

While other Olmec winged pendants have composite infantile features, the two pendants from Costa Rica are unique both in their "batness" and in their reference to the germination and growth of maize. Joralemon (1971) apparently does not consider the bat wings to be a significant iconographic trait, however, since the Guanacaste-Nicoya pendant was classed as an image of God III, which he initially defined as an avian deity, and later as a "raptorial bird-monster related to the sky, sun, maize, chinless dwarfs, and religious ecstasy" (Joralemon 1976).

The non-Olmec figure-decorated winged pendants from Guanacaste-Nicoya all have one iconographic trait

category in common: aquatic references, usually in the wings, including shark, alligator, crab, fish (?) and mollusk. The shark-winged bat pendant (BC Number 36), is of special significance here because this configuration is uniquely accounted for by Classic Mayan glyphic evidence. The patron of the Initial Series Introducing Glyph (i.e., Long Count date) for the Mayan month Zotz (bat) is the xoc fish (shark), which is also the patron of the Mayan day Muluc (water, jade) (Thompson 1971:105; Kelley 1976). A stone figure from the southern Maya region seems to solidify this relationship among bats, aquatic fauna, and jade. This figure is an anthropomorphic bat with its outstretched wings decorated with the Mayan turtle shell motif (T625, box, turtle shell motif, possibly also related to a water lily motif, according to Kelley 1976:126); significantly, the figure wears as a large pectoral the day sign Muluc (T511) (Figures 25, 26). Literally, this figure can be read as a jade bat with its wings encompassing water. Although the figure is unprovenienced, Easby and Scott (1970:Number 183) date it A.D. 550-950 and relate it to the sphere of Copán on logical stylistic and iconographic grounds: the figure is extremely volumetric, a style trait associated with stone carving at Copán, whose emblem glyph (T756d) is a bat head. Joyce Marcus (1976:122-124) notes that toponyms referring to bats are especially found in the

southern regions of the Maya world, around Copán and in the highlands of Guatemala and Chiapas.

Linda Schele (1977:56; 1981:115) has characterized Palenque, the westernmost major Late Classic Mayan site, "as the western portal of the underworld, where the sun, the moon, and the cyclic gods died," and she suggests that Copán, the largest easternmost Classic Mayan site, was the eastern portal of the Mayan underworld. If Schele is correct, death and underworld associations of the Mayan bat would have had a special significance in the Copán sphere; the bat figure discussed above may manifest such a cosmological scheme. The extreme southern occurrence of the two Olmec bat pendants, at the absolute southeasternmost reaches of Mesoamerica as a culture area, may reflect a Mesoamerican cosmology in which bats and jade symbolized a watery southern underworld. This does not mean that these pendants were made by the Olmec in or for Costa Rica; more likely, they were carved by Olmec artists in the Olmec heartland, and carried southward beyond the Isthmus of Tehuántepec into the "colonial Olmec" regions of Chiapas, Guatemala or El Salvador, whence they later reached Costa Rica, probably in the Mesoamerican Late Preclassic period. The Costa Rican winged pendant tradition thus is intermediate between the Olmec tradition, probably of the late La Venta horizon and whose only exemplars are known from

Costa Rica, and the Late Classic Mayan cosmological scheme that post-dates the Costa Rican tradition but that still is iconographically related. The Mayan bat figure discussed above in fact can be seen as a greatly enlarged winged pendant.

The Olmec winged pendants and the Mayan bat figure clearly reflect a shared iconographic tradition, with little question of "disjunction." The Costa Rican winged pendant tradition was certainly inspired by the Olmec one, whatever the mechanics of contact and influence, and the glyphic associations of the shark-winged bat pendant from Guanacaste-Nicoya are so precise as to suggest a deliberate visualization of the Mayan-type scheme. A literal reading of the shark-winged bat pendant would suggest that the bat was the lord of a watery underworld, entered through the caves that bats inhabit. Since jade in Costa Rica apparently had much of the same material symbolism and value as in Mesoamerica, i.e., of preciousness, water, new life and rebirth, then the winged pendants of Guanacaste-Nicoya can be seen as variations on the theme of the watery underworld.

There may also be an underlying theme of fertility or rebirth here, since jade represents both "precious water" and the underworld, and because the fauna depicted are associated with the underworld (e.g., bat) and the earth (cf. Selser 1960-61, 4:464-467; Thompson 1971:145). More

abstract images of the watery underworld are shell-form pendants, among which might be included the Olmec and/or Izapan jade bivalve excavated several years ago at Talamanca de Tibás near San José in the Central Highlands (Snarskis 1979, 1981:51-54).

Avian images on these winged pendants are not really anomalous. In the Atlantic Watershed at this time, where beak-bird images are most common, they are most often associated with decapitated human heads or with dead "prisoners" (BC Number 139, beak-bird with trophy head macehead; BC Number 146, beak-bird with trophy head on metate; Figure 7, beak-bird with trophy head jade pendant). Another pendant, a crab with beak-bird wings (BC Number 39), has more in common with the iconography of the Atlantic Watershed, since it is an abbreviated version of the complex scene on a flying panel metate now in New Orleans (Easby and Scott 1970: Number 212). There, an anthropomorphic feline or monkey stands on the back of a crab in the flying panel, while a beak-bird with trophy head descends down each support on the back of an alligator, apparently into the underworld. The beak-bird is a composite being of macaw, vulture and harpy eagle, and since in the Atlantic Watershed it is the only being that seems regularly to descend into and emerge from the underworld, it may be a solar being par excellence. The crab pendant therefore may depict the beak-bird entering

the underworld where it takes the dead, some of whom, at least, may be reborn.

In summary, the winged pendants from Guanacaste-Nicoya appear to have their origin in a previously unrecognized Olmec cosmological scheme that associated bats with the watery underworld. During the Mayan Late Classic period, a similar scheme is associated with Copán and possibly with much of the southern Maya realm. The winged pendants of Guanacaste-Nicoya are temporally intermediate, and apparently belong to this same cosmological and iconographic tradition. The iconographic variety of the Guanacaste-Nicoya pendants, however, suggests that greater elaboration of this theme occurred in Costa Rica; Mayan Mesoamerica may have been as much receptor as donor. The horizontal composition of the winged pendants may also reflect the horizontal nature of the underworld. If so, the winged pendants reveal a system of directional symbolism that may be relevant to other categories of jade and stone sculpture.

Bar Pendants or Tubular Beads

Bar pendants or tubular beads seem to be uncommon everywhere in Nuclear America except Costa Rica, where there are few discernible differences between those from Guanacaste-Nicoya and those from the Atlantic Watershed.

The basic typology is the same for both regions: simple tubular beads, undecorated except for raised bands; and zoomorphic tubular beads which, with rare exceptions, are reptilian or saurian. Of the latter, one can distinguish monocephalic and bicephalic beings.

The method of use of at least the plain tubular beads may be shown by one category of stone sculpture in the Atlantic Watershed, the saurian-masked human figure of late Period V, perhaps ca. A.D. 700-1000 (BC Numbers 196-198). A standard iconographic trait of these figures is an assembled necklace consisting of one large horizontal bead, with a half-dozen or so shorter beads pendant from it. The present dating of the stone figures is based largely on iconography and inference (Graham 1981:122), since none has been found scientifically; it is probable that jade beads are represented and that such beads were a late category of jade in Costa Rica, coming near the end of the early traditions. The saurian-masked figures are thus important in this context for two reasons: they may show how and when some of the tubular beads were worn, and they suggest that the plain beads are associated with saurian imagery. Although similar stone figures are not found in Guanacaste-Nicoya, both geographical proximity and stylistic identity suggest similar uses and meanings.

In Mesoamerica, tubular jade beads appear to date

largely from the Classic period, with no Olmec or other Preclassic examples known. A Late Classic bar-and-pendant necklace similar to that described above was recovered from the Cenote Sagrada at Chichén Itzá (Coggins 1984:Figure 52; Rands 1965:Figure 8; Tozzer 1957:Figure 624).

In Guanacaste-Nicoya, three beings are represented in the zoomorphic tubular beads: monocephalic and bicephalic alligators (Figure 6c; BC Number 40), and monocephalic rattlesnakes (Figure 6b). The animal's body is frequently decorated with geometric or abstract designs, e.g., the double-strand guilloche or scroll motif in the monocephalic alligator, and the undulating "waves" of the rattlesnakes.

Carlos Balser raises the possibility that the bicephalic beads may be local variants of the Classic Mayan "ceremonial bar," and in view of the previous example of Costa Rican "downscaling" of Olmec votive axes, this suggestion may have merit. However, the body markings noted above are closely paralleled in base-line designs of Mayan stelae and other monuments of the Izapan style. The Izapan base-line scroll is very similar to the eccentric guilloche scroll of the monocephalic alligator (Quirarte 1973:Figure 7, e, g-j), and the undulating "wavy" body of the rattlesnake is similar to the watery body of the "dragon" at the base of Izapa Stela 1

(Quirarte 1973:Plate 1). As interpreted by Quirarte (1973:33), the base-line designs collectively represent the terrestrial sphere:

Its variable aspects are demonstrated by the numerous stylized representations of the markings on compound reptilian and saurian bodies: sometimes the surface is a body of water with fishes swimming in it; other times, its fertile aspects are represented by terrestrial "dragon" heads and crocodiles.

Thus, while the eccentric guilloche scroll motif of the monocephalic alligator might initially be seen simply as a variant of the mat motif, the saurian context and the Izapan analogue suggest that the specific references here are to the terrestrial sphere--the surface of the earth represented by a saurian--and the water of the underworld that it floats upon. The iconography of the bar pendants of Guanacaste-Nicoya indicates that the principle of horizontal coding as seen in the winged pendants should probably be expanded to include symbolic references to the terrestrial sphere, the surface of the earth, in addition to the underworld. The bar pendant tradition is probably later than the winged pendant tradition, since the former has Olmec antecedents while

the latter has Izapan antecedents.

"Spoons"

Carved jade spoons were until recently associated with the late La Venta horizon of Olmec art, but intensified looting and collecting in Costa Rica during the 1960s and 1970s revealed that again a late Olmec jade category was the only plausible antecedent of a local tradition of jade spoon carving in Costa Rica. While the late Olmec style of the carving and incising of the Olmec-attributed spoons is apparently well-accepted (cf. M. Coe 1965:745, Figure 29, incised spoon from Guerrero; Figure 9, carved spoon reportedly from Guácimo, Línea Vieja), the seeming rarity of Olmec-style spoons even attributed to heartland Olmec sites suggests that, like votive axes, Olmec spoons were either made in the heartland for "provincial" distribution, or made outside of the Olmec heartland. Perhaps significantly, there were no spoons in the "curated" Cerro de las Mesas jade cache, a diverse assemblage of Olmec and post-Olmec jade that may have been anciently looted from Gulf Coast sites (Drucker 1959).

Easby (1968:90) was apparently the first to identify the image on the Línea Vieja spoon as a "fanged and crested bird monster." Joralemon (1976:52) repeated this identification and incorporated this spoon into his

corpus of Olmec images of God III, the raptorial bird-monster. He likewise accepted Peter Furst's (1968:162) suggestion that Olmec jade spoons were "receptacles for psychotomimetic snuff," and argues that the "Bird-Monster is probably associated with the spiritual ecstasy produced by ingestion of psychotropic substances" (Joralemon 1976:52).

In contrast, both Balser (1974:22) and Pohorilenko (1981:311) identify the spoons morphologically as atepocate, tadpole images. Pohorilenko (1981:311) states that

this identification fits very well within the overall thematic aspects of Olmec representation, which is characterized by an extraordinary interest in the genetic process, as is the case with the Olmec "baby-face" representations.

Joralemon (1976:Figures 14h, 20h) interprets the Guerrero spoon cited above as an image of God I, the Olmec Dragon, and the Línea Vieja spoon as God III, the Olmec Bird-Monster, but on the basis of imagery rather than the spoon morphology. Pohorilenko does not resolve the contradiction between his morphological characterization of spoons as tadpoles, and his interpretation of the Línea Vieja spoon as a bird-

monster. In essence, then, Joralemon ignores the possible morphological symbolism of the spoons, while Pohorilenko raises but does not resolve the contradiction between morphology and imagery.

There is only one Olmec monument known so far that depicts a spoon, and it shows it being worn as a horizontal pectoral. This round pedestal stone (?) was discovered some years ago on the south coast of Guatemala, and has been published by Shook and Heizer (1976). The monument has a most unusual composition, in sharp low relief, of an extremely attenuated profile "acrobat" whose contorted body describes a circle, intersected by a more naturally proportioned frontal figure.

This mounument depicts Olmec-style and -attired figures, and while its composition seems almost deliberately abstruse, the accoutrements are shown with great clarity. Apparently unnoticed by Shook and Heizer or by Pohorilenko, the frontal figure wears a jade spoon as a horizontal pendant. Thus, the horizontally worn jade pendant, suitably oriented to depict a tadpole, supports the directional equation of horizontality and watery places. The infantile nature of the tadpole also supports the notion that the horizontal watery realm is the source of new life. If Olmec spoons are in fact later than the Olmec bat-winged pendants found in Costa

Rica, as seems probable, then the infantile anthropomorphic features of the bat-winged pendant figures have been replaced by the depiction of the infantile tadpole. Thus, the symbolic associations of Olmec and Costa Rican spoons, whether plain or decorated, would appear to be with a horizontal watery realm where new life begins. The notion of the underworld is somewhat problematic, and inferred from the compositional evidence. While Pohorilenko (1981) entirely discounts the possibility of any contemporaneous or direct Olmec influence in Costa Rica, the pedestal stone from Guatemala seems to indicate that jade spoons got at least that far south during late La Venta times. If Pohorilenko is probably right in the strict sense about Olmec not having been in Costa Rica, it must also be evident that important components of late Olmec religious-cosmological ideology and material symbolism were shared in Costa Rica.

Small Effigy Pendants

Small jade zoomorphic effigies are another category of Costa Rican jade with some similarities to Olmec jade. Olmec small jade effigies include vultures, monkeys and duck heads (Easby and Scott 1970:Numbers 46-50). Among the small effigies known from Guanacaste-Nicoya and native to the region are rabbits, frogs, coyote heads,

insects (wasps or bees), toads with large parotid glands, agoutis, hummingbirds and "eagles" (Balsler 1974:Lámina XXIV). While the Olmec and Costa Rican groups differ in content, they are similar in size, and perhaps in function.

The small size of these carvings suggests that they may have been worn as "charms" on bracelets or necklaces, or as parts of beaded ensembles. This should not imply, however, that these objects are necessarily without iconographic significance. While few of the species shown in the Guanacaste-Nicoya effigies are present in stone sculpture of that region (apparently only the coyote and raptor), most of the species do figure in the better known religious-cosmological iconography of Mesoamerica (e.g., rabbit, frog, toad, hummingbird, wasp or bee). There is also the possibility that a few effigies could be literal renderings of Mayan glyphs; the best candidate here would be the frog effigy, drilled for vertical suspension with the head oriented upward, recalling T740, the "upended frog" birth glyph.

On a more mundane and practical level, these small effigies could have been hunting charms, to bring a successful kill (e.g., rabbits, agoutis, coyotes, raptors), and curing charms used to absorb or expel illness (e.g., frogs, toads, insects, hummingbirds).

The small size and often rather cursory execution

suggest that the small effigies were more widely distributed than the larger objects of jade.

Summary: Jade and the Iconography of Stone Sculpture in Guanacaste-Nicoya

The proposition that foreign iconographic influence should be more obvious in Guanacaste-Nicoya jade, as opposed to stone sculpture, because of the greater variety of imagery in jade, has been confirmed. Paradoxically, however, the intensification of archaeological activity in Costa Rica in the last decade has made the nature of the jade industries there more rather than less problematic and mysterious. Costa Rica no longer seems to have been a major source of raw jade for Preclassic Mesoamerica, and there may even be more Mesoamerican jade in Costa Rica than there is Costa Rican jade in Mesoamerica. The emergence of jade industries in Costa Rica may have been predicated upon long-distance exchange networks to acquire the raw material, as for the Olmec. The origins of foreign worked jade in Costa Rica correspond generally with the sources of foreign iconographic influence in the Costa Rican jade traditions: late Olmec, Post-Olmec, and Classic Maya.

The iconographic transformation of the Olmec votive axe tradition was evidently much more complex than has been previously supposed. The orientation of the figure

on the axe was inverted, while the axe itself was apparently transformed from a presumed cult object into a personal pendant ornament. Both the predominance of anthropomorphic forms and the full- and half-figure typology were preserved from the Olmec tradition, but the new composition seemingly stressed the axe's function by separating the bit end from the figural design. Perhaps most significantly, from an iconographic standpoint, the infantile and were-jaguar (or were-toad) features of the Olmec axe tradition were completely eliminated, in favor of other iconographic motifs, Olmec and Izapan, that focus on cosmological themes and, possibly, rulership. The Guanacaste-Nicoya tradition of avian axe imagery was apparently derived from Middle to Late Preclassic Olmecoid traditions, although some influence may have come from the Olmec use of raptorial traits in headdresses and masks.

The elimination of infantile traits in the Costa Rican axe tradition thus may be related to the introduction of Olmec and Izapan traits concerning cosmic passage in the anthropomorphic axes, and with the new development of the avian axe complex. It cannot be determined yet, however, if the changes in imagery and composition reflect a similar change in meaning, i.e., if the transformational-generational symbolism of Olmec votive axes was differently expressed, or eliminated

altogether.

The description and preliminary analysis of the iconography of winged pendants in Costa Rica is important because it provides, for the first time, an indication of the cosmological, zoomorphic and directional symbolism of at least one category of objects in the early tradition. The notion of a watery underworld symbolized by aquatic beings and presided over by a bat apparently stemmed initially from the Olmec, but shows significant links with Classic Mayan concepts.

Consideration of a second category of horizontally-composed and -worn jade ornaments, bar pendants, led to the probable identification of an iconographic complex related to the terrestrial sphere, with apparent Izapan-derived iconographic traits. A third category of horizontal objects consists of jade spoons, and again there are clear Olmec antecedents. Indeed, it is not even certain that many of the spoons found in Costa Rica were actually made there; they may have been made by the Olmec and then exported. Like the winged and bar pendants, spoons are also equated with a watery realm. Finally, the Guanacaste-Nicoyan category of small jade zoomorphic effigies again may have Olmec antecedents; although there is little if any indication of direct continuity in the choice of species with the Olmec category, most, if not all, were important in later Mesoamerican cosmologies.

Because jade is the most distinctively "Mesoamerican" material worked in the early traditions in Costa Rica, it is perhaps not surprising that significant relations with Mesoamerican iconographic traditions should be so apparent. The remaining components of the early tradition mortuary complex--maceheads and metates--can be analyzed in terms of this tentative iconographic basis.

3. Maceheads

In Guanacaste-Nicoya, maceheads are small hardstone artifacts, frequently biconically perforated and usually figure-decorated. The outside diameter or maximum dimension ranges from 6-15 cm., and the inside diameter from ca. 3-5 cm. Quartzite, calcite and other rocks are common, but jade is rare. Because of the perforation, virtually all students have inferred that these objects were made to be mounted on thin wood shafts, although there are no reports in the literature of the discovery of hafted or mounted maceheads. The biconical perforation, produced by tubular drilling from each side, suggests that a special hafting or mounting method was used, but its nature is not known. However, sculptures from the Atlantic Watershed, jade staff-bearer figure pendants, show one particular type of macehead mounted on a shaft (cf. Figure 8; BC Number 139). This at least

indicates that some maceheads there were mounted on shafts. Although there is no such evidence for Guanacaste-Nicoya, the near identity of most maceheads in the two regions is enough to confirm their use with staffs or shafts.

However, the traditional identification as maceheads or clubheads have functional implications that have never been explored. Besides the straightforward implication that decorated maceheads were actually used as weapons, there are at least two other plausible uses of these objects. They could have been ceremonial or emblematic versions of actual weapons; or they could have been an emblem or symbol largely divorced from any reference to weaponry, as e.g., markers of social status or group membership (See the comments by Snarskis, BC Number 44).

Aesthetic elaboration, in conjunction with frequently small size and evident fragility, indeed seems to contradict a purely utilitarian interpretation, although the points and spikes of some examples certainly have a martial capability (BC Number 47). There is, however, no hard evidence for sustained or endemic warfare in Guanacaste-Nicoya during this time. Collectively, the imagery of the early tradition here often is pacific in comparison with the sacrificial themes of the Atlantic Watershed. While it probably is unlikely that the increases in social complexity of this time were achieved

without some coercion, the utilitarian macehead interpretation is moot without better evidence.

Similarly, unless the plain or geometric maceheads, mainly spheres and spiked cylinders and disks, were actual weapons, there are no recorded finds of obviously utilitarian maceheads. Of course, the real war clubs could have been made entirely of wood, as apparently was the case with the Olmec, but here again there is no independent evidence. Hence, the hypothesis that maceheads are ceremonial versions of actual weapons is weakened because there is no other evidence in Guanacaste-Nicoya of war clubs.

The final hypothesis, that the maceheads are markers of social position or group membership, derives from brief comments by Snarskis (See BC Number 44) and Lange (1979). Snarskis bases his comments largely on ethnographic data indicating the presence of zoomorphic clan symbols among the few remaining indigenous peoples of the southern Atlantic Watershed, but there is no evidence that the late prehistoric peoples who were their presumed ancestors made or used stone staff heads. Lange's comments are based on the near identity, in morphology and motif, of maceheads in both Guanacaste-Nicoya and the Atlantic Watershed in the early tradition. According to Lange (1979a:11),

...maceheads were symbols of either rank, class or status. Almost identical forms are repeated across the country and indicate social and hereditary ties among geographically dispersed upper classes.

Lange infers that this inter-regional similarity reflects a shared high-level communication system. At this point, all of these ideas lack comparative data regarding the form, iconography and use of maceheads. So far we have been limited by an implicit assumption that comparable artifacts are unknown elsewhere in Nuclear America.

In Mesoamerica, no extant counterparts or examples of maceheads have been reported for the Preclassic periods, but there is visual evidence for the existence of decorated warclubs and ceremonial staffs during the La Venta Olmec horizon. Joralemon's (1971) Motif 74 is apparently a carved wood war club, and it appears in a variety of contexts and forms: with the small surrounding figures of La Venta Stela 2, and on La Venta Stela 3 and Chalcatzingo Relief II, where the left figure displays a "flowering" staff-cum-maize stalk (Joralemon 1971:Figures 2, 3, 259). Joralemon's (1971:Figures 2, 13, 34) Motif 76, a staff, is held diagonally by the central figure on the rock relief at Las Victorias, El Salvador, and possibly appears as a quasi-glyph on an incised celt from Central Mexico. The famous Humboldt Celt has

incised renderings of a paddle-shaped war club (as held by the middle figure of Chalcatzingo Relief II) with perhaps a maize cob motif in the upper paddle part of the object, and another "flowering digging stick" (Joralemon 1971:Figure 32).

The Las Victorias relief is perhaps the clearest depiction of an Olmec mace, with a separately carved (stone?) globular macehead on the shaft, near the top. The central figure of La Venta Stela 2 carries a possibly bicephalic staff, larger than but comparable to the actual Olmec black stone bicephalic scepter from Ejido Ojoshal, Cárdenas, Tabasco (Joralemon 1971:Figure 183; Navarrete 1974:Figure 16). This object depicts Joralemon's God II, the maize god, at the top, with Joralemon's banded maize motif emerging from the cleft head (Motif 81). The bottom head, rendered in profile with mouth downward, is his God I, the Olmec Dragon, identified with "earth, water, and agricultural fertility" (Joralemon 1976:37). The body connecting the heads of Gods I and II is a bound or clasped bundle (Motif 151). Given Joralemon's interpretation of the scepter heads as those of the maize and earth gods, it is likely that the bundle signifies maize stalks emerging from the body of the earth god.

Quirarte (1981:294), however, sees the Tabasco scepter as a horizontal bicephalic creature that, he

feels, foreshadows tricephalic "split" imagery. However, he ignores the fact that scepters are normally held vertically. The upright position of the maize motif and head of God II are only meaningful when read vertically, although the "descending" profile head of God I could also be read horizontally as an image of the earth's surface. The directional code of the Tabasco scepter is basically vertical, in keeping with the growth of maize, which emerges from the head of the earth dragon.

The Tabasco scepter is not unique. Navarrette (1974: Figures 15, 17, 18) illustrates fragments of three other scepters of identical or similar iconography, and a small figure holding the same type of object vertically. These objects thus reveal an Olmec tradition of small carved stone staff-like objects, bicephalic, and with evident directional coding, which may have been used in rituals of agricultural fertility. Although these scepters have no apparent martial associations, the main figure of La Venta Stela 2 carries a large staff, possibly bicephalic, and is surrounded by figures with (carved wood?) war clubs. If the main figure's staff were a bicephalic scepter, then here the martial associations would be more apparent. Given the scepters' associations with the elite and with maize fertility, their real-life counterpart must have been the wood digging stick (coa), which penetrates the earth's surface to plant maize. The

transformation of the digging stick into a symbolic expression of elite authority as the source of agricultural fertility is thus directly analogous to the Olmec aestheticization of the stone axe (Graham 1980).

Olmec art thus provides an antecedent tradition of figure-decorated staff-like objects combining references to elite status, agricultural fertility, and possibly martial authority. The Las Victorias macebearer so far provides the best evidence for the existence of geometric stone maceheads in the Olmec horizons, and here the martial reference seems paramount: the caped mace-bearer may signify (or threaten) the presence of an Olmec garrison far from the heartland. The depicted globular macehead here is very similar to some maceheads from Guanacaste-Nicoya (BC Number 51). If maceheads like that at Las Victorias actually existed, we would again have visual evidence in southern Mesoamerica of an intrusive Olmec context for an object-type found later in Costa Rica. As with the jade spoons found in Costa Rica, there is no conclusive evidence that the globular or spherical maceheads found in Guanacaste-Nicoya were actually made there; they too could be foreign heirlooms.

At this point, then, the Middle Preclassic Olmec horizons provide suggestive evidence of staff and mace traditions in Mesoamerica, south and east of the Olmec heartland. There was an Olmec tradition of figure-

decorated staffs or scepters associated with elite authority and agricultural fertility, and a possibly separate tradition of maces that may be associated with an Olmec military presence in portions of southern Mesoamerica. The Late Preclassic period, however, is so far silent about both traditions, apparently lacking both direct and depictive evidence.

Apparently the earliest direct archaeological evidence of perforated stones comes from the Miccaotli phase (Teotihuacán II, A.D. 150-250) in the Valley of Mexico (Tolstoy 1971:Figure 5e, 288). Tolstoy suggests that these globular, biconically drilled objects, often called "doughnut" stones, may be clubheads, and notes that they appear from the Classic period on (the example illustrated by Tolstoy would be "Protoclassic" or Early Classic). However, in the same time period in the Guatemalan Highlands, the same type of object is identified by Borhegyi (1965:26) as probably a digging stick weight. Borhegyi notes that these "doughnut stones" seem to be concentrated in the Pacific Coast and Central Highlands regions of Guatemala, and that in the latter region they may occur as early as the end of the Late Preclassic period (perhaps ca. A.D. 100-200). He also cites Berlin's (1952:Figure 17g) publication of a figure-decorated perforated stone assigned to the Kaminaljuyú Aurora phase (A.D. 300-400). Borhegyi's

(1965:26 note 35) final comments on these objects are worth noting:

Because they were frequently carved with elaborate designs (representing monkey, jaguar, or human faces) and were occasionally found within the boundaries of ceremonial centers they may have been used for ceremonial planting. However, their alternate function as batons and maceheads or symbols of power is also a possibility...

Obviously, in the absence of more precise archaeological data, no resolution of the issue is possible. Even then, however, a neat either/or resolution may not be warranted, since there is no empirical reason why the same object could not have been used for either purpose. A multi-purpose artifact of this nature, bridging agricultural and martial activities, would have been susceptible to the same kind of aesthetic transformation that produced Olmec votive axes. Although it would be premature at this point to attribute the Costa Rican staff head/macehead/digging stick weight traditions to influence from or contact with southern Mesoamerica, Mesoamerica was the source of the figure-decorated axe traditions, and provided the basic morphology of the Costa Rican metates. Since two of the

three components of the early tradition mortuary complex were derived from Mesoamerica, at least in terms of morphology, it would not be surprising if the third component were also intrusive from Mesoamerica. Archaeological data indicate that the Costa Rican mortuary complex was formed ca. A.D. 1-200, so that iconographic elaboration, the addition of imagery to maceheads and metates, was at least underway by this time. The present data on southern Mesoamerican staff traditions just barely satisfy the chronological criterion (i.e., of course, excluding the Olmec tradition).

The rest of southern Central America can be eliminated as a source because Costa Rica has the only known stone staff head tradition in the area. Colombia has no traditions of stone staff heads that are earlier or contemporaneous. Although the monumental stone sculpture of San Agustín in southern Colombia has numerous images of figures with war clubs and (probably related) ceremonial staffs, the actual objects probably were carved of wood, since no separate staff heads of stone or metal are reported (cf. Reichel-Dolmatoff 1972b: Plates 16, 35, 61, 63, 67, 93). The visual contexts here indicate that martial associations are important, and Reichel-Dolmatoff generally aligns such imagery with an aggressive or martial component of shamanism. San

Agustín therefore does not seem to offer either formal or iconographic precedents.

The so-called Sinú style of Colombian goldworking offers numerous examples of cast staff heads, including large-beaked birds, dogs, monkeys, a feline attacking an alligator, and human figures (Bray 1978:Numbers 235-245). According to Bray (1978:Number 235),

These objects are conventionally called "staff heads," though the placements of the sockets makes it clear that most examples were hafted horizontally rather than vertically. They may possibly have served as ceremonial spear-thrower hooks, but this is far from certain.

The Sinú style is generally dated ca. A.D. 1000-1500, which is too late to have had any influence in Costa Rica. It seems to include the only significant tradition of separate staff heads in Colombia, in any material. Although Bray (1978:Numbers 180, 181) has published two Muisca stone objects that he identifies as digging stick weights or "clod-breakers," these probably date well after A.D. 500, and are thus too late to have been antecedents of the Costa Rican traditions. The same objection must be raised against the well-known monolithic scepters and hafted axes of the Tairona,

probably dating after A.D. 1000 (Bray 1978: Numbers 319-321). Hence, at this point, there is little possibility that either the form or iconography of the Costa Rican staff heads could in any way have derived from Colombia.

In Ecuador the situation is similar. For the Cara phase in the Northern Highlands (Integration Period, A.D. 500-1500), Meggers (1966:144, Figure 44d-g) notes disk- and star-shaped stone maceheads that "assume shapes often executed in copper to the south and on the coast." While Meggers' disk-shaped maceheads look very much like fine versions of "doughnut stones," they again are too late, and Meggers implies that the Cara phase stone objects were based on Peruvian metal staff heads. Thus, northern South America can also be eliminated in the search for antecedents of the Costa Rican macehead tradition, and only the Central Andes remains as a possible alternative to Mesoamerica.

In Peru, the earliest evidence of war clubs and/or ceremonial staffs appears to be in stone sculpture and textile images of the Chavín "Staff God." Alana Cordy-Collins (1977) has argued that an early stone relief of the Staff God depicts the deity holding, as if it were a staff, a hallucinogenic San Pedro cactus. According to Cordy-Collins, this image of a four-ribbed San Pedro cactus, held as a staff by the Staff God, was a

prototypical image of this Chavín deity whose cult later spread to the coast via textile images and an associated hallucinogenic ritual. In her words,

The Staff God probably reflects the culmination of a shift in the economic orientation of Chavin civilization from the tropical forest cultivators to highland agriculturalists; the Staff God is so designated because he bears a staff in each hand-- quite possibly a digging stick initially and later a symbol of authority [Cordy-Collins 1977:360].

Cordy-Collins thus explicitly derives the ceremonial staff as authority symbol from the agricultural digging stick, and associates the staff with elite economic authority. It may be significant in this regard that one of the few Chavín or Chavinoid stone staff heads known was tentatively identified by Lothrop (1958: Number 299) as a cactus; this Cupisnique ("coastal Chavin") diorite staff head has four sharp discoidal blades or ribs at the cardinal points, separated by vertically paired conical spikes. (The cactus reference was eliminated by Benson [1963: Number 344] in her later edition of the catalog of the Bliss Collection.)

Although no Costa Rican maceheads appear to be directly similar to the Bliss Cupisnique example, there

are a number of spiked cylindrical and discoidal maceheads, some from the cemetery at Las Huacas (Hartman 1907). The Chavín staff head tradition certainly antedated the Costa Rican traditions, and was itself part of an areally expansive art style. However, there is as yet no evidence of Chavín figural stone staff heads.

Recent work by Oscar Fonseca Z. and James Richardson III (1978) provides the first evidence of possible artistic contact between Guanacaste-Nicoya and the Central Andes during the period A.D. 1-500. In their re-analysis of the Hartman collection of Costa Rican art in Pittsburgh, the authors claim to have discovered two small stone pendants of Camelidae, the family that includes guanaco, vicuna, llama and alpaca. The authors further note that during the late Early Horizon and Early Intermediate period, "camelid herding was an important economic element on the Peruvian north coast" (Fonseca Z. and Richardson 1978:306). The authenticity of the Hartman artifacts is beyond question, and Snarskis (1976) had earlier published an El Bosque phase ceramic camelid figure from the Central Atlantic Watershed, noting the existence of other ceramic camelids rendered as pack animals as well.

Fonseca Z. and Richardson tentatively suggest that the presence of camelid images in Costa Rica was the result of marine contact, via sea-going rafts, from the

northern Peru-Ecuador coast to the Nicoya Peninsula. If camelid images actually were the product of direct contact, perhaps the camelids were themselves present, and, being clearly strange and unusual, were recorded by local artists in clay and stone. Although the Costa Rican camelid images could have been copied from Central Andean images, or based on eyewitness accounts, one could then ask why other distinctively Andean traits such as stirrup-spout vessels, or images of sea lions, were not also copied.

The data of Fonseca Z. and Richardson, and of Snarskis, would seem to indicate some sort of Central Andean presence in Guanacaste-Nicoya during the span of the early tradition, between A.D. 1-500. Since this is too late to have been a Chavín-Chavinoid expedition in the Early Horizon, it must then be attributed to the Early Intermediate period. On a more general comparative level, Cordy-Collins' interpretation of Chavín staffs is valuable in providing independent associations of elite ceremonial staffs and agricultural digging sticks, an association that could have reached Costa Rica via later intermediaries.

In the Early Intermediate period, the Vicús, Recuay and Moche art styles of the northern coast and highlands of Peru all provide evidence of the local importance of ceremonial staffs and war clubs. The poorly understood

Vicús style of the Far Northern Highlands has yielded cast copper maceheads (Mosley 1978:65; unillustrated but apparently not figure-decorated). The dating of the Vicús style is problematic: following some years of intensive looting of cemeteries, a scientific excavation produced radiocarbon dates equivalent to the span A.D. 200-400, but some of the looted tombs reportedly contained Moche I ceramics, indicating that use of the cemeteries began several centuries earlier, perhaps before A.D. 1.

Among the objects excavated by Terence Grieder (1978:109, Figure 95) at the Pashash site of the Recuay culture in the southern part of the Northern Highlands were several fragmentary "doughnut stones" that in all respects appear identical to those discussed earlier (Grieder 1978:109, Figure 95). The context here allows no further functional discrimination, and Grieder suggested that they were used as flywheels on drill shafts.

Finally, war clubs and ceremonial staffs were central elements of the Moche culture (ca. 100 B.C.-A.D. 700) of the Northern Coast, rivaling the early traditions of Costa Rica in this regard. Moche personal ornaments and painted and modeled ceramics indicate the use of standardized geometric warclub heads: disks with conical finials, globes, "stars," and "pineapples" (Donnan

1978:Figures 44, 65, 67, 68, 70). There is at least one type of figural war club or staff, the "half-fist" (Donnan 1978:Figures 65, 66), a motif that is found also in the rare Moche stone sculpture, and in carved bone lime spatulae (Donnan 1978:Figures 42, 43). There is also at least one depiction of a discoid war clubhead topped by a zoomorphic finial, perhaps a canine or feline (Donnan 1978: Figure 65, left). In ceramic depictions, the most common clubhead appears to be a disk, a sort of fine perforated stone that invariably has a conical finial (analogous to the conical spikes on the Chavinoid macehead discussed above), and which appears to be separate from the actual club head.

Artifactual evidence divides between cast copper "star" club heads that probably were real weapons (Donnan 1978:Figure 11), and carved wood staffs with anthropomorphic or zoomorphic finials that may be ceremonial versions of the war clubs (Donnan 1978:Figure 198; Lumbreras 1974:Figure 122). In addition to these functional inferences based on the difference in material, the martial-ceremonial relationship also has an iconographic basis. One of the rare Moche wood staffs depicts the full figure of an owl, and anthropomorphized avian warriors, both owl and eagle (i.e., nocturnal and diurnal raptors) are frequently shown in ceramic paintings with the standard discoidal war club (Donnan

1978:Figures 209, 271). Since owl and/or eagle heads (and occasionally full figures) are relatively common subjects of maceheads in Guanacaste-Nicoya (e.g., Ferrero 1977:Lámina Vb), there is at least the possibility here of an iconographic relationship between Moche art and that of Guanacaste-Nicoya, with similar functional contexts. A local Costa Rican tradition of perforated stones, perhaps used as both clubheads and as digging stick weights, may have received a decorative impetus from Moche war clubs and/or ceremonial staffs. For Moche influence to have had any significant effect on the decoration of maceheads in Guanacaste-Nicoya, it must have occurred sufficiently early in the early tradition, and have been both fairly intense and involving the local elites who controlled art production. Both of these latter points are likewise suggested by the abrupt appearance of camelid imagery in stone and ceramics in Guanacaste-Nicoya and the Atlantic Watershed.

However, both chronology and precedent suggest that Mesoamerican-derived traditions of multi-functional "doughnut stones," used as maceheads and digging stick weights, probably initiated these traditions in Costa Rica before A.D. 1. We must also consider it likely that the basically vertical cosmological and directional codes of late Olmec stone scepters had also been acquired in Costa Rica, since other systems of directional coding in

Olmec objects seem to have been understood at the outset of the early traditions in Costa Rica. It is thus more likely that any Moche contribution to the Costa Rican staff traditions was largely confined to the ideational realm, providing a model for the elaboration of objects that were previously undecorated.

The data suggest, then, that the Costa Rican macehead traditions represent the fusion of Mesoamerican and Central Andean staff traditions. This convergence of "high culture" influences suggests that the Costa Rican macehead traditions relate to several realms of symbolism and behavior: coercive authority with the war club, elite status with the ceremonial staff, and rituals of agricultural fertility with the digging stick.

However, if Moche influence was significant in Costa Rica, this does not necessarily mean that the images and meanings were Moche-inspired. The image categories of both Guanacaste-Nicoya and Atlantic Watershed maceheads indicate that very few images of either region can be directly related to those associated with Moche clubs and staffs. In Guanacaste-Nicoya, avian maceheads depict quetzals, eagles and owls; canine images are limited to Canis urocyon or "little tiger," and felines may also be represented. Capuchin and squirrel monkeys have also been identified, and human subjects are limited to heads and skulls. There are also several varieties of geometric

maceheads, fairly simple in form.

Nearly all of these figural identifications are problematic to one degree or another. Only the raptors, eagle and owl (Ferrero 1977:Ilustraciones I-144, III-7), certainly have a comparable context in Moche art, with the anthropomorphized owl and eagle warriors and the owl staff head noted above. Moche clubs sometimes are pictured with zoomorphic finials (feline? fox?; Donnan 1978:Figure 66, left), as if to assert visually a relation between geometric war clubs and figural wood staffs. Moche wood staffs invariably show full figures, one of which is a feline attacking a man (Benson 1974: Figure 18), and another a fanged personage with a staff and accompanied by a child (Lumbreras 1974:Figure 123).

Moche non-figural maceheads are rather closely paralleled in Guanacaste-Nicoya and the Atlantic Watershed in form but not, of course, in material. Although the late early traditions of Costa Rica overlapped with the beginnings of metalworking, there are no known examples of metal club or staff heads from Costa Rica. From the Atlantic Watershed and Diquís regions there are eight-spoked "star" maceheads in stone that could easily be direct copies of Moche "star" maceheads cast in copper (Cf. Figure 20; BC Number 140; Donnan 1978:Figure 111). From a technological standpoint, it is far more likely that such a complicated form as the

"star" macehead would be more common in metalwork, instead of in stone carving where such forms could have no practical use. Thus, while simple geometric maceheads might be undiagnostic, the star-form examples in Costa Rica are probably imitations of Moche cast metal ones. Meggers' (1966:144) comments on the stone maceheads of the Cara phase in Ecuador are relevant here, since she also sees a similar influence of metalworking on stone carving.

Monkey images are not common in Moche art, probably in part because they are not native to the coast and highlands of the Central Andes. Donnan (1978:Figures 95, 96) has observed that monkeys are the only realistically depicted animals in Moche art that wear ear ornaments, and he suggests that monkeys "were kept as pets or taught to aid in the harvest of some fruits." Moche monkeys are also shown holding a lime gourd and spatula, apparently about to indulge in the very human activity of using narcotic drugs (Donnan 1978:Figure 182). While monkey images do appear in the Guanacaste-Nicoya early tradition in maceheads and ceramic effigies (BC Number 6; Ferrero 1977:Ilustración I-23), they are more monumental and perhaps more common in the contemporaneous flying panel metates of the Atlantic Watershed (e.g., BC Numbers 145, 147). On the metate supports monkeys are interchangeable with beak-birds, the mythical avian creatures that

frequently hold human heads in their beaks or talons, and deliver the dead to the underworld. In the Atlantic Watershed, then, monkeys partake of the anomalous nature of the beak-bird, an avian being associated with the underworld and death.

This interchangeability must reflect a sharing of imputed traits. The anomalous nature of the beak-bird probably derives from the implied contradiction of a large sky being that is consistently associated with dead or dismembered human bodies, and thus is defined by its movement between the cosmological realms of sky and underworld. Thompson (1971:80, 143), following Seler (1960-61,4:456-464), notes that in Mayan cosmology the monkey (eleventh day sign of the Sacred Round, Yucatec Chuen) was a patron and symbol of human arts and crafts, and that a monkey head could also replace that of the sun god in the kin (day) sign in Initial Series inscriptions. To explain the relation between the sun and monkeys, Thompson (1971:143) turns to late Central Mexican cosmology and religion:

In Mexico, the sun god as patron of the arts of singing, music, and entertainment was Xochipilli ("Flower Prince"), and one of his guises was that of the monkey. Furthermore, the day Ozomatli, "monkey," is under his rule. In the Mayan area the

sun god was also patron of poetry and music, and was likewise connected with flowers (the plumeria, symbol of procreation). The monkey also symbolized the arts and crafts as well as licentiousness and the act of procreation, but the sun god was the first person to cohabit. With these various threads forming a definite warp and weft, it is entirely appropriate that the monkey should substitute for the more usual representation of the sun.

H.B. Nicholson locates the late Central Mexican deity Xochipilli within a maize cult that is subsumed under the broader religious-ritual themes of rain, moisture and agricultural fertility. He (1971b:417) characterizes Xochipilli as one of "an important group of youthful solar-fertility deities who, aside from the generative power in the abstract--and sexual lust which provided it--presided over flowers, feasting, painting, dancing, and gaming."

Thompson (1971:268) also notes that the "evil" glyph in Codex Dresden is probably a monkey head with death symbols that equates evil, or bad luck, with licentious activity or "uncultured" sexuality. In a companion essay to the one cited above, Nicholson (1971a:Figures 42, 43) illustrates two Aztec stone sculptures of monkeys, each wearing "human" ear ornaments as among the Moche.

Finally, Michael Coe (1977) has shown that among the Maya, a monkey deity was the patron of scribes and artists, and was associated in mythology with the underworld, while also a glyphic indicator of the sun (kin, day).

Some ethnographic dimensions of the monkey's anomalous nature are suggested by Peter Roe (1982:232-236), who in the course of his analyses of monkeys in South American Tropical Forest mythology, provides us with a virtual catalog of deviant simian behavior. Monkeys are "hairy, humanoid, clever, and oversexed" and also "dirty, cannibalistic, noisy, laughable, and of underworld (forest) affiliation." They produce "random noise," as opposed to the "ordered tones of men's sounds," and are thus associated with thunder, a natural noise, and with the underworld and with uncontrolled sexuality in the aquatic realm. Monkeys are further associated with females, anal incontinence, a "failed protohuman form related to the other imperfect and doomed protocreatures of the first stages of the cosmos," penes, and "exceptionally libidinous" behavior.

Thus, diverse data from Central Mexico, Mayaland, the Central Andes and Amazonia, indicate that monkeys generally are perceived as being anomalous, defying and bridging normally discrete categories such as nature/culture, animal/human, underworld/sky,

nature/culture, animal/human, underworld/sky, order/disorder, and fertility/lust. The anomalous nature of Costa Rican monkeys, inferred from their interchangeability with beak-birds, is thus paralleled elsewhere in the Americas.

The owl (Ferrero 1977:Ilustración III-7) is also a confounder of categories, as a raptor that eats at night and thus is the nocturnal counterpart of the diurnal harpy eagle (Ferrero 1977:Ilustración I-114). The martial connotations of the Moche owl and eagle warriors have already been noted (Donnan 1978:Figures 209, 271), and one can also note here that Kubler (1967:9-10) has argued that at Teotihuacán both owls and quetzals are symbolic of "warrior cults" or associated social groups. Esther Pasztory (1978a:133) has argued that the Teotihuacán "warrior cult" was associated with the "sun god as a raptorial bird" (harpy eagle?) and with "the owl and weapon symbol." She adds that in the Teotihuacán complex of warrior imagery, warriors could also be represented as armed anthropomorphic coyotes, and that the "dog was a symbol of descent to the underworld." Dogs in Mesoamerica at times were companions of the dead in the underworld, perhaps befitting their domesticated status, as seen in the ceramic funerary effigies of West Mexico (Kan 1970:14; Meighan and Nicholson 1970:30). Skeletal remains of dogs were common in the elite

Teotihuacanoid tombs at Kaminaljuyú (Kidder et al. 1946; see also Thompson 1971:78-79). As wild species, e.g., coyotes, canines in Mesoamerica seem more often to have been associated with warfare and aggression. The Guanacaste-Nicoya canine macehead (BC Number 48) may or may not have been of a domesticated species (assuming the identification to be correct) so that here comparative data are of little help, beyond a basic association of wild canines with warfare and the probability that all Costa Rican maceheads have some martial connotations.

All of the Guanacaste-Nicoya maceheads discussed can be associated with beings or motifs that are cosmologically anomalous (monkey, owl), and/or associated with aggression and death (eagle, quetzal, owl, human head and skull). The identity of the canine remains elusive, and Lothrop's (1958:Number 143) jaguar identification has not been generally accepted, since it has no apparent feline traits. All human macehead images are disembodied, representing either skulls, or faces attached to a "shield." The aggressive, martial component is perhaps most apparent in the iconographic analogues to the martial imagery of both Teotihuacán and the Moche. The comparative data suggest that a synthesis of functions and meanings was at the root of the Costa Rican macehead traditions, drawing on warclubs, ceremonial staffs and digging stick weights from Mesoamerica and

Andean sources. This may account for the seeming resistance of the imagery to direct, one-to-one iconographic comparisons and interpretations. It must also be remembered that maceheads were but one part of a mortuary complex of "art-tools" that has no parallels elsewhere in Nuclear America.

As real or symbolic warclub heads, maceheads represented the instrument of death that was wielded as the behest of elite authority. As ceremonial staffs of elite authority, they expressed elite power and control in warfare, and as elaborated digging sticks, elite authority in food production. Metaphorically, the anomalous nature of some macehead imagery would esoterically express the power of the elite to control or preside over changes in cosmological standing, from life to death (warfare), and from death to life (agriculture). The vertical nature of the staff, and its inversion from digging stick to warclub, enhance the anomalous nature of the imagery and provide a physical metaphor of vertical movement between different cosmological realms. In the Atlantic Watershed we shall see more clearly that such a cosmological code can be inferred from the jade staff-bearing figures, whose staffs have a beak-bird and trophy head at the top, and a downward-pointing profile saurian head at the bottom. This configuration recalls that of the Olmec Tabasco scepter, and suggests that the

staff was conceptualized as a vertical axis of movement and transformation between different cosmological realms. Given the near-uniformity of maceheads in the two regions, one can fairly assume that similar codes were applied to staffs in Guanacaste-Nicoya.

Earlier attempts to determine the function and meaning of Costa Rican maceheads do not appear to have been sufficiently comparative or synthetic. Comparative data suggest that in Costa Rica staffs coordinated diverse functions and meanings, in part through the use of polysemic imagery. The condensation in one artifact type of references to various social functions, and the use of polysemic imagery, suggest that the macehead and staff were potent, portable, and public symbols of pervasive elite power. We might now recall Cordy-Collins' comments on the agricultural generation of the Chavín Staff God. In Costa Rica, too, the polysemic macehead and staff is an aesthetic-ritual reflection of a major shift in the mode of agricultural production, since the emergence of the early traditions of stone sculpture coincides with the formation of a new agricultural economic base and the birth of complex societies.

4. Metates

Special-purpose metates in Guanacaste-Nicoya are three-legged stone platforms, usually carved from volcanic rocks and varying widely in size, from miniature versions that could have been toys or used to grind condiments or paints, to relatively monumental versions that may be a meter or more in length and that could easily have served as stools or seats. Although not all metates in Guanacaste-Nicoya were decorated, the most important and the most costly (labor-intensive) were. They can be arranged within a chronological typology based on carving technique and design. The earlier type has legs that are rough cylinders or truncated cones. The carving is confined usually to the underside of the plate and to the legs, and no effigy heads project from the end of the plate. This type, hereafter called Type A, dates to the period A.D. 1-500, and is contemporaneous with those tripod metates of the Atlantic Watershed in which decoration is confined to relief work on the bottom of the plate (BC Numbers 14-17).

The second type of Guanacaste-Nicoya metate, hereafter Type B, has a similar longitudinally curved plate but has slab legs, usually in the form of a

truncated and inverted triangle, and usually with openwork or perforated carving (BC Numbers 72-78). Archaeological contexts indicate that this type was made during the period A.D. 500-800, perhaps beginning earlier and ending later. Although the extent of temporal overlap with Type A metates is unknown, it probably was not great, since archaeological data suggest that Type B metates effectively replaced those of Type A, probably ca. A.D. 400-600. The technical virtuosity of many Type B metates supports their contemporaneity with the great flying panel metates of the Atlantic Watershed.

While the metates of Costa Rica have for decades been recognized as among the most impressive achievements of Precolumbian stone carving, our understanding of them has actually been quite poor. It was not until the 1960s and 1970s that the approximate chronological positions of the metate types was determined, a direct consequence of more refined ceramic chronologies; iconographic studies of metate imagery are still virtually nonexistent. Even the authors of the masterly Before Cortés exhibition catalog (Easby and Scott 1970) were limited to brief notes about metates. Haberland (1973) in his essay on stone sculpture of southern Central America in the volume of companion essays to the Before Cortés catalog excluded functional stone sculpture from his survey. Given the meager amount of research on record, much of what follows

is provisional. Thus, it is suitable to begin with a review of the empirical evidence regarding the function and meaning of metates in Guanacaste-Nicoya.

The final deposition of decorated metates in high-status burials is indicated by a few well-known documented finds, but we do not know the sex ratios of the deceased, or whether the burials were primary or secondary. Although whole metates are invariably reported as having been found in mortuary contexts, the minimal archaeological knowledge of other types of sites, especially habitations, precludes any definitive statement that decorated metates were always destined to be burial furniture. The available data do suggest that most metates were so employed, whether simply placed near the remains, or actually used as a burial platform. Burial per se, the primary or secondary interment of the remains of the deceased, was probably a correlate of social rank, with only the higher-ranking dead being secondarily interred. Metates were the largest, most labor-intensive and probably most important component of the early tradition mortuary complex, and hence were probably multi-purpose and polysemic.

Evidence of the use and meaning of metates is sufficient to counter any argument that well-made tripod metates were never actually used as grinding stones. Lange (1979) has been the chief proponent of the belief

that Guanacaste-Nicoya metates were actually stools rather than grinding stones. However, as shown in Chapter III, the formal sources of these objects were metates, and in many cases the plate shows grinding wear, even on the most elaborately decorated examples (personal observation). As we shall see, Lange is partially correct about their use as seats, but this use should not be separated from their metate origin. One ceramic image depicts a female with small but prominent breasts straddling a metate while grinding with a mano decorated with a mat-type cross-hatching (Ciruelas phase, A.D. 300-500; Ferrero 1977:Ilustración I-73). The decorated mano of the ceramic object is rare in actuality, suggesting that it accompanied a decorated metate (the base of the ceramic metate is missing), as in the 1980 find of a decorated metate and mano at Nacascolo (Graham 1981:131 note 1; Snarskis 1981:26; cf. BC Number 72).

Snarskis (BC Numbers 79, 93) has shown that other Guanacaste-Nicoya ceramic objects that clearly depict an individual seated on a bench or platform, invariably show tetrapod benches (often bicephalic saurians or felines), a type that has never been encountered in stone in Guanacaste-Nicoya. The ceramic bench figures probably portray benches made of wood and caning. From that standpoint, these objects can be associated with the formal and material traditions of both Classic Mayan

depicted benches (e.g., Tikal Wood Lintel 3, Temple 1, and Wood Lintel 2, Temple III, in Robiscek 1976:Figures 237, 238), and the ethnographically-known tradition of South American Tropical Forest "shamans' stools" and chiefs' benches (e.g., Reichel-Dolmatoff 1971:110-111). Thus, while visual evidence indicates the existence during the period A.D. 500-1000 of a separate tradition of wood stools and benches, this does not prove that metates were not also used as stools. Moreover, some evidence from the metates themselves suggests that they also served as seats. At this point, there is visual evidence only for the use of metates as grinding stones, but this does not tell us what was ground. It could have been maize, but it also could have been other substances of ritual importance such as drugs.

In Mesoamerica tripod metates are fairly common in mortuary contexts from the Classic period on, but virtually without exception they are confined to the peripheries of the graves. As suggested by Kidder et al. (1946), they may have been included to provide the deceased with some assurance of sustenance in the afterworld. They were often associated with apparent retainer burial, as in Mounds A and B at Kaminaljuyú. In Mesoamerica, northern South America and the Central Andes, there seem to be no examples of the dead interred on or below tripod metates. Likewise, only in southern

Central America (i.e., non-Maya Honduras, Nicaragua, Costa Rica and Panama) are there traditions of decorated tripod metates, all of which postdate the metate traditions of Costa Rica. Although there are a number of isolated occurrences of decorated metates in Mesoamerica, e.g., Veracruz (Hartman 1907:Figure 7), Bilbao, Guatemala (Parsons 1969:Plate 25), and Quelepa, El Salvador (Andrews V 1976:161-162), in every case such metates are exotics and not the product of local traditions of decorated metates. Thus, there is no evidence to indicate that the practice of decorating metates began anywhere but in Costa Rica, even though metates were of symbolic importance in several regions of Mesoamerica.

The simplest imagery of Type A metates is on the legs, usually near the tips, and represents saurian, bird and human heads, and "bound bundles." In some cases, the underside of the plate is carved in relief with the body of a figure, so that the head carved on the leg is integrated with the plate figure (e.g., BC Number 16). In the most complex Type A metates, the underside of the metate is treated as a relief panel framed with fret or interlace patterns (BC Numbers 14, 17).

To repeat, the first stages of the aesthetic elaboration of metates in Costa Rica involved the carving of relief figures and designs on the legs and underside of the grinding plate. Although these are low relief

carvings, the frequent integration of the legs and plate underside into one coherent image lends the whole metate the appearance of a three-dimensional image when inverted. The other significant design format in Type A metates is the conversion of the plate underside into a framed relief panel with a single major figure. In this case, too, the metate must be inverted or stood on end for the image to be seen.

The later Type B metates have a more consistent design format in which a zoomorphic head projects from the front (single leg) end of the right-side-up metate (BC Numbers 72, 73, 75-77). Among the zoomorphic heads represented are those of macaws, harpy eagles, felines, coyotes and crocodiles. Typically the thin triangular legs are carved in openwork, and in some cases the complicated carving reveals very stylized and inverted simian figures worked into the seemingly abstract design. The stylization of the inverted leg motifs contrasts with the legibility and "normal" orientation of the large zoomorphic heads that emerge from the plate. Thus, while Type B metates also contain inverted imagery, on the whole they are clearly meant to be seen right-side-up; unlike the Type A metates, those of Type B have no imagery hidden under the plate.

Regardless of the variation in metate design, it is apparent that the basic metate form has been carefully

retained, as if to stress that the form and meaning of "real" metates were essential to the communication of the symbolic code of the obviously special-purpose metates. This observation squarely addresses the ongoing confusion over the use of these metates: the debate so far has often had an exclusive, either/or character, but it should be apparent that neither the metate form nor its aestheticization and monumentalization can be ignored. These facts are not exclusive, and must be integrated into any analysis and interpretation. Hence, before attempting to unravel the iconographic complexities of these objects, some methodological basis must be established.

The first problem concerns the nature of the comparative data. Since there are no prior traditions of decorated metates, the iconographic components must have been either invented afresh, or derived from other contexts. The first option is unlikely, but the mortuary associations of metates with axes, other jade, and maceheads, indeed suggests a priori that there are unifying iconographic threads.

It may then be useful to consider the "natural meaning" of metates, i.e., the constellation of given and perhaps unconsciously-held associations behind the unique cultural choice to aestheticize and monumentalize mundane tools of food preparation that helped to make possible

the reproduction of human life. The quotidian use of metates is evident: maize that has been soaked in lime water is ground (typically by mothers, wives or daughters of a household) on the metate into masa, the corn meal that then is cooked. From a material and structural standpoint, maize that has been ground on a metate is at the midpoint of its cultural transformation: masa is no longer raw, but it is not yet cooked, in Levi-Straussian terms. It is irrelevant at this point whether maize was a staple for everyone, for the upper ranks only, or even an entirely special-purpose crop grown only for ritual use; current data are inadequate to resolve this matter. What counts here is that the metate was singled out, and not some other object. Because it is inconceivable that the elaboration of metates was unrelated to their material use and social value as tools of food preparation, it can be inferred that the decoration of metates relates in yet unknown ways to aspects of its social roles, meanings or associations. Among these would be the transformation of maize from an inedible to an edible foodstuff, the fertility of the earth (maize cannot be ground unless grown), the sexual division of labor in agriculture and food production (men traditionally plant maize, women process and cook it), and perhaps differential access to the tools of production and reproduction (if the production of stone

stools was by specialists and organized by an elite, as has been argued earlier).

What did it mean to aestheticize tools of food preparation, to transform a grinding stone into a decorated cult object in a society where images and stone sculpture were scarce, and perhaps never seen except in the presence of elite authority? As probably everyone then well understood, these were no ordinary metates. We can assume that the addition of imagery and the increase in size and technical quality totally transformed the perceived nature of these metates, perhaps expanding in unforeseen ways on the "natural meanings" mentioned above.

Finally, we might consider the mortuary significance of decorated metates. Given their frequent, if not exclusive, deposition with the remains of the elite dead, it can also be inferred that the mortuary importance of decorated metates derived from the material importance of "real" metates in the reproduction of human life, i.e., their essential function as the instruments of the physical transformation of maize from raw to about-to-be-cooked. Hence, the metate is first of all a ubiquitous artifactual metaphor of material transformation, and this suggests that behind their mortuary use were concepts relating to the dead in the afterworld and perhaps to rebirth, at least for the elite

owners. As we have seen earlier in this chapter, there was a cosmology describing a watery underworld and a saurian terrestrial sphere expressed in jade pendants. We must now determine to what extent these or related cosmological concepts may have been expressed in decorated metates.

The Iconography of Type A Metates

As we have seen, all but a few Type A metates with figural decoration situate the images underneath the grinding plate. Therefore, any iconographic analysis of this imagery must contend with two separate and as yet unrelated problems: the identification and explication of the images themselves, and the meaning of their covert placement.

The zoomorphic imagery of Type A metates includes full-figure images in which the body of a bird or crocodile is carved on the bottom of the plate, with the animal's head carved on the single leg (BC Number 16). Anthropomorphic imagery includes heads carved upside down just beneath the plate, and full-figures which are carved on the plate bottom and often framed. Of the latter, one is a profile skeletal with saurian-like claws (BC Number 14), and another is an elaborately attired frontal human figure wearing feline and avian costume elements (BC Number 17). A unique variant metate has a human figure

and other motifs carved in openwork on the overhanging front end of the plate, which is also bordered by projecting crocodile scutes (BC Number 18).

Geometric motifs decorate the legs and frame the underside of the grinding plate. Leg motifs include medial and basal bindings, and in a few cases the legs are vertically scored or grooved to give the appearance of a bound bundle of sticks. The underside of the grinding plate (but never the top) is often framed by a two-or-three strand plaited reed or mat band, especially on metates with full-figure images. Alternatively, the underside may be framed by a motif which is best described as an irregular, discontinuous fret, different from the plaited reed motif.

The specific context of this imagery and decoration--decorated metates used in mortuary and other cults--has no precedent anywhere else in Nuclear America. Therefore, the comparative contexts that ordinarily are crucial to iconographic analysis must necessarily be more generalized: we cannot look for Mesoamerican or Andean traditions of decorated metates. Here we must refer back to the "natural meanings" of metates offered earlier: nature/culture transformation, the fertility of the earth, death, female domestic labor, and the appropriation of agricultural produce by an elite. These behavioral and symbolic realms provide a set of

hypothetical associations whose relevance and validity will be determined in the course of the iconographic analysis.

For substantial reasons, comparative data should be sought first in Mesoamerica. First, the formal sources of the Guanacaste-Nicoya metates were shown to have been Mesoamerican metates. Second, Guanacaste-Nicoya has usually been considered a part of Mesoamerica, at least at the time of Contact. Third, early historical accounts show that the Contact-period inhabitants of parts of Guanacaste-Nicoya spoke languages of Náhuatl affiliation and that their gods and calendar were to some extent also of Central Mexican affiliation. However, neither the temporal depth nor the geographical extent of Mesoamericanized culture in Costa Rica has been adequately studied.

As Lothrop and others have noted, the Contact-period Nicarao had a strongly Mexicanized religion, but it has been difficult to correlate in any convincing way even the late art styles of Guanacaste-Nicoya with any of the known ethnic-linguistic groups. For example, Period VI (A.D. 1000-1500) ceramics depict what is probably a specifically Late Postclassic Central Mexican deity, the female earth monster Tlaltecuhli (cf. BC Number 112; Klein 1976:Figures 2-5). However, even such explicit evidence of Central Mexican influence cannot a priori be

be associated with any of the legendary migrations of Mexican peoples to southern Central America. While the ethnohistorical sources indicate that two peoples of Mexican linguistic affiliation, the Nicaraos and the Chorotega, were in Guanacaste-Nicoya at the time of Contact, there is no agreement among scholars as to the period of their arrival or their place of origin in Mesoamerica (See summaries in Borhegyi 1965 and Davies 1977). Given the magnitude of this problem, our purposes here may be best served by focusing on the iconographic dimensions, with the understanding that Mesoamerican influence per se is no longer an issue, even if its nature remains unclear.

Within Mesoamerica, the religious-ritual-iconographic systems of the Classic and Postclassic Maya and the Late Postclassic Central Mexican Nahuatl (Aztec) are by far the most fully understood. For both the Maya and the Aztec, the exegeses are based on early Postcontact records, and the decipherment of native writing systems. Nicholson (1982) has urged that great care be taken in the temporal retrojection of Contact-period data back into prehistoric periods, but the "direct historical approach" is often the only progressive alternative. The cautious and critical use of such a method seems fully warranted here, given the historical evidence of partial Mesoamericanization, and the archaeological evidence that

Costa Rican and Mesoamerican societies enjoyed periodic contacts and exchanges throughout the span of the early traditions in Guanacaste-Nicoya and in the Atlantic Watershed.

Saurian Imagery. Saurian metate imagery includes full-figure crocodiles carved underneath the plate (BC Number 16), crocodile scutes bordering the surface of the plate (BC Number 18), and possibly metate legs carved as downward pointing saurian or ophidian heads (Ferrero 1977:Ilustracion I-72). The full-figure crocodile identification is secure because the image is rather realistic, and this also permits the identification of the crocodile scutes carved on the plate border. The identification of the carving on the legs as saurian heads is problematic.

In the 260-day cycles of the Aztec and Maya calendars, the first of the twenty day names refers to a saurian creature who symbolizes the earth, Cipactli for the Aztec, Imix for the Yucatec Maya. The Aztec glyph Cipactli typically is a profile crocodylian head without a lower jaw (Seler 1960-1961,4:Figures 654-668). The full-figure Cipactli depictions are also profile and usually agnathic, and emphasize the spiky scutes and long claws (Seler 1960-1961,4:Figures 669-673). Cipactli was the male aspect of a dualistic Aztec earth monster: surrounded by water, Cipactli's spiky back was the

earth's surface from which maize plants grew, as shown in Codex Borgia, 27 (Seler 1960-1961,4:Figure 673).

Among the Nicaraos, a Nahuatl-speaking people of Greater Nicoya, there was a female creator deity named Cipattonal, the wife of Tamagastat, who together created the earth (Lothrop 1926,1:65-67). Among the Aztecs, the creator couple were Tonacatecuhtli/Ometecuhtli and Tonacaihuatl/Omecihuatl. They created the first human couple, Oxomoco and his wife Cipactonal, who are shown divining with maize kernels in Codex Borbonicus, 21 (Nicholson 1971b:397-398, Figure 1). Oxomoco and Cipactonal later created the male earth monster Cipactli. A male god named Oxomogo assisted Tamagastat and Cipattonal at the Nicarao creation (Lothrop 1926,1:65).

Klein (1976) has shown that in Aztec art, Cipactli is always depicted in profile, while his female earth monster counterpart Tlaltecuhctli is always shown frontally and associated further with the earth, vegetation, fertility, death, and the entrance to the underworld. Klein (1976:176) explains one of the characteristics of the frontal depictions of Tlaltecuhctli:

When the earth monster appears in relief on a three-dimensional object such as a stone cuauhxicalli, or

offering vessel, it occupies the underside of the bottom of the object...This horizontal position not only corresponds to the prone position of the earth monster in the cosmos but resulted as well in the image having been placed in direct contact with the ground. The purely symbolic intention of this spatial orientation is evidenced by the fact that these images were completely hidden from view.

Among the Maya, living groups still associate the day Imix with the earth and maize (Thompson 1971:70-72). The symbolic (non-figural) form of the Imix glyph is the water lily, and the personified form is a (usually agnathic) saurian head, often with water lilies or maize plants. In non-calendric usages, the symbolic form of Imix is often compounded with the Kan symbol of ripe maize, signifying, as Thompson (1971:70-71) says, "abundance of maize or food in general," as well as offerings of food. He thus characterizes the Imix monster:

The jawbone and other symbols of death which this earth monster usually displays denote his connection with the interior of the earth, the abode of the god of death; the vegetation, particularly maize plants and lilies (they are edible), which sprout from his

body, bear witness to the fact that he forms the surface of the earth, and is the symbol of abundance, and that he floats in a great pond...

According to Thompson (1970:209-233), there was another aspect of the earth monster, called Itzam Cab, "Iguana Earth," or Itzam Cab Ain, "Iguana Earth Cayman." Thompson thinks that this aspect of the earth monster was the floor of the Maya cosmos, which he saw as a house formed by four vertical iguanas. For Thompson this Itzam Na "Iguana House" represents a conception of the universe that extends and expands the cosmological referents of the Imix monster, but he did not resolve the contradiction that his own analysis and insights had brought to light:

...it is apparent that there is a confusion between two conflicting traditions: one that the earth rested on the back of a crocodile or cayman and the other that the surface of the earth was the continuation of this iguana house [Thompson 1970:216].

Klein (1976:61) appears to have resolved Thompson's contradiction by noting that the profile heads of the saurians that formed the iguana house cosmos met to form

a single frontal face of the earth monster that represented the surface of the earth. She further suggests that the Mayan earth monster also had both male and female aspects, correlated with profile and frontal depiction:

...the Maya earth monster Itzam Cab, like the similarly en face Mexican female earth monster Tlaltecuhltli, was distinguished from its profile male counterpart Imix (Cipactli) on the basis of its specific association with darkness and the world direction of the west [Klein 1976:63].

The fundamental identity of the Mexican and Mayan earth monsters implies a shared Mesoamerican earth monster complex in existence at least by the Classic period. Like the Aztec Cipactli and the Mayan Imix earth monsters, the Type A saurians are explicitly associated with maize by virtue of their placement on metates. In turn, the placement of saurian imagery on Type A metates, hidden on the underside, parallels the Aztec placement of the frontal Tlaltecuhltli on the underside of offering objects. Tlaltecuhltli, as we have seen, is associated with the earth, vegetation, fertility, death and the entrance to the underworld. The metate saurian imagery thus shares the basic terrestrial and underworld

associations of Mexican and Mayan earth monsters. Metates are clearly associated with maize and the fertility of the earth. A Tola Trichrome (A.D. 200-500) ceramic vessel from Guanacaste-Nicoya also makes this link explicit: it depicts a crocodile grinding on a metate (Stocker et al. 1980:Figure 3). The mortuary use of metates associates them with the symbolism of Mesoamerican frontal earth monsters, viz., death and the entrance to the underworld, associations seemingly underscored by the placement of images underneath the metate.

The metate saurian imagery does not correlate with the frontal/profile scheme of symbolic opposition that Klein has described for the Aztec and Classic Maya, and for this there may be several reasons. The combination of two- and three-dimensional depiction in the metates is one obvious impediment. Such a scheme also may not have been fully elaborated in Mesoamerica until the Classic period, while the metates appear to date rather earlier. Avian Imagery. If the saurian imagery of Type A metates relates to Mesoamerica earth monsters, how is the avian imagery to be interpreted? Do all Type A metates have terrestrial and underworld associations, or does avian imagery have other associations?

The single example of a full-figure avian being on Type A metates is a rather generalized depiction that

cannot be precisely identified (Hartman 1907:Plate VIII). Like the full-figure crocodile, the bird's body is carved on the underside of the plate, with the rear legs as the bird's feet, and the single leg as the downward-pointed head. The prominent hooked beak suggests that the bird is a raptor. The wings are spread out on the plate. As a realistic image, the bird may be descending to land, with feet extended, wings spread, and head pointed down. The image may thus be a ventral view, in contrast to the dorsal view of the crocodile.

Given the "natural" associations of metates with the earth, fertility and maize, we should perhaps begin by asking if there is any avian being with similar associations in Mesoamerica. There is one being that has all these symbolic associations, the owl-Moan bird complex.

Muan (cognate with moan) is the fifteenth month in the Yucatec Mayan 365-day cycle. The head form of the Muan glyph on Classic monuments is the profile of a bird with a prominent hooked beak, apparently a raptor. A symbolic form of the Muan glyph in the Postclassic Codex Dresden includes a spiral, which Thompson (1971:114) identifies as a water sign, along with affixes that Thompson interprets as relating to vegetation, new growth and rain. On this basis, he concluded that the month Muan is related to water, noting that the Yucatec word

moan has meanings of both cloudy and drizzle, and is the name for the screech owl. Thus, both glyphic and lexicographic evidence relates the month Muan and the word moan with water, rain and the owl.

Thompson (1971:114) states, however, that the "role of the Moan bird in Mayan mythology has led to much confusion." He notes that the deified Moan bird is depicted in Codex Dresden with a maize plant headdress, and that the symbolic and head forms of the Muan month glyph occur with the numeral thirteen. Thompson concludes, agreeing with Seler (1960-61,4:613-616), that this is a reference to the thirteen cloudy layers of the sky. With this evidence for the celestial association of the Moan bird, he identifies the moan with the owls shown with celestial dragons and sky bands in Classic Mayan monuments (Thompson 1971:Figure 20). He further notes that, again in Codex Dresden, God B, of rain, life and germination, is shown seated on both sky bands and the head of the Moan bird, in a divinatory almanac concerned with rain.

Continuing his exploration, Thompson (1971:115) suggests that this Moan bird complex was also known in Central Mexico, in the etymology of Tamoanchán, the Central Mexican "celestial abode of the gods, the land of flowers and abundance." He shows that the word Tamoanchán is from a Chiapan Mayan language. Following

Seler again, moan is connected with the Moan bird, and Thompson also connects the suffix -chan with the Chiapan chan, snake (also sky in some Chiapan languages). Thompson (1971:115) concludes:

Tamoanchan, as the celestial land of rain and mist, the land of abundance, corresponds to the Maya representations of the celestial serpent surmounted by the Moan bird...Muan, accordingly, is the month of the Moan bird, a deity who lived in the sky, was intimately associated with the celestial dragons, and symbolized the cloud-filled heavens.

Thompson (1971:144-145) also connects the Moan bird with the tun or 360 day year. Tun means "precious stone" and by extension, jade, rain and water. The Moan bird with a skeletal lower jaw is a personified variant of the tun glyph, as are an agnathic saurian or ophidian, and a crab. The Moan bird is thus connected by its aquatic and pluvial associations with other beings with terrestrial and underworld associations, and as well with the rain cycle of the Mayan year and with jade. Although Thompson rejects any suggestion that the Moan bird is associated with death, the network of symbolic associations that he uncovers also reveals a terrestrial and underworld aspect of the Moan bird.

Klein's (1976:126-130) study of frontality in Mesoamerican art appears to explain why Thompson was probably wrong in rejecting a relationship between the Moan bird and death. She notes first of all that in Postclassic Mexican art the owl was shown frontally so often that it must be regarded as a symbolic convention. Since frontal figures nearly always connoted death, darkness and the underworld, the Moan must have also. The connection between owls, death, souls, fertility and rainfall in fact was widespread in Mesoamerica. She argues that the Moan bird and the owl were essentially fused in Mayan thought, since Tamoanchán, the land of rain and mist, was located in the west, the entrance to the underworld, and since both commonly appear with symbols of death. According to Klein both the Moan bird and owls symbolized the night sky and the fertility of the earth. Clemency Coggins (1985:56) identifies the Moan bird as one of the old male lords with solar and nocturnal features who rule the Mayan underworld. She thinks that the Moan was also associated with bloodletting, a sympathetic fertility rite of the Mayan elite.

Therefore, the Mesoamerican Moan bird-owl complex appears to account for the appearance of the avian being on Type A metates: it is associated with maize, rulership, fertility, death and the underworld. There

are indications that this symbolic complex is of considerable antiquity in Mesoamerica. In the Olmec-style Mural 1 in the cave at Oxtotitlán, Guerrero, the figure seated above the cave mouth wears an avian-headdress that Grove (1970:8-11) has identified as representing an owl. He explicitly relates this avian imagery to the Mayan Moan bird, interpreting the mural in terms of rain, water and fertility. It may be significant that the two cave entrances are on the western side of the massif, and since the caves themselves proceed eastward, Mural 1 faces west. And, since the entrance to the underworld was believed to lie in the west, the cave mouth may have been conceived as the entrance to the earth and the underworld. The Oxtotitlán Olmec mural associates an owl-Moan bird impersonator with rain, water, fertility, and, perhaps the entrance to the underworld in the west. Thus, the basic outlines of the owl-Moan bird complex may be evident in Olmec art of the Middle and Late Preclassic periods.

Anthropomorphic Imagery. The profile skeletal figure (BC Number 14) has close stylistic and iconographic analogues with the figures carved on the human femurs from Chiapa de Corzo, Chiapas, of Late Preclassic or Protoclassic date and of probable Izapan affiliation (Agrinier 1960). The outlined skeletal limbs, the wrist

and ankle circlets, and the surrounding water scrolls of the metate figure are all paralleled on Bone 3 from Chiapa de Corzo (Agrinier 1960:Figure 9). The wrist and ankle circlets seem rare enough to be diagnostic features.

On Bone 3, a profile skeletal human figure is swimming, accompanied by a crocodilian seen in dorsal view. Pasztory (1974:18) has identified the profile figure as a predecessor of the Teotihuacán Crocodile-Tláloc (Tláloc A), the earth-monster aspect of the Teotihuacán deity whom scholars have named after the Aztec rain god. The metate skeletal figure therefore has stylistic and iconographic links with Izapan-style representations associated with the earth, water, fertility and death. The metate figure is apparently an aspect of an earth or water deity, shown in the watery underworld. Its placement underneath the grinding plate is in accord with the Mexican treatment of saurian terrestrial imagery, and the association with maize and death are inherent in the metate context.

Another Type A metate (BC Number 17) depicts a frontal male figure with eye rings, elaborately attired in a feline pelt and feather headdress. This image has iconographic links with Tláloc-related imagery of Central Mexico. Both the figure and its headdress mask have rings around the eyes. Although each pair of rings is

partially cut off at the top, there can be no doubt that these are eye rings as seen in Mesoamerican art, where some are similarly incomplete (cf. Klein 1976:Figures 3, 4). Eye rings are commonly associated with Tláloc imagery, but Klein (1976:20a-217) has shown that at least in Postclassic art, they signified terrestrial and stellar darkness, water, death, enlightenment, and the completion of time in both human and calendrical-cosmic cycles. Eye rings occur not only on images of Tláloc, but also on images of or related to Venus, owls, butterflies, insects, the night sun and death.

The agnathic mouth of the headdress mask, with its upturned volute corners and an even row of teeth, occurs in Mesoamerican art in much the same context as the eye rings. In the art of Teotihuacán, this mouth type is a trait of Pasztory's Jaguar-Tláloc (Tláloc B), although the latter has fewer teeth and a protruding bifurcated tongue (Pasztory 1974:8-10, 15, Figures 1, 10).

The feather headdress shares with Teotihuacán Tláloc headdresses the bow-fillets, the radiating crest, and the lateral pendants of streamers or feathers (Pasztory 1974:Figures 3, 7, 18). The Teotihuacán examples include the Crocodile-Tláloc and a possible war deity. Both the basic structure of the tiered headdress and the stylistic conventions for rendering quetzal feathers are quite within the norms for the art of Teotihuacán. For most

Mesoamerican peoples, quetzal feathers signified preciousness, and the Classic Maya may also have equated quetzal feathers with sacrificial human blood (Seler 1960-61,4:562-567; Thompson 1970:176).

Several motifs here do not have exact counterparts in the art of Teotihuacán. The axe suspended on a lanyard from the left volute of the mouth of the headdress mask is probably a local trait. Virtually all of the jade axes and celts from Costa Rica were perforated for suspension, but the metate image is the only one that actually shows an axe suspended. Klein (1976:203-206) connects representations of the sacrificial flint knife in Postclassic Mesoamerican art with death and the completion of human and temporal cycles. In frontal images, the protruding tongue may be depicted as a flint knife, and Klein notes Thompson's (1971:78) interpretation of a knife in the mouth as a sign of death. Empirically, an association of the axe on a lanyard with death would be a natural inference, and its suspension from the mouth of the headdress mask suggests a parallel with the Mesoamerican associations of the flint knife.

The long flute played by the figure may also be a local trait. Lothrop (1926,2:Figure 161c) illustrates a fragment of a tubular ceramic flute, in a ceramic type now labelled Guinea Incised and dated Late Period IV, ca.

A.D. 300-500, and thus coeval with Type A metates. Ceramic flutes and ocarinas, often in zoomorphic form, were common burial offerings during this time, and may not have been restricted to high-status burials. According to Snarskis (1981:30), such artifacts "were perhaps indicative of a preoccupation with ritual required to bind together a society of increasing complexity." The metate image apparently depicts the ritual use of flutes.

Among the Aztec music was particularly associated with the god Xochipilli, who also was associated with flowers, sexual pleasure, fertility, abundance, young maize, and music in the night in the southern land of flowers, a mythical place equivalent to Tamoanchán (Klein 1976:72-77). The Mesoamerican data provide a parallel for the association in Costa Rica of music with maize, fertility and the underworld.

Guanacaste-Nicoya ceramics coeval with the early tradition of stone sculpture have a number of motifs whose meaning is established in Mesoamerican art, where they occur in similar contexts. Eye rings and eye bands are common motifs on ceramic head vessels and figures of Late Period IV and early Period V (ca. A.D. 200-800): e.g., BC Numbers 68 (hunchback figures), 71 (head), 81 (head), 82 (head, with interlaced cross on opposite side of face), and 85 and 86 (female figures). All such fine

modeled and painted ceramic effigies are presumed to have been funerary offerings for individuals of relatively high rank. The head vessels are identified as death images, perhaps of sacrificial victims (BC Number 82). Although these ceramic objects are three-dimensional, the predominance of painted motifs on the face and front of the body contributes a frontal aspect that is congruent with the typically frontal context of eye rings in Mesoamerica.

Another ceramic figure of a woman has a black maltese cross centered on the (pierced) navel (Ferrero 1977: Ilustración I-45). Klein (1976:199; 1982:23) suggests that the maltese cross may symbolize the entrance to the underworld, and that it may represent the universe in the form of the four cardinal or intercardinal directions plus the center, in which case it could signify temporal completion as well. Klein (1976:179,245) further notes that in Late Postclassic Central Mexico, the navel was associated with the central world direction, as was the night sun emerging from the underworld. In the present case, then, the maltese cross centered on the pierced navel of a funerary ceramic figure may share the late Mesoamerican associations of this motif with death, temporal completion and the underworld.

Although the presence of eye rings on our Type A metate figure appears to be unique in that context, the

presence of eye rings and maltese crosses on contemporaneous and slightly later ceramic objects shows that motifs known in Mesoamerica appear in the art of Guanacaste-Nicoya. We cannot prove that these motifs had the same meanings in Guanacaste-Nicoya, but the record of Mesoamerican incongruous influence in Guanacaste-Nicoya is strong enough to suggest that the meanings were fundamentally shared. The presence of these motifs on funerary ceramics provides contextual evidence that the basic Mesoamerican associations of death, underworld darkness and temporal completion were also known in Guanacaste-Nicoya.

Geometric Motifs. Two geometric motifs typically frame the underside of the plate of Type A metates: an irregular and discontinuous fret (Ferrero 1977:Ilustración I-72), and a two- or three-strand plaited or woven mat motif. The latter is conventionally termed a guilloche, and has iconic value since it imitates a reed band, a sort of continuous mat (BC Numbers 14, 17).

A similar example of the "broken fret" appears as the only decoration on a ceramic cup of the Monte Albán IIIA period in Oaxaca, ca. A.D. 200-600 (Caso and Bernal 1965:Figure 14a). It is problematic at this point whether we are concerned here with a degraded version of a true fret, or with an entirely different motif with a

different meaning. We also do not know which may be the more significant in this context, the generalized motif itself, or the concept of the frame.

It is relevant to note at this point that frames per se in Mesoamerican art conventionally function to denote cosmological boundaries as Quirarte (1974) has shown for Izapan and Classic Mayan art. In a similar vein, one implication of Thompson's (1970:216-218) notion of the Mayan Itzam Na "Iguana House" earth monster is that the rectangular frame of the stucco relief in the Temple of the Inscriptions at Palenque represents in one vertical plane both the vertical and horizontal boundaries of the cosmos. And among the Postclassic Maya, the wall paintings at Tulum, Quintana Roo, are framed and subdivided by a variety of motifs, including step-pyramid frets, chevrons, mat segments, serpent interlaces and jaguar pelage bands (Miller 1982:Plates 28, 37). Miller does not refer to the relevant work of Klein or Quirarte, but there is every indication that at Tulum the frames and subdivisions of the wall paintings denote cosmological boundaries and connections.

More precise comparisons are possible for the plaited mat-band frames. An exact counterpart of the three-strand mat band is found in the frame of the fragmentary Stela 10 from Kaminaljuyú, a Late Preclassic Monument (Figure 24). Easby and Scott (1970:Number 60)

suggest that the surviving figures relate to wind, rain and water, and one of the figures may be a precursor of the Classic Tectihuacán Crocodile-Tláloc, an earth and fertility monster (Pasztory 1974:17-19).

Significantly, one of the mat-band frames occurs on the metate with the elaborately attired figure with eye rings and tiered quetzal feather headdress (BC Number 17), a figure that was shown above to have iconographic links with Mesoamerican motifs relating to fertility, the earth, the underworld, darkness and death. Additionally, since the mat band frames the figure on the underside of the metate, who apparently is in the underworld, it is probable that the mat band denotes either the entrance to the underworld or passage through cosmological realms, as Klein (1982b) has shown for the mat in the Mesoamerican Postclassic. The political symbolism of the mat as the throne or seat of the lord among the Classic and Postclassic Maya is related to its primary association with cosmic passage. Thus, the appearance of the mat band on Type A metates provides iconographic evidence that metates may actually have been thrones of leadership and "seats of power." This is the first concrete evidence that metates may also have been thrones. If valid, the political symbolism of the metate-throne would be linked with the symbolism of cosmic passage. Finally, since the mat motif is the main element in the glyph for

the Mayan month Pop (Figure 26), the first month of the year, the mat frame may also connote the beginning of a new temporal cycle; given the mortuary context of the metate, this new temporal cycle would begin with the entrance of the elite dead into the underworld.

Geometric leg motifs on Type A metates are limited to medial bindings or circlets, and vertical grooves or scores (BC Number 17). If these motifs have iconic value, then they may have been symbols of the completion or "binding" of a temporal cycle, in the manner of the year bundle that symbolized the completion of a 52-year cycle among the Aztecs. Moreover, as Klein (1976:201) points out, "Both the end of a temporal cycle and the simultaneous beginning of a new one were...closely associated by the Maya with the concept of descent [into the underworld]." Therefore, if the leg motifs are iconic rather than merely decorative this association of binding with completion and descent would be congruent with meanings imputed to other metate motifs and images.

Summary. Mesoamerican iconographic data have been argued to explain both the choice of imagery on Type A metates and its placement underneath the grinding plate, where it is closest to the earth and hidden from normal view. In these terms, the imagery involved generally relates to the earth, underworld, darkness, death and fertility. Geometric motifs complement these

associations, with the frames signaling the underworld, cosmic passage and completion, and the legs perhaps also referring to completion. In several cases, iconographic motifs on metates have quite specific precedents or parallels in Mesoamerican iconography. The visual symbolism of the metates amplifies their "natural meanings" and social uses. As a tool, the metate signifies the transformation of the raw harvest of the earth into food for human consumption. As a high-status burial platform and grave offering, the metate signifies the passage of the elite from one cosmic realm to another, descending from the earth into the underworld accompanied by the symbol of the earth's fertility and generation of new life.

The Iconography of Type B Metates

Around A.D. 500, Type B metates began to replace those of Type A. The formal dimensions of this change are described in the appendix. The iconographic changes were considerable, correlating with a radical change in the design format. The principal image was moved from its covert location underneath the grinding plate, to a prominent position projecting from the plane of the grinding plate at the "front" or single-leg end (cf. BC Numbers 16, 75). The principal images were restricted to zoomorphs, but of a wider variety of species: only the

saurian (crocodile) was certainly retained from the Type A tradition, while new and more precisely identifiable images of macaws, harpy eagles, owls(?), felines, and canines now appeared. The sole reminder of the Type A tradition of covert placement is found in the simian-like creatures that were carved in openwork, often inverted, in the triangular legs of Type B metates.

Geometric decorative motifs were likewise made to accord with the new format. The grinding plate of Type B metates is typically framed on the vertical edges of the long sides, and often on the surface of the plate as bands at each end. Geometric motifs also commonly appear on the legs and on the neck and head of the projecting effigy, often in openwork. The motifs themselves are more varied and generally more easily identifiable, including chevrons, S-scrolls, step frets, zig-zags, diamond interlaces, and a sort of two-strand serpentine interlace or fret (BC Numbers 72-78).

The change from Type A to Type B amounts to a systemization of the design format. There is a more restricted total universe of imagery, with the elimination of anthropomorphic figures, but the zoomorphic and geometric codes are expanded. Perhaps the most immediate difference between the two types is that in Type B the principal images are not hidden but are easily visible. Given the premise that we are still

concerned with an attenuated, streamlined and provincial version of a basically pan-Mesoamerican cosmology and, further, that the standardized design reflects a certain unity of structure and function, we can then ask what cosmological system would retain the saurian earth monster while adding raptors, parrots, felines and canines. Certainly, the retention of the basic metate form, and the saurian being, imply essential continuity of function and symbolic code or language. However, the saurian being is not as common in Type B metates, and the virtual elimination of covert imagery suggests that terrestrial symbolism is no longer so important.

If, then, we are still concerned with the same basic cosmological structure in Type B metates, the new zoomorphic beings must refer either to additional cosmic realms, or to cosmic beings themselves as they travel through the cosmos. Given the iconographic evidence that Type A metates may have been symbolic "mat-thrones," we should recall Klein's (1982b:23, 29) argument that Mayan thrones are associated symbolically with the mat, the sun, and the central world direction, and that the throne as symbol of political authority relates to "its ability to traverse the cosmos." Elsewhere, in writing of the general features of late Mesoamerican religion, Klein (1976:52) says

The duration of each temporal cycle was conceived of in terms of the sequential phases of the life span of men, plants, and/or animals. The various planets that regularly traversed the heavens and underworld were believed to be "born" at their reappearance, to weary, age, and decay as they crossed the heavens, and to "die" upon disappearing into the underworld at the western horizon... The Chorti Maya still compare the cycles of the sun god to the life cycle of a human being... Man's own life cycle was linked to that of all plant life, particularly that of maize, through a "mystical relationship" stemming from his dependence on that crop...The conception of a child was compared with the sowing of the maize seed (hence the earth was conceived as a "womb"), childbirth with the first sproutings, puberty with the first flowering, maturity with ripening, and death with the husking and devouring of the corn.

In these terms, the metaphorical and symbolic utility of the metate is readily apparent. It is the place where maize "dies" in order to give life to humanity. How natural, then, that metates should be intimately, physically, associated with the death of an individual, the end of one life cycle and the presumptive beginning of another, when the dead descends into the underworld,

with (or on) the magic mat-throne.

We can now consider what the common Mesoamerican cosmological associations of the Type B animal beings may have been, and to what degree they may be relevant to the interpretation of Type B images. Our concern then will be with the relationship between metate imagery, and the common animal forms of cosmic beings in Mesoamerica. One could predict that the most common general associations would be found in calendrical data such as day and month names, and their signs and variants, since we already have seen the relevance of Mayan calendrical evidence to these questions in this chapter.

Saurian Imagery. As noted above, saurians are the only animals which unquestionably are common to both Type A and B metates. This continuity has been taken as evidence that the terrestrial, earth monster associations posited for the Type A saurians also apply to those of Type B (BC Number 73). Thus the crocodile represents the fertile earth from which maize grows, and the terrestrial realm generally as the earth monster. The Mayan glyph for the day Imix is a waterlily, or an agnathic saurian, and the Aztec glyph for the day Cipactli is an agnathic crocodile.

Feline Imagery. In Mexican and Mayan cosmologies the jaguar represents the terrestrial and nocturnal sun, the sun in the underworld. The Mayan day Akbal, "interior

of the earth," is equivalent to the Aztec day Calli, House, presided over by the deity Tepeyóllotl, "an anthropomorphized jaguar with attributes of the earth and a connection with the earth deity," whose name means "heart of the mountain" (Thompson 1971:73-74). Late Classic Mayan incense burners from Chiapas show the anthropomorphic head of the night sun wearing eye rings, a cruller nose ornament, jaguar ears, and jaguar fangs in the headdress (Anton 1970:Plate 140). The Kekchi Maya name for the sun god is Balanke, "Jaguar Sun" (Thompson 1970:236; BC Numbers 74, 78).

Raptorial Imagery. Raptors in Type B metates are identified by Snarskis (BC Number 76) as harpy eagles because of the hooked beak and prominent tufts or crests on the head. In a few cases, however, the eyes are large and have large rings; the eye bands and the tufts might then suggest that a horned owl was represented. But, in most cases, the long beak and relatively narrow head argue in favor of the harpy eagle. Since eye rings are a Mesoamerican attribute signifying underworld darkness and death, the eagle may then have these associations on the metate when it had eye rings (BC Number 76).

The Mayan day Men is the equivalent of the Aztec day Quauhtli, Eagle. Although the day sign for Men is interpreted by Seler (1960-61,4:590) and Thompson (1971:82-84) as an old goddess of weaving, the equivalent

Mexican day sign was an eagle. In both areas the eagle was a symbol of the sun, and in Mexico the eagle symbolized the descending or dying sun, Cuauhtémoc (Caso 1958:33). The sign for the Mayan day Ahau, Lord, referred to the young sun god of the night (Klein 1976:116-117). Variant Ahau signs include an eagle or vulture in profile, representing another aspect of the young sun god. Therefore, the harpy eagle with eye rings may represent an aspect of the sun in or descending to the underworld.

Canine Imagery. Several Type B metates have canine heads as the principal image (BC Number 77, perhaps Number 78). However, it cannot be determined whether these are domesticated dogs, or wild species such as coyotes. In Mesoamerica, dogs were companions of the dead who guided them in the underworld (Thompson 1971:78). Skeletal remains of dogs have been found in high-status graves in West Mexico (Meighan and Nicholson 1970), and at Kaminaljuyú (Kidder et al. 1946). Sahagún says that both dogs and coyotes eat maize, and Seler (1960-61,4:474-502) identifies them both as providers of maize.

The day sign for the Mayan day Oc represents the skeletal ribs of a dog, with a death sign; the equivalent Mexican day is Itzcuintli, Dog (Thompson 1971:78). The head of a dog with crossed bones can also serve as a

variant for the kin (day) sign in Mayan inscriptions.

As Thompson (1971:79) remarks:

The substitution of this glyph for the more usual sun glyph, particularly in its use in the lunar series, is very strong evidence for a Maya association of the dog with the sun at night when it descended to the underworld to emerge next sunrise in the east.

Thompson suggests that the word oc is related to related to ocol, "to enter," referring to sunset, and notes that the Chol Maya preserve oc or ok as the word for dog (tzi in highland Mayan languages, pek in Yucatec). He therefore concludes that the canine deity of the day Oc was the counterpart of the Mexican Xólotl, an aspect of Quetzalcóatl as the Evening Star who led the sun into the underworld (Thompson 1971:79). The funerary context of Type B canine images thus accords with the cosmological symbolism of canines in Mesoamerica.

Psittacid (Parrot) Imagery. Psittacidae in Type B metates have been identified as macaws, brilliantly colored and noisy fruit-eating birds still seen in the forests of Guanacaste-Nicoya (BC Number 75). In one of the divinatory almanacs in the twelfth-century Mayan Codex Dresden, there appears (page 40b) a macaw holding torches in the context of auguries for drought (Seler

1960-61,4:551-562; Thompson 1971:270). The Postclassic Maya deity Kinich-Kakmo, "Sun-face-fire-macaw," symbolized the midday sun. Since the almanacs generally are concerned with prognostications for the maize crop, the macaw in Dresden is thus associated with the death and destruction of maize.

Type B macaws also share the association with death of the contemporaneous Atlantic Watershed beakbird complex (see Chapter V). Thus, if the Type B macaws do symbolize or refer to the sun, it is more likely to have been an association with its destructive or death-related aspects. Some support for this may come from Thompson's (1971:270) conclusion that the drought years in the Dresden almanacs should be assigned to the western and southern "world directions, which, as Klein (1976:227-232) has argued, are associated in Mesoamerica with death, the underworld, descent, completion and rebirth. The meaning of the macaws in Type B metates remains elusive, but there are preliminary indications of an association with the sun's more malevolent aspects.

Simian Imagery. Monkeys of unknown species occur in Type B metates only as very stylized figures in the openwork carving of the legs (BC Number 72). In the flying panel metates of the Atlantic Watershed, however, monkeys are interchangeable with the beak-birds who are associated with the disposal of the dead. There is some

evidence, then, that monkeys in Costa Rica are associated with the underworld and with nocturnal aspects of the sun. Sahagún says that monkeys eat maize, and describes the use of roasted maize as bait to capture them. Thompson (1971:143, 167) shows that the monkey was a variant form of the Mayan kin (day, sun) sign, and Seler (1960-61,4:456-464) notes the equivalence of the monkey and the Mexican deity Xochipilli, the young maize god. Here, then, independent evidence from Costa Rican and Mesoamerica agrees about the relationship of monkeys to maize and the sun.

Geometric Motifs. The geometric motifs on Type B metates include chevrons, diamonds, scrolls, serpentine interlaces, zig-zags and frets. Unlike the largely hidden motifs on Type A metates, those of Type B are found on the vertical edges and top ends of the plate, on the legs, and on the effigy head and neck. The visible placement of these motifs thus corresponds to the other design change.

Given the demonstrated continuity between Type A and Type B metates, their geometric motifs should have a similar function and general meaning, viz., to denote the boundaries of the terrestrial realm and the entrance to the underworld. However, mat bands are rare on Type B metates, a presumably deliberate change which may be related to the abandonment of covert imagery underneath

the grinding plate.

Chevrons, frets and interlaces all occur on the vertical edges of the grinding plate, and the consistent location suggests that their meanings may be similar (BC Numbers 72, 75). In Mesoamerica, chevrons are standard motifs on the rim and basal bands of funerary ceramics of the Chamá style, a Late Classic polychrome ware from the Alta Verapaz highlands of Guatemala (Rands and Smith 1965:Figure 16e). Chamá cylindrical vases frequently depict underworld themes, indicating that chevron bands have underworld associations (Anton 1970:Plates 66, 68, 69, 71, 72). In the Late Postclassic murals at Tulum, Quintana Roo, chevrons are a major framing motif, along with mat bands and step frets, while the serpent interlace with mat segments forms a continuous, interconnected ground line for the superimposed registers of figures (Miller 1982:Plates 28, 37). Miller's (1982:87) work suggests that the various framed and interconnected zones correspond to cosmic realms of sky, earth and underworld, denoting both cosmic boundaries and the passage or connections between them.

Virtually all of the Type B geometric motifs also occur, usually incised, on ceramics of Periods V and VI in Costa Rica. The motifs are especially common on the so-called Chocolate Ware of early Period VI, often with feline, saurian, and ophidian imagery (BC Numbers 101,

102; Lothrop 1926, 2: Figures 118, 119, Plates CII-CV). Thus, the local context of these motifs is predominantly, if not exclusively, funerary, which supports the premise of underworld associations. Even if we cannot unravel all of the threads of meaning, there are indications that the geometric motifs symbolically complement the zoomorphic imagery by denoting cosmic boundaries and connections.

Summary. Mesoamerican data on animal forms of cosmic beings provide a good "fit" with the Type B metate imagery of saurians, felines, raptors, psittacids and canines. All Type B animals have associations with maize or with the sun in the underworld, in Mesoamerican terms. The comparative method cannot prove that these animals had the same cosmological associations in Guanacaste-Nicoya, but it does account for the conjunction of these particular animals in ceremonial metates which were used as burial furniture. Considered together, the diverse lines of evidence--the formal sources of metates, archaeological context, natural meanings, and comparative iconography--describe a system of cosmological symbols similar in structure to the widely shared Mexican and Mayan systems of Mesoamerica. The coherence and context of this postulated cosmology suggest that Type B metates functioned symbolically to transport the elite dead into the underworld, where the

dead sun was reborn, and where the young maize grows.

5. Conclusions

The iconographic analysis of jade in Guanacaste-Nicoya provided a basis for the analysis of maceheads and metates. By starting the analysis with jade categories such as axes and winged pendants, where Mesoamerican links have long been suggested, it was possible to specify such links and also understand how Guanacaste-Nicoya jades differed from known Mesoamerican traditions. Horizontal compositions in winged pendants and spoons were shown to be associated with the terrestrial and underworld realms. Mesoamerican calendrical and glyphic data were argued to provide a key link relating Guanacaste-Nicoya jade imagery to pan-Mesoamerican cosmological structures. This in turn was instrumental in providing, for the first time, a coherent systematic interpretation of metate imagery. The structural similarities in the covert placement of images on Type A metates and in Aztec sculpture are a striking congruence despite great spatial and temporal separation, and yet the Aztec data help to account for function, context and meaning. The historical dimensions of this link remain to be resolved.

V. THE IMAGERY AND THEMES OF THE EARLY TRADITION IN
THE ATLANTIC WATERSHED

1. Jade

As with the previous chapter devoted to the early tradition of stone sculpture in Guanacaste-Nicoya, the iconographic analysis of jade will be used as a foundation for that of stone sculpture. The jade industries of Guanacaste-Nicoya and the Atlantic Watershed are fundamentally related in all important respects: in chronology, technology, form and iconography, and possibly also in raw material sources. The analysis of Guanacaste-Nicoya jade was undertaken as a prologue to the analysis of stone sculpture because of the apparent technological influence of jade carving on stone sculpture, and because of the hypothesis that foreign iconographic influence would be more readily discoverable in jade. This hypothesis now seems fully confirmed for Guanacaste-Nicoya. A significant consequence of the testing of that hypothesis was the initial revelation of cosmological structures that were later shown to have considerable relevance to the interpretation of stone sculpture. The relevance of jade

to stone sculpture in the Atlantic Watershed is even greater, because some jades clearly have the same iconographic themes as stone sculpture. Since much of the earlier analysis of jade in Guanacaste-Nicoya is also valid for jade in the Atlantic Watershed, this section will accordingly focus on the differences, and how they affect the earlier conclusions regarding iconography and cosmology.

In both Guanacaste-Nicoya and the Atlantic Watershed, jade production temporally parallels the early traditions of stone sculpture. If anything, the evidence is somewhat clearer in the Atlantic Watershed, where the climactic phase of string-sawing in jade is apparently coeval with the climactic phase of openwork carving in flying panel metates, perhaps ca. A.D. 500-800 (or several centuries earlier). Further, the latest phase of Atlantic Watershed jade carving apparently overlaps with the local emergence of metallurgical traditions derived from Panama, perhaps ca. A.D. 700-900 (or, again, possibly somewhat earlier).

The greater importance of string-sawing and drilling in Atlantic Watershed jade parallels the greater importance there of openwork carving in stone sculpture. While the stone sculpture of Guanacaste-Nicoya often has impressive openwork carving, this typically appears to have been achieved by intricate drilling, whereas in the

Atlantic Watershed the indications of drilling are usually less obvious, as the figures are often carved completely in the round, indicating that substantial grinding and polishing followed the drilling.

Guanacaste-Nicoya jade also shows a stricter dependence on Mesoamerican formal categories, while Atlantic Watershed jade exhibits greater formal independence and variation. This relation is also evident in metate sculpture, where the Atlantic Watershed metates envelop the Mesoamerican form with new components whose only apparent purpose is to support the three-dimensional figures on the flying panel.

Finally, as an apparent corollary of the idiosyncratic technology and form, Atlantic Watershed jade has a closer iconographic relation with stone sculpture. This iconographic relation resolves into fewer ties with known Mesoamerican art traditions, and closer ties with art traditions to the east and south.

Axes and Celts

According to Lothrop (1955) axe and celt forms comprised about seven per cent of his sample of jade objects from the Línea Vieja zone of the Atlantic Watershed, as compared to 30 percent in Guanacaste-Nicoya. Easby (1981:139) cautions that these statistics have probably changed because of intensified looting in

recent decades, but at this point we do not know whether the proportion of axes and celts has increased or decreased. As it stands now, the relatively greater predominance of non-axe and -celt forms in the Atlantic Watershed probably reflects the region's greater formal independence from Mesoamerican traditions, and not any decreased importance of actual woodworking and forest-clearing tools there. With regard to the actual importance of utilitarian axes and celts in the Atlantic Watershed, Snarskis' (1978:153) data for the central part of the region during the El Bosque phase of Late Period IV indicate that the most common forest-clearing tool was a waisted and double-bitted chipped slate axe that does not belong to the ground stone axe tradition.

Formally, there are no appreciable differences between the "axe-gods" of the Atlantic Watershed and those of Guanacaste-Nicoya. In both regions the basic pattern is an inversion of Olmec types, with the bit end preserved and the figural decoration confined to the poll end. Also, in both regions the basic iconographic categories are the same: avian, anthropomorphic half-figure and anthropomorphic full-figure. This convergence has already been noted, and interpreted as evidence of the fundamentally similar origin and trajectory of the two regional traditions. However, the relative proportions of the iconographic categories

appear to differ rather significantly between the two regions. Whereas in Guanacaste-Nicoya, anthropomorphic types were about three times more common than avian types, in the Atlantic Watershed (or at least in the *Línea Vieja*) avian types represent a majority (see also Easby 1968:38). This situation, too, reflects the greater independence of the Atlantic Watershed tradition, since the most common iconographic category here (i.e., avian) is the rarest in the Olmec tradition and, as suggested earlier, probably derived from the kind of Olmecoid axe tradition represented by the examples recovered from Playa de los Muertos, Honduras.

Avian axes and celts from the Atlantic Watershed are predominantly from, or attributed to, the *Línea Vieja* zone. They include double-crested "eagles" (BC Number 23), "eagle impersonators" with arm-like wings (Easby 1968:Numbers 20, 21), avian beings with tiered avian headdresses (Easby 1968:Number 14), and quetzal-like avian beings with a centerline crest (Easby 1968:Number 12). A possibly reworked axe pendant, missing its blade, has been compared by Snarskis (BC Number 150) to the Cerro de las Mesas avian celt (Drucker 1955:Plate 36f). The two have similar avian traits, with the downturned beak, centerline tufts (only one on the Costa Rican example), and two transverse perforations. Snarskis does not attempt to resolve the question of whether the

example from Costa Rica is a reworked Olmec import or heirloom, or an early Atlantic Watershed product. The majority of the avian images here are raptors, but there is more emphasis on the composite or impersonator aspects, in the mask-like beaks and avian headdresses.

The more anthropomorphized axes and celts are less common, and come in half-figure and full-figure versions, as in Guanacaste-Nicoya. The half-figure versions may be somewhat more common than the full-figures. There are no examples of straightforward human images: all are in some way compounded, e.g., with "bat" (BC Number 33) or simian (Easby 1968: Number 7) traits, or with obviously unrealistic elements such as mat or scroll tongues (Easby 1968: Numbers 4, 6), or head clefts and "alter ego" motifs (Easby 1968: Numbers 6, 10, 11). As in Guanacaste-Nicoya, the mat and other woven tongue motifs may signify cosmic passage and elite status, congruent with the final deposition of the axes with the elite dead. Post-Olmec traits in Atlantic Watershed axes generally parallel those in Guanacaste-Nicoya, but there is emphasis here on alter ego-motifs, also predominantly avian.

Although Snarskis (BC Number 163) identifies the raptorial beings on the avian axes as harpy eagles because of two lateral tufts, a number of the avian axes, along with some other jade objects, have large, deeply drilled eyes, with full or partial eye rings rendered in

relief or incision (e.g., Easby 1968:Numbers 15, 17, 18, 21). As realistic traits, this eye treatment is suggestive of the owl, a nocturnal raptor. Alternatively, however, if Snarskis' species identification is correct, then the avian beings are harpy eagles with eye rings, a Mesoamerican iconographic attribute associated with frontality, and signifying darkness, death and temporal completion. Since avian axes with eye rings also occur in Guanacaste-Nicoya (e.g., BC Number 29), there is greater likelihood that eye rings represent an iconographic trait, rather than a local stylistic convention. Given both the funerary context and the consistent frontality of the axes, then, their iconography may reflect a cosmology similar to that postulated for Guanacaste-Nicoya.

Avian axes rarely if ever appear with laterally paired alter egos. This suggests that the predominantly avian alter egos on the anthropomorphic axes might be raptors, compositional elaborations wherein the lateral tufts of raptors have been treated as miniature raptors, an inversion of the Olmec pars pro toto treatment. The inversion of this well-known Olmec compositional and iconographic device would be further evidence of the systematic recasting of the Olmec axe tradition in Costa Rica.

In axe form, composition and iconography, there are

no appreciable differences between the Atlantic Watershed and Guanacaste-Nicoya traditions. That there are likewise no appreciable differences in technology, in spite of the high elaboration of string-sawing in other categories of Atlantic Watershed jade, suggests that there the period of axe production was relatively short, perhaps confined to the first several centuries of the early tradition. On the other hand, numerous other jade objects from the Atlantic Watershed have the basic contours of axes with clear evidence of string-sawing (cf. Easby 1968: Number 21, avian celt, and Number 57, framed figure pendant). Many of the small, string-sawn pendants may have been recut from old or broken axes, perhaps prompted by the dwindling supply of jade, whether in the form of raw jade or foreign exchange pieces.

Although jade axes remain among the most cryptic of Costa Rican artifacts, a few dimensions of their iconography are beginning to emerge. Given the Mesoamerican influence on the origin of jade carving in Costa Rica, and subsequent evidence of sustained intercourse, it seems certain that jade in Costa Rica had essentially the same set of associations as prevailed in Mesoamerica; water, rain, fertility, preciousness, sustenance, life and high status.

Axes in Costa Rica must also have had much the same utilitarian and symbolic value as they did in

Mesoamerica. The actual material basis of their value is, of course, their use in clearing land for planting, especially in the tropical forests. It is surely significant that where axes first became art objects, in the Olmec heartland, they had to be made of imported stone. The importing of stone for utilitarian axes, and for metates as well, must have been controlled by the political leaders, and may have been an important basis of their authority (Graham 1980).

The archaeological contexts of jade axes in Costa Rica provide some evidence of their symbolic value. Their consistent deposition in burials and their association with metates suggest associations with the terrestrial and underworld realms and with fertility and maize. Two iconographic motifs found on jade axes in Guanacaste-Nicoya and the Atlantic Watershed give additional indications of terrestrial and underworld associations. Mat motifs on the headbands and tongues of anthropomorphic axes may signify cosmic passage generally, and entrance to the underworld specifically, as well as denoting authority and high status. Eye rings on avian axes (eagles or owls) may signify darkness, death and the completion of temporal and life cycles, as they did later in Mesoamerica.

In Mesoamerica, decorated ceremonial axes are relatively uncommon after the Preclassic period, but

depicted axes, apparently representing utilitarian ones, are more common and have associations with rain, storms and agricultural fertility. Among the Classic and Postclassic Maya, hafted stone axes were attributes of the Chacs (= God B), directional gods of rain, storms and lightning (Thompson 1970:251-262). Thompson reports that the present-day Mopan Maya of Belize call the old stone axes that they occasionally find "baatchac," the axes of Chac, representing lightning bolts thrown by the Chacs. While Chacs are in one sense sky beings, because rain falls from the sky, their more fundamental associations are with terrestrial and underworld water sources. The long noses of the Chacs are thought to be serpentine traits, and frogs and toads are their companions (Thompson 1970:255, 258).

The Mexican counterparts of the Chacs are Tláloc and the Tlalocues, his directional aspects. The axe is an attribute of Tláloc (Thompson 1970:253; 1971:134). However, the quintessential attributes of the Mexican rain god are the goggle eyes or eye rings which, as Klein (1976:206-217) has discovered, are attributes of other deities as well, and signify water, death, enlightenment and temporal completion. While the full elaboration of this trait syndrome probably occurred in the Postclassic periods, some aspects were present in the Classic period. The paradise of Tláloc, Tlalocán, was located in the

underworld, in the west or the south, and was associated with the setting sun (Klein 1976:78-82).

The religious-cosmological associations of axes in Classic and Postclassic Mesoamerica are with rain and storm gods, who have important associations with the earth and underworld. On the most general comparative level, Costa Rican axes probably share some of these symbolic associations, the most plausible being the earth and underworld, fertility and death, because these are congruent with their archaeological contexts.

Winged Pendants

The winged pendants of the Atlantic Watershed are similar in most respects to those of Guanacaste-Nicoya. Those known so far include an Olmec-style head with bat wings, a split Mayan-style bat pendant, and a Colombian-style abstract pendant. In the local style, there are bat and avian winged pendants.

The Olmec-style bat pendant was discussed in the previous chapter (Pohorilenko 1981:Figure 5). In brief, the bat is associated with the watery underworld, and the maize cob motif on the head refers to the origin or growth of maize from the interior of the earth. The cosmological symbolism of this and the Olmec winged pendant from Guanacaste-Nicoya was incorporated into later winged pendant traditions, although with some

changes in imagery and iconography.

The split Mayan bat pendant (Figure 10) supports the earlier iconographic linkage with Mayan cosmological concepts in the initial discussion of the winged pendant from Guanacaste-Nicoya. "Splitting" of jade objects should not necessarily be viewed as a sign of disregard for the integrity of the whole object; as Balsler (1974:Lámina XXI, 3) has pointed out, splitting was probably done both for economic reasons, to provide jade for reworking, and for religious-ritual reasons, as funerary offerings in which one half was interred and the other reworked or saved. The preserved half of the Mayan pendant was presumably interred but redrilled for suspension. Additionally, within the context of the underworld associations of Mayan bats, the presence of a two-strand guilloche and a fret motif on the wing supports the previous conclusion that such motifs abstractly signify the watery nature of the underworld.

The so-called Tairona-style "abstract" pendant represents half of a bivalve shell or a closed bivalve shell, and thus further supports the aquatic associations proposed in the discussion of the Guanacaste-Nicoya winged pendants. Balsler does not explicitly state whether he thinks the "Tairona" pendant from the Atlantic Watershed is a local product or an import. However, given the time-depth of winged pendants in Mesoamerica,

and the southerly "migration" of these pendants to Costa Rica at a time early enough to inspire a local tradition of winged pendants, it seems that winged pendants became more abstract in form as the concept spread southward, especially since Costa Rica has the earliest non-Mesoamerican tradition of winged pendants.

The reworked male bat pendant is not Olmec in style, but the three-dimensionality of the bat's head makes a Costa Rican attribution somewhat suspect; the reworking, at least, must have occurred during the early tradition in Costa Rica. Easby (1968: Number 46) does not address this issue, but does state that an originally upright pendant was redrilled for suspension upside down. The inversion of this object thus becomes very problematic, since Olmec and Mayan bat images were both upright and symbolic of the underworld. In nature, bats are upright at night, and inverted during the day (i.e., asleep, in caves or other dark places). Hence, according to this logic, an upright bat could signify night (i.e., the time of the sun in the underworld), while an inverted bat could signify day (i.e., the sun in the upperworld) but might also signify the interior of the earth. Such inversion of imagery was relatively common but its meaning remains elusive. Tentatively, it could be suggested that this pendant articulates a theme of nocturnal-diurnal inversion (and transformation) in terms

of the natural behavior of bats.

The iconographic dimensions of the Atlantic Watershed winged pendants are essentially the same as those of the Guanacaste-Nicoya tradition. Both regional traditions are temporally bracketed by Olmec and Mayan examples and iconographic links, indicating the Mesoamerican determinants of these traditions. In both Costa Rican traditions, the fundamental associations are with the underworld realm and its watery nature. From the perspective of Costa Rica, the more abstract shell-form winged pendants of northern South America and Panama appear as derivatives of the Costa Rican traditions.

Bar Pendants or Tubular Beads

The bar pendants of the Atlantic Watershed are also similar to those of Guanacaste-Nicoya, with minor differences in imagery and motifs. As indicated in the earlier discussion, the two regions share the same basic typology of plain or banded bar pendants, and zoomorphic bar pendants.

There are no perceptible differences between the plain or banded bar pendants of the two regions, except for the occasional inclusion of a small zoomorphic motif in the Atlantic Watershed: Easby (1968: Number 52, center) suggests that the raised eyes of one example may be avian, but the image could also be seen as an abstract

crocodile with protruding eyes, which would accord better with the predominantly saurian imagery and contexts of other bar pendants. There is also a more remote alternative that preserves the (questionable) avian reading of the pendant: the tube or bar could be a skeuomorph of a bone snuffing tube (the cross-drilling through the eyes renders the tube ineffective for actual snuffing).

In the initial discussion of Guanacaste-Nicoya plain bar pendants, it was suggested that even these essentially abstract ornaments had saurian symbolic associations because of their apparent depiction on crocodile-masked stone figures of the late early tradition of the Atlantic Watershed (BC Numbers 196, 197). This argument is even more relevant for the Atlantic Watershed, where the figures and pendants were actually used and made.

Other horizontal bar pendants also have links with contemporaneous stone sculpture. Bicephalic saurian bar pendants are a common zoomorphic type in the Atlantic Watershed and, as suggested earlier, these appear to signify the terrestrial sphere, the horizontal, wet and fertile surface of the earth. The bicephalic saurian being of the bar pendants is apparently a crocodile, and is the same bicephalic crocodile being that serves as a "pedestal" for the crocodile-masked figure on the flying

panel of perhaps the most famous of Costa Rican metates (BC Number 147; cf. Easby 1968:Numbers 29, 42; Balser 1974:Lámina XXVI, 4). The most three-dimensional of these bicephalic crocodiles (Figure 6d) has a three-strand mat-like motif on the sides and top of the body. This motif recalls both the plate frames of Guanacaste-Nicoya Type A metates (BC Number 17) and the frame of Kaminaljuyú Stela 10 (Figure 24), which were argued to signify the aquatic nature of the terrestrial realm, agricultural fertility, and cosmic passage or boundaries.

Only one example of the bar pendant with human figures is known so far, reportedly from Guacimo, Linea Vieja zone, (Easby 1968:Number 28). This image recalls the "pedestal" of another well-known flying panel metate, in which a beak-bird masked figure stands on two horizontal human figures, "joined" at the heads, under the feet of the masked figure (Ferrero 1977:Ilustración III-93). Although the metate pedestal motif is not bicephalic, the example of the bicephalic saurian motif suggests that this may be another, if less direct, iconographic link between bar pendants and stone sculpture.

Thus, while the Atlantic Watershed tradition of bar pendants is generally paralleled by that of Guanacaste-Nicoya, the Atlantic Watershed bar pendants have closer

iconographic links with stone sculpture. Perhaps most significant here is the evidence that this category of jade ornaments repeats in portable form motifs or themes of contemporaneous stone sculpture. Methodologically, this supports the hypothesis than an iconographic analysis of jade objects can contribute to the iconographic understanding of the more complex stone sculpture.

"Spoons"

Most of the clearly Olmec or Olmecoid jade spoons from Costa Rica are attributed to the vicinity of Bagaces in Guanacaste-Nicoya, where most were found during intensive looting in the 1960s. However, three jade spoons are attributed to the Línea Vieja zone in the Atlantic Watershed, all of the so-called bird-monster type, and all with string-sawing (Figure 9; Pohorilenko 1981:Numbers 4-6).

The corpus of jade spoons is too small and too unreliable in provenience to permit any firm conclusions about their origin, their entry into Costa Rica, or their distribution within Costa Rica. Still, a few tentative conclusions can be reached. No string-sawn jade spoons are presently known from either Guanacaste-Nicoya or anywhere else, while all three of the Atlantic Watershed examples are elaborately string-sawn. Hence, the

Guanacaste-Nicoya spoons, which are plain or incised, are the best candidates for unmodified imports from Mesoamerica, perhaps post-La Venta (Easby 1968:90). The Atlantic Watershed spoons may have been reworked in the Línea Vieja, if not actually made there, but they cannot have been reworked from either Olmec or Guanacaste-Nicoya type spoons as presently known, because the "flame eyebrows" project past the normal contours of the spoon. Thus, while jade spoons derive from Olmec prototypes (as shown by the "round stela" from Guatemala; see Shook and Heizer 1976), the elaborate string-sawing may be a post-Olmec development.

From the standpoint of iconography, the problem here concerns the addition of the new string-sawn features to the original tadpole form of spoons (Balser 1974:22; Pohorilenko 1981:311). The aquatic associations of jade and tadpoles, and the latter's infantile nature, have been interpreted as symbolizing the emergence of life from the watery terrestrial and underworld realms. The new elements could be expected to elaborate on the general theme of fertility. Easby (1968:90) and Joralemon (1976:52) have identified these string-sawn elements as traits of the Olmec bird-monster. In Joralemon's reconstruction of Olmec deities, the bird-monster is God III, a raptorial deity, associated with the sky, sun and maize. However, Stocker et al.

(1980) have argued that the so-called bird-monster actually has no avian traits. They see the "flame eyebrows" as the bony tubercles above the eyes of crocodylians (Stocker et al. 1980:743, Figures 1a-c, 4b). In the Atlantic Watershed spoons, these projecting eye motifs cannot have been reworked or added later, while the other presumed avian motifs--beaks and feathers--all show signs of having been later alterations (Pohorilenko 1981:313-314).

Thus, available evidence suggests that these string-sawn spoons initially had only aquatic references, viz., the tadpole form, with crocodylian eyes and (perhaps) mouths. Later reworking, presumably in Costa Rica, may have attempted to transform the crocodylian mouth into a raptor's beak. In fact, the avian axes and spoons may have similar iconographic histories. In both cases, the Olmec prototypes emphasized infantile traits, and in both cases, raptorial traits appear to have been later conjoined to the original terrestrial-underworld themes. Thus, in Costa Rica both axes and spoons underwent an iconographic expansion of the original cosmological references. This is the same kind of iconographic expansion that marks the shift from Type A to Type B metates in Guanacaste-Nicoya. These similar processes of iconographic change in axes, spoons and metates may reflect the pervasive local pattern of

transforming Mesoamerican themes.

The Expansion of Jade Pendant Categories

In Guanacaste-Nicoya, small effigy pendants were assigned to a problematic residual category, negatively defined by their exclusion from such standard categories as axes, bar pendants, etc. In the Atlantic Watershed, this residual category is so large that it loses any usefulness. Aside from several so far unique objects, many of the object types listed below can be grouped into regionally valid categories. Without exception, all these objects are perforated for suspension, and hence must have been worn as personal ornaments. In addition to the unique Tibás shell pendant, the following categories have been isolated: beak-bird pendants, frontal figure pendants, profile figure pendants, staff-bearer pendants, vertical beads, framed figure pendants or plaques, "curly tailed animals," "circle" pendants, and reworked Olmec-Olmecoid masks.

Two observations about jade carving in the Atlantic Watershed can be made at the outset. The number and diversity of these categories indicate that jade carving in this region was less bound by the formal traditions of Mesoamerican jade carving, and the quantity indicates that there simply was more jade available to work or rework. Additionally, notwithstanding the abundant

evidence for sustained artistic contact between Guanacaste-Nicoya and the Atlantic Watershed, few if any of these types have been reported from Guanacaste-Nicoya as exchange pieces. With the prominent string-sawing indicating a relatively late date for most of these objects, perhaps ca. A.D. 400-800, this may also indicate that during this time jade was relatively abundant in a few zones of the Atlantic Watershed, especially in the Línea Vieja, and that the Atlantic Watershed was not sharing access to its (new?) supply of raw or worked jade.

The Tibás Shell Pendant

Perhaps the most unique pendant object is the large (L 33 cm) jade bivalve shell that was excavated in an elite three-metate burial in the San José suburb of Talamanca de Tibás in 1977. As described by one of its excavators, the object has on the concave interior of the jade shell half, an incised and low-relief image of a human right hand grasping a small composite being with the head and forelegs of a feline, and the segmented tail of a butterfly, with the joint covered by the stiff wings of the butterfly (Snarskis 1979). Snarskis notes that the bivalve shell has Olmec antecedents in examples excated at La Venta and at Cerro de las Mesas. The La Venta example is unquestionably of the La Venta horizon,

and the two Cerro de las Mesas pieces are probably contemporaneous or early post-Olmec. The latest excavated examples are two small plain ones from an Early Classic context at Barton Ramie, Belize. Shell-form jades were concentrated in the Olmec Gulf Coast heartland, and it is not known whether the ones from Belize are Mayan products or Olmec heirlooms. Shell-form jades are rare, and few are decorated. Snarskis reports one unprovenienced Olmec example with an incised face, and a later example, perhaps Protoclassic (ca. A.D. 1-300), from Belize, with incised glyphs. The Tibas jade shell is by far the largest one known, and has the most complex and skillful decoration. Although shell-form jades circulated in Mesoamerica for perhaps a thousand years or more, their period of production probably was much shorter.

Snarskis explains that the front half of the compound animal being is a young feline, probably a jaguar cub. He identifies the rest of the being as the segmented thorax and squarish wings of a butterfly, by reference to similar motifs in monumental Olmec and Izapan art, where they appear as "costume" elements of otherwise human figures (e.g., La Venta Stela 2; Izapa Stelae 9, 50; Kaminaljuyú Stela 11; Snarskis 1979:Figures 11, 13-14). Snarskis also notes that the prominent knot or bow on the wrist of the human hand that holds the composite "jaguar-

butterfly" is virtually identical to the wrist and ankle bows on the principal figure of Kaminaljuyú Stela 11. Following Garth Norman's (1976) interpretation of the Izapan butterfly beings as soul-bearers, Snarskis concludes that the Tibás jaguar-butterfly had a similar meaning, reflected in its high-status funerary context. He does not attempt to choose between an Olmec or Izapan origin of the piece, but notes the arguments in favor of each. Snarskis adds that many questions about the Tibas shell remain unanswered, including whether or not the piece was reworked, and the meaning of the human hand grasping the jaguar-butterfly.

The wrist bow is an obvious attribute of rank or status. While Snarskis (1979:Figure 12A) notes that a bow appears on the back of the headband of Colossal Head 2 from San Lorenzo, wrist bows of the type on the Tibas shell are exceedingly rare, and the closest parallel is Kaminaljuyú Stela 11 (Miles 1965:Figure 15a; Snarskis 1979:Figure 11). They do not seem to appear in Olmec art (Joralemon 1971), nor apparently in other examples of Post-Olmec or Izapan art (Quirarte 1973; Norman 1976); nor are they found in Proskouriakoff's (1950) style catalog of Classic Mayan sculpture. The extreme localization of this trait might thus suggest an Izapan origin of the shell's decoration, although lapidary work is apparently rare in the Izapan style.

Both the horizontal format of the shell and its obvious aquatic reference correspond with earlier conclusions about horizontal pendants and the watery nature of the underworld. A literal reading of the composite animal would suggest that a feline, probably the jaguar, is depicted in a state of generation or regeneration, as the butterfly emerges from its pupa, and that this process occurs in the underworld. If the butterfly functions here as a soul-bearer, then the feline may represent the deceased, possibly a lord or ruler. The bow-tied forearm and hand would probably remain vexing unless perceived literally as a "hand-grasping event." A literal perception of the image allows us to see the quasi-linguistic nature of an otherwise perplexing composition, and thence to compare it to the Classic Mayan "hand-grasping" verbal glyph.

Thompson (1971:132) early on associated Mayan hand glyphs with death, and more recent research has clarified the significance of these "hand-grasping events." Proskouriakoff (1973), in a characteristically probing essay on T714, the "hand-grasping fish" glyph, notes its occurrence with glyphs such as T606, "shell," T672, "shell-fist" (death indicator), and T568, "sacrifice." Proskouriakoff concludes that one of the meanings of T714 is the apotheosis of a dead lord, an event that apparently often was accompanied by sacrificial

blood-letting rites (see also Marcus 1976:Figure 1.2g; Schele 1982:Chart 39). Both T714 and the Tibás shell have obvious aquatic references, and the Tibas image literally portrays a "hand-grasping event" as related to elite regeneration or rebirth. If the Tibás shell is contemporaneous with Kaminaljuyú Stela 11, it would have been decorated during the Late Preclassic/Protoclassic period, ca. 200 B.C.-A.D. 200, when an early form of Mayan writing was being developed in the Highlands. The Tibás shell may have been decorated to mark or commemorate the apotheosis of a dead Izapan lord, and it may thus be one of the earliest depictions of a "hand-grasping" event.

The circumstances of the arrival of this object in Costa Rica are likely to remain mysterious, but the elite burial in which it came to rest is dated ca. A.D. 100-400. Given the presence in this grave of other objects that were made in Guanacaste-Nicoya and in the Atlantic Watershed proper, this Central Highlands grave makes an unequivocal statement about the inter-regional ties of its occupant or his lineage. When seen in this context, the Tibás shell becomes the symbolic centerpiece of an exchange network that ultimately reached into southern Mesoamerica. The reuse of the shell in an elite grave in Costa Rica seems to have replicated the shell's original meaning and context.

Beak-Bird Pendants

Beak-bird pendants form one of the largest groups of jade effigy pendants, characterized by their depiction of an avian being with a prominent beak (Easby 1968:49-54). A minority of beak-bird pendants can be identified as to family: toucan, Ramphastidae (BC Number 154); kingfisher, Alcedinidae (BC Number 155); vulture, Cathartidae (BC Number 156).

However, the majority of beak-bird pendants cannot be so identified, either because specific traits are absent, or because the beak has been deliberately stylized, typically by string-sawing into a "squared spiral" or fret form (e.g., Easby 1968:Numbers 33, 34, 36). Since elaborate string-sawing is a characteristic of late Atlantic Watershed lapidary work, beak-bird pendants with string-sawing may be generally later than those without string-sawing, such as the three "realistic" examples identified above. The division between "realistic" and stylized beak-birds may thus have some chronological value. If this is true, then an iconographic change is also implied, in which some species-specific traits were replaced, as the avian being perhaps assumed mythic proportions.

Some evidence of the nature of this change can be found in a pendant whose beak is that of a toucan,

although greatly exaggerated (Figure 7). However, as Easby and Scott (1970: Number 220) observed, the body is more anthropomorphic than avian: instead of wings, there are arms, with the hands joined over the chest. At the base of the figure, as if clutched in its talons, is a stylized human head.

This figure depicts or alludes to the feeding habits of three separate avian families. The beak is that of a toucan, a fructivore of the family Ramphastidae. Food held in talons is a trait of carnivorous raptors such as the diurnal eagle (Accipitridae) and the nocturnal owl (Strigidae). However, an association with carrion is implied by the decapitated (i.e., from a body already dead and dismembered) human head, and this is a trait of vultures (Cathartidae) who have generally weaker beaks and talons (Austin 1961:73; Schaffer 1981).

The avian traits of this figure thus relate to very large beaks (toucans), aggressive carnivorous behavior (eagles, owls), and the consumption of already dead bodies (vulture). The anthropomorphic traits of the figure imply that the avian traits are to be associated with human behavior, i.e., as a metaphorical code of human behavior. Since beaks and talons are the weapons of a bird in the natural competition for subsistence, the realm of human behavior alluded to here is probably warfare, a cultural competition for subsistence in which

the victors, metaphorically and sometimes literally, consume the defeated.

Structurally, the particular conjunction of traits in this figure reveals a series of metaphors about food and human and avian behavior. The most prominent avian trait is the toucan beak at the top of the figure, balanced, so to speak, by the human head at the bottom. Since toucans are primarily fruit-eaters, the human head is metaphorically a fruit. The other avian traits alluded to here are predation and the consumption of rotting flesh. The anthropomorphic traits of this figure--arms and hands that can wield weapons--structurally connect the traits of avian fruit-eaters and meat-eaters.

This figure thus appears to account for one iconographic dimension of the beak-bird, the nature of its avian traits. In several other objects of the Atlantic Watershed early tradition, vultures are portrayed both realistically and metaphorically, in contexts that support an association with warfare. One tripod ceramic vessel has support adornos of vultures feeding on decaying human bodies (Ferrero 1977:Lamina XXI, b). The vulture is the king vulture (*Sarcorhamphus papa*), identifiable by the caruncle on the beak. A similar vessel has adornos of king vultures holding human heads in their talons; the use of the talons to grip food is perhaps an allusion to the feeding habits of

carnivores rather than scavengers (Ferrero 1977:Lámina XXIII). An effigy head vessel has small king vulture adornos around the vessel opening, one over each ear and one over the forehead (BC Number 191). Snarskis suggests that this vessel is a portrait and that the vulture adornos are the person's alter egos or spirit allies, the location of the adornos indicating that the person had the keen senses of the vulture, especially its vision. Given the king vulture's association with warfare, one could also suggest that the head is that of a warrior who, like vultures, has "consumed" his prey.

In flying panel metates, the beak-birds and other figures projecting from the supports are often identifiable as to family. In several cases, the forms of the beaks suggest the king vulture with its prominent caruncle (Ferrero 1977:Ilustraciones III-91, III-92), and in another case the bird appears to be the turkey vulture (*Carthartes aura*) because of its pervious nostril (Ferrero 1977:Ilustración III-94). The harpy eagle (*Harpia harpyja*), to judge from the pair of wide crests (Ferrero 1977:Ilustración III-90) and the toucan, to judge from the long thick beak (BC Number 144), can also be identified.

Thus, identifiable avian images on the supports of flying panel metates are similar to those identifiable on jade beak-bird pendants, and in most cases the metate

support birds are also associated with human heads or whole dead bodies. The occasional presence of monkeys in "beak-bird position" on flying panel metates is an obvious example of structural equivalence: since human heads are cultural "fruit," and since some monkeys are fruit-eaters, monkeys and beak-birds are natural competitors for fruit (Ferrero 1977:Ilustraciones III-93, III-95). Macaws, another large-beaked fruit-eating bird, and monkeys, are also common prey of harpy eagles.

The role of the vulture in early Atlantic Watershed art may be paralleled by the Andean condor in early Moche art. In an insightful recent study of Carthartidae (vultures and condors) in Moche art, Anne-Louise Schaffer (1981) shows that condors were associated with a war/prisoner/trophy head complex. Condors are shown in metalwork and ceramics feeding on decapitated heads and bodies, appear on weapons (copper knives), and are shown as headdress motifs in ceramics. Schaffer also suggests that the heads of slain war captives actually were fed to condors. However, there is nothing in Moche art quite comparable to the heavily stylized beak-birds in Atlantic Watershed jade.

These fret or squared-spiral beaks are the same as those of the anthropomorphic beak-bird impersonators found in the central portion of some flying panel metates (cf. Easby 1968:Numbers 34, 36, 38; BC Numbers 144,

145). In jade beak-birds, the anthropomorphic body and stance seem more often to be associated with the stylized beak form, but in metates the distinction is much clearer. Beings with clearly avian bodies appear only on the supports, and only one known example has a geometrically stylized beak (Ferrero 1977:Ilustración III-91). Conversely, anthropomorphic beak-birds in metates are always in central position, and always have geometrically stylized beaks. Thus, within flying panel metates there is a distinction between the "natural" beak-birds and their anthropomorphic "impersonators." This distinction is not as clear in jade.

While the two aspects or natures of the beak-bird are certainly related, there is an implicit division of labor in the metate figures that may have both social and cosmological significance. The support figures, whether avian or not, are usually associated with human heads or bodies. The central figures are always shown standing, usually with hands raised and palms outward; in avian terms, this stance recalls the threat display of raptors, when they stand erect with wings spread to defend their territory (Brown 1976). This posture is absent from all other categories of early tradition Atlantic Watershed art, and might thus signify a realm of behavior that in reality was sharply limited to people of certain ranks or occupations. On a literal level, the metate support

figures are concerned with the disposal and/or consumption of the dead. The central figures are present during these activities but do not directly participate, and thus may represent those who direct or control such activities. The metate images were certainly polysemic, or multiply-coded, but the distinction between those who consume or move the dead, and the central figures who seemingly orchestrate those actions, suggests that social rank may be one of the codes or levels of meaning, and that the central figures (who are more human) may be of higher rank than the support figures (who are more animal).

When this reasoning is applied to the jade beak-birds, it suggests that the "realistic" beak-birds were emblematic of those most closely associated with the consumption and disposal of dead humans, such as warriors or ritual buriers. The more anthropomorphized beak-birds with stylized beaks, on the other hand, may have represented war captains or ritual leaders who presided over such activities.

The analysis of beak-bird imagery in jade, supplemented by comparisons with metate imagery, suggests that certain avian traits were chosen because of their allusion to avian feeding habits. These traits reveal structural oppositions between fructivores and carnivores, and between carnivores and scavengers. The

equivalence of monkeys and beak-birds in metates suggests that the structural oppositions are, in fact, those of competitive subsistence relations. The anthropomorphization of the beak-bird thus suggests that one function of the beak-bird iconographic complex was the projection of natural competition for subsistence as a model for human subsistence behavior. The visual evidence of trophy heads and prisoners indicates that human subsistence behavior was connected with aggression, the taking of captives, and their sacrifice by beheading. In a Levi-Straussian sense, this analysis of the beak-bird indicates that a natural feeding or culinary code was used to express, and perhaps to validate, cultural patterns of behavior.

Now that some of the empirical-natural aspects of the beak-bird have been tentatively sketched out, we must consider the extent to which ideational aspects can be reconstructed from archaeological and ethnographic data. The most relevant comparative context would be an art tradition in which similar avian beings are associated with fruit and human dead. Only one Nuclear American art tradition provides multiple parallels with the Atlantic Watershed beak-bird complex: the Peripheral Coastal Lowlands (PCL) of the Middle Classic Period (A.D. 400-700), initially defined by Lee Parsons (1969). Among the iconographic parallels in the PCL tradition are:

vultures as transporters of the dead, in Bilbao, Guatemala, Monuments 16, 17 and 74 (Parsons 1969:114, 117); the equation of fruit and human heads, in Bilbao Monuments 16, 36, and 39 (Parsons 1969:119); fructivorous birds associated with human heads, in tenoned stone sculptures from Kaminaljuyú and Los Tarros, Guatemala (Parsons 1969:Plate 56a, h), and an hacha from El Baúl, Guatemala (Proskouriakoff 1954:Figure 11p); vultures consuming the dead, in a palma from Veracruz and an hacha from Guatemala (Proskouriakoff 1954:Figure 6, Palma 9, and Figure 11a); and fructivorous birds with a right-angle beak, in jade pendants from Zaculeu and Kaminaljuyú, Guatemala (Woodbury 1953:Figure 2801, m; and Kidder et al. 1946:Figure 148), and in ball-court markers from Xochicalco, Morelos and Copán, Honduras (Proskouriakoff 1954:Figure 11c).

Parsons (1978:32-34) noted some contemporaneous parallels between the art of Middle Classic Mesoamerica and Costa Rica. These include the presence in Costa Rica of such Mesoamerican objects as slate-backed pyrite mirrors from Central Veracruz, found in the Atlantic Watershed (Stone and Balsler 1965). Parsons also implies a parallel with Mesoamerica in the stone spheres of the Diquís region, but many of these are monumental, far larger than the "large" stone balls he notes in Mesoamerica.

In addition to the two traits above noted by Parsons, the following Costa Rican presences can be added to his list of PCL Middle Classic traits. In the category of artifacts, several examples of Teotihuacán-style frescoed cylindrical tripod vessels were reported by looters in Guanacaste-Nicoya during the 1970s, among them one with an image of Tláloc with the year sign in his headdress (Ferrero 1977:Lámina XLIV). Also brought to light about the same time was a Teotihuacán III-style small stone figurine (Ferrero 1977:Figura V-2a). While looters are notoriously mendacious, it is difficult to imagine anyone with even a minimal knowledge of the Precolumbian art market trying to dispose of reasonably valuable Central Mexican art in San José, Costa Rica, unless the objects were found locally.

Under Parsons' category of art styles and themes, the following corrections can be made. Human sacrifice by decapitation, death, a trophy head "cult," "eagle and jaguar complex," and vultures receiving sacrificial offerings, are as characteristic of the early Atlantic Watershed as of Middle Classic Mesoamerica. Of course, at this level of generality, the mere sharing of traits is all but meaningless, and proves nothing. Iconographic analysis cannot be supported by a mere list of traits. However, there is some iconographic evidence to support the idea that the shared traits are not entirely

coincidental.

But before that, two other artifactual categories that link Costa Rica and the PCL Cotzumalhuapa region must be mentioned. The first is the discovery near Bilbao, as casual surface finds, of variants of Guanacaste-Nicoya Type A metates. One has the single leg carved as the downward pointing head of an unidentifiable animal, and another has a splayed monkey carved in relief underneath the plate (Parsons 1969:Plate 25b). In strictly iconographic terms, neither metate would be made out of place in Costa Rica, but they are stylistically aberrant. These metates were not made in Costa Rica, but they seem likely to have been based on the metates of Guanacaste-Nicoya. The second link is the discovery of "heroic-sized human heads" in a late Middle Classic context at Bilbao (Parsons 1969:73, Plate 18). Parsons associated these independent sculptures of heads with trophy head collecting and post-ballgame decapitation rituals. All indications are that the Bilbao heads are earlier by at least three centuries (and perhaps five) than the independent heads of the late Atlantic Watershed tradition (BC Numbers 212-216).

Some kind of direct connection is probable, however, since at least one feline effigy metate of the late Atlantic Watershed-Diquís-Chiriquí horizon has been reported as a surface find from the Pacific coast of

Guatemala (Parsons 1969:Plate 25e). Unlike the Guanacaste-Nicoya Type A variants and outliers, there is no evidence that tetrapod feline metates were ever made anywhere but in Costa Rica and Panama. At this point, then, Parsons' trait lists, along with the corrections and additions, add up to a prima facie case for intercourse of long duration (though not necessarily continuous) between northern Costa Rica and southern Mesoamerica. We shall now consider the specific iconographic parallels between the Atlantic Watershed and the Middle Classic PCL, involving the association of avian beings with fruit and human dead.

At Bilbao, Parsons (1969:117, Plates 42c-e) identified the iconographic theme of the Sun Vulture, "a mythological creature which received and carried to the celestial regions those human offerings which may have been sacrificed in connection with the ceremonial ball game". Two key objects in this complex are Bilbao Mounuments 16 and 17, large rectangular blocks that each show a king vulture with sun disk pectoral; in one talon is clutched a cacao pod with a human face, and from the open beak hangs a human head and several limbs (Monument 16) or a dead human torso (Monument 17). A third object, Bilbao Monument 74 is a round disk with a vulture in three-quarter view (combined frontal and profile views) which Parsons thinks might have been a ball court

marker.

Parsons' Bilbao Sun Vulture is similar in iconography to the metate vulturine-beak-birds who transport the dead, whether as an entire corpse or a decapitated head (Ferrero 1977:Ilustraciones III-92, III-94). Bilbao Monuments 16 and 17 show the solar connotations of the vulture there. In terms of the amount of the dead body that is actually transported, they are intermediate between the Costa Rican examples, which show either a whole corpse or the head only, but not the parts of a dismembered body. Although the Bilbao Sun Vultures are more realistically rendered than the Costa Rican images, both the Bilbao and Costa Rican vulture-beings exhibit an anomalous trait more characteristic of raptors such as eagles and hawks, viz., the transporting of food in the beaks or the talons. Thus, the Bilbao Sun Vulture also has behavioral traits characteristic of the harpy eagle nature of the Costa Rican beak-bird. Additionally, the cacao pods of Monuments 16 and 17 unmistakably refer to the behavior of large-beaked fructivores such as parrots or toucans, at the same time juxtaposing the fruit (cacao) to carrion (a decapitated human head) seized in the manner of a raptor (in the talons).

The Bilbao Sun Vulture may appear superficially to be a realistic vulture image, but a closer look at its feeding habits and behavior indicates that it has much

the same condensed, synthetic and anomalous character as the Atlantic Watershed beak-bird. The solar associations of the Bilbao "Sun Vulture" are clear, in the form of the sun disk, but the solar aspect is not so overt in Costa Rica. However, there is evidence to suggest that the Costa Rican beak-bird was a solar being in a broader sense, since its avian traits and feeding habits imply a regular and continuous cycle of movement from the upperworld to the underworld. In this sense, the Bilbao Sun Vulture also strikes a balance between opposing categories, as its predominantly vulturine form is qualified by allusions to eagles and parrots/macaws.

Bilbao Monuments 16, 36, and 39 (Parsons 1969:Plates 42e, 43d, 42c) each show cacao pods with human facial features. The equation of this fruit with human heads (and possibly also with human hearts) is thus unmistakable, and clearly relates the fruit to sacrifice by decapitation and to the trophy head complex. Cacao is reported to grow wild in New World tropical forests, but its importance in Bilbao iconography probably derives from its commercial value. Heavy cacao pods grow from the trunk and branches of the bush, suggesting that cutting off the pods may have been conceptualized as a kind of decapitation. There may also have been conceptual links between war and the cacao trade; both produced wealth, and cacao lands may have been acquired

through war. Monkeys, rats and squirrels are natural consumers of cacao, but it is not known whether fructivorous birds such as parrots, macaws and toucans also ate cacao.

The modern processing of cacao suggests other similarities to warfare and ritual sacrifice. The pod is cut or cracked open to remove the beans and pulp, and the beans and pulp are fermented before the beans are dried and roasted. Thus cacao processing might have been likened to sacrifice, and the fermentation might have been analogous to the decay of bodies after sacrifice. The association at Bilbao of vultures and cacao pods, and the apparent sacrifice of cacao pods in Monument 21 (Parsons 1969:Plates 30, 31) before the ball game, support these associations.

A Guatemalan Middle Classic hacha-ball court marker group also relates to this fruit-human head-sacrificial decapitation complex. Hachas (Proskouriakoff 1954:Figure 11p, El Baúl) and tenoned ball court markers (Parsons 1969:Plate 56h, Los Tarros, Guatemala, and Plate 56a, Kaminaljuyú) show parrot or macaw heads with the beak open and a human head inside. The ball game associations of hachas are widely accepted, and the tenoned parrot-macaw heads may have been markers on the side batters of ball courts (Parsons 1969:139). The depiction of a stylized parrot/macaw head with a human head inside the

open beak clearly portrays the human head as the food of a fruit-eating bird.

A palma from Veracruz (Proskouriakoff 1954:Figure 6, Palma 9) shows what may be a vulture with its beak sunk into the head of a skeletal victim. Again the avian feeding habits are anomalous in that the bird appears to be a vulture, but its focus on the head recalls the equation of fruits and heads in parrot/macaw imagery. Another palma (Proskouriakoff 1954:Figure 11a) has similar iconography, with a vulture crouching on and pecking at a skull. Again there is an anomalous quality, because of the head-fruit equation, and because the skull is picked clean. These scenes are similar iconographically to adornos of vultures eating rotting human bodies on Atlantic Watershed ceramic vessels (Ferrero 1977:Lámina XXI b).

A key stylistic and iconographic trait is the right-angle beak shared by Atlantic Watershed beak-birds, and by a diverse group of images from Middle Classic southern Mesoamerica. While the most extreme Costa Rican examples exhibit a squared spiral that never appears in Mesoamerica, related Mesoamerican examples are nevertheless heavily stylized and include both jade and large stone sculpture: e.g., a small jade pendant from Zaculeu (Woodbury and Trik 1953:Figure 280) has a right-angled slot to indicate an open beak, while the

famous hacha-ball court marker from Xochicalco, Morelos (Proskouriakoff 1954:Figure 11c) has a right-angled beak; it must also be noted that the pervious nostril of this latter example is not a trait of any parrot, macaw or toucan, but of the turkey vulture. The right-angled beak may be more than a style trait, however, because in Costa Rica this beak form occurs predominantly on the beak-birds who orchestrate the disposal of the dead.

Avian and fruit themes of the Middle Classic period in southern Mesoamerica have significant iconographic analogies with the beak-birds and associated themes of the early tradition in the Atlantic Watershed. Perhaps the most crucial link between the Mesoamerican and Costa Rican imagery is the fruit-head equation, a visual metaphor that thematically links the vulture, parrot/macaw, and eagle beings of Mesoamerica. In both areas, dead humans and the feeding habits of birds are metaphorically connected to project human death as a natural process; i.e., a culturally-determined mode of death--human sacrifice by decapitation--is portrayed as a natural process. The explicit solar association of the Bilbao Sun Vulture, and the probable solar symbolism of both the parrot and the eagle, reveal a cosmological code that may also be relevant to the Costa Rican imagery.

Jade beak-birds represent in portable and personal form allusions to or reflections of the disposal of the

dead, whether sacrificial victims or war captives, in the terms of avian feeding codes that serve to rationalize and naturalize culturally specific modes of death. The beak-bird is therefore the crucial actor in an ideological drama that equates human warfare and sacrifice with competition for subsistence in the natural world. The consequences of human aggression are removed to the underworld by supernatural avian beings whose solar attributes and references stress periodicity and inevitability, and thus serve to link the behavior of people with the cyclic regularity of the cosmos. The specific iconographic links between the Atlantic Watershed and southern Mesoamerica in the Middle Classic period indicate an actual historical link.

Frontal Figure Pendants

Frontal figure pendants are so called because the figure is presented frontally, en face. All are transversely perforated through the neck for suspension. Although the figures are basically anthropomorphic, in nearly every case the figure also has non-human attributes, or, in a few cases, a greatly exaggerated human attribute.

The following zoomorphic traits are found in frontal figure pendants: humans with saurian masks, headdresses or other saurian features (BC Numbers 157, 177); humans

with avian masks, headdresses or other avian features (BC Numbers 160-164; Easby 1968:Numbers 23-25, 27, 35); humans with simian features (BC Numbers 168-171,178; Easby 1968:Number 26); and humans with exaggerated human traits, such as large and deeply drilled eyes and navels (BC Numbers 165-166), or a completely featureless face which in profile becomes the head of a crocodile (BC Number 173).

The frontal figure pendants with saurian, avian and simian traits represent three of the four categories of zoomorphic beings involved with the disposal of the dead on the supports of flying panel metates. (The absent category is the feline, uniquely present on the famous metate from San Rafael de Coronado, Turrialba Valley [Ferrero 1977:Ilustración III-95].)

The simian traits are too generalized to be identified by species, but they are probably either howler or spider monkeys. Snarskis generally identifies saurian traits as alligators (more likely Cayman acutus, a crocodilian; see Brazaitis 1973), again the traits are too generalized to do more than exclude very different beings such as iguanas.

Avian traits, on the other hand, are generally less ambiguous. Aside from the quetzal with its distinctive sagittal crest, all other avian traits refer to the beak-bird, or specifically to the harpy eagle aspect of

the beak-bird. Twin tufts or crests, diagnostic of the harpy eagle, are interchangeable with twin avian alter egos. Since, as we have seen, monkeys are subsistence competitors of the fruit-eating aspect of the beak-bird, monkeys with harpy eagle traits such as tufts probably refer to the iconographic system of the flying panel metates.

If these pendants are related iconographically to the flying panel metates, then they are probably portable versions of the central figures of the metates. Anthropomorphic figures never occur on the metate supports unless they are dead, and they are always fully human, with no zoomorphic traits. The frontal figure pendants therefore are contextually analogous to the anthropomorphic beak-bird pendants, and both are complements of the "naturalistic" beak-birds who are related to the metate support figures. Together, frontal figure pendants and beak-birds essentially reproduce, in telescoped fashion, most of the actors in the metates.

But if these two categories of pendants reproduce the actors on the metates, why then are images of the dead so common on metates and so uncommon on pendants? One reason may concern the differing distribution of metates and pendants. Obviously, there are far more pendants than there are monumental flying panel metates. The pendants were made to be worn, and they therefore

correspond to numerous individuals, perhaps to something like the Atlantic Watershed equivalent of lieutenants and captains. The monumental metates, accordingly, would correspond to higher levels of authority, perhaps paramount chiefs and subchiefs. Since warfare typically occurs between groups, rather than within groups, the dead who are represented on metates probably are the enemy dead, captives from another political entity. Their appearance on metates, rather than pendants, may indicate that sacrifices and other ritual associated with war were organized by paramount chiefs and occurred at their center.

Profile Figure Pendants, Including Staff-Bearers

Profile figure pendants are so called because the figures are carved in profile, almost as silhouettes, and can best be seen in profile. Within this group, staff-bearing figures are more numerous than figures without staffs.

Profile figure pendants without staffs are limited to males with a crocodile snout and beak-bird-like beak or tongue and a saurian alter ego (BC Number 176; Easby 1968: Number 38). Profile staff-bearers always hold a staff vertically in front. On the back, they usually have either a saurian alter ego (BC Number 175) or a suspended trophy head (Figure 8). One divergent piece

has neither alter ego nor trophy head, and is further distinguished by having the staff emerge from the genital region as if it were an extension of the phallus (Easby 1968: Number 39).

The two profile pendants without staffs represent composite saurian-avian beings or impersonators. Although Snarskis (BC Number 176) suggests that the vertical perforated scroll motif hanging from the saurian snout is a tongue, crocodilians do not have tongues, nor does the element look like a tongue. The motif more resembles the stylized beaks of several jade beak-bird pendants (e.g., Easby 1968: Numbers 33, 34), including the perforated scroll end.

This composite saurian-avian being does not appear on flying panel metates. However, saurian and beak-bird impersonators do occur as the central figures on metates (Ferrero 1977: Ilustraciones III-92, 93), and the "ears" of saurian heads and headdresses on some figures may actually be stylized harpy eagle tufts as seen on frontal figure pendants (Ferrero 1977: Ilustraciones III-91, 94). Also, the San Rafael de Coronado metate central figure has a saurian snout with a serpent hanging vertically from the front, so there is a precedent in metates for this kind of composition, even if the motif is different (Ferrero 1977: Ilustración III-95). This motif is usually called a "serpent tongue," probably because a serpent

looks like (and has) a "tongue." While the identification of the motif in question on the profile pendants as a tongue may be a matter of semantic preference, the motif itself more resembles a stylized beak. This suggests that these profile pendants might represent the saurian and beak-bird aspects of metate central figures.

The saurian alter egos of the profile figures also are not paralleled in metates, where only felines appear as alter egos (BC Number 147). In fact, identifiable saurian alter egos are rare in Costa Rica until late Period V, when they occur in gold work (e.g., BC Numbers 283, 293). The closest iconographic parallel to the profile figure alter egos is found in the monumental stone sculpture of the San Agustín tradition in Colombia. At least two of the sites in the San Agustín zone, Alto de Lavapatas and Alto de las Piedras, have standing male figures with feline features and bicephalic saurian alter egos draped over their head and back (Reichel-Dolmatoff 1972:Plates 73, 75). Although the San Agustín figures are full-round, the compositional emphasis is two-dimensional, so that the figures actually appear more like reversible silhouettes. Thus, San Agustín stone sculpture provides both iconographic and compositional parallels for the alter egos in jade. If most San Agustín stone sculpture dates before ca. A.D. 500, as

Reichel-Dolmatoff's (1972:129) comments suggest, then San Agustín may have been an antecedent as well.

If the stone sculptures of San Agustín are proposed to represent the source of the saurian alter ego iconographic trait, we must then consider the possible modes of transmission. Direct contact cannot be ruled out, as Mary Helms (1976) has argued for the late periods in Panama, but the most plausible mode of transmission during the early tradition was probably the traffic in portable objects such as metalwork.

The salvage work of Stone and Balser (1965) at Guácimo in the Línea Vieja shows that regional styles of goldwork from Panama and Colombia occur in the same graves with maceheads and reworked axe-gods of the early tradition. Among the gold objects of foreign style were Coclé "curly tailed" animals, a Quimbaya human figure, and an early Tairona (?) double-spiraled hammered pectoral (Stone and Balser 1965:Figures 23a, b, 26a). Stone and Balser suggest that the Guácimo graves should be dated ca. A.D. 700-800, or near the end of the early tradition of stone sculpture.

The Guácimo graves show that Colombian iconographic traits could have spread to Costa Rica via gold exchange, and the presence of Coclé-style objects hints that the central provinces of Panama may have been intermediaries. Coclé goldwork is held to be similar to and probably

influenced by the goldwork of Quimbaya style (Bray 1978: 51), while Calima goldwork reflects iconographic traits of San Agustín stone sculpture (Reichel-Dolmatoff 1965: 110; Emmerich 1965:61).

From an iconographic standpoint, the "early" styles of Colombian goldwork, notably Calima and Quimbaya, provide abundant examples of alter ego motifs: e.g., Quimbaya human figure pendant with twin human alter egos (Bray 1978: Number 404); Quimbaya-Darién (?) style saurian-human figure pendant with saurian mouth extended as flanking "wings" (Jones and Bray 1974: Number 71); and Calima hammered headdress ornaments with flanking composite alter egos (Bray 1978: Numbers 525, 526). Saurian alter egos are also common in Cocle style goldwork, appearing as "belts" and as headdress motifs (Emmerich 1965: Figures 111, 112). These "Late Coclé" objects probably date ca. A.D. 700-1100 (Linares 1977:57). In western Panama and southern Costa Rica, the Veraguas, Chiriquí and Diquís goldworking "styles" offer still more examples of saurian alter egos, often on masked impersonators (e.g., BC Numbers 264, 265, 267, 273, 274; Emmerich 1965: Figures 134, 137, 138, 143, 146). This southern Costa Rican-western Panamanian goldworking tradition is now thought to have begun about the middle of Period V, ca. A.D. 700.

Therefore, the saurian alter egos on the profile

pendants appear to have their origins in southerly traditions. The ultimate source may have been the stone sculpture of San Agustín, Colombia, some of whose traits were spread by the traffic in metalwork. A more proximate source would be the eclectic goldworking traditions of central Panama.

Because of their composite saurian-avian traits, these anthropomorphic pendants are closely linked with the central impersonators of the flying panel metates, and again we see that jade pendants carry a telescoped version of metate imagery. The meaning of the saurian alter egos should therefore be assessed within this context.

In Costa Rica, saurian beings so far have been associated with the earth and its fertility, and we have seen that the beak-bird is actually a symbolic code for subsistence competition. Since warfare was a cultural form of competition for subsistence, fertility was a direct consequence of success in war. The competition was, after all, for the earth. Shamanic alter egos are conventionally interpreted as images of a shaman's spirit helpers or protectors, implying a special supernatural power. Since the monumental metates were probably associated with chiefs, alter egos in general may carry this conventional association as well, as a visual claim to supernatural power and protection, whether for the

group collectively or for the chiefly lines alone.

Staff-bearers are always human figures, usually without alter egos, and usually with a trophy head slung from the neck over the back (Figure 8; BC Numbers 174, 175; Easby 1968: Number 39). When the staff heads are clearly rendered, as in the matched pair from Guácimo (Figure 8), it is probable that these figures depict early tradition Atlantic Watershed maceheads in use, mounted at the top of a (wood) shaft whose other end has a stylized saurian head in profile, pointing downward.

The most common macehead type in the later part of the Atlantic Watershed early tradition was a stylized beak-bird with a trophy head pendant from the right-angle beak. This motif is virtually identical to some flying panel metate support figures, a closeness that is materially affirmed by the fact that these maceheads are carved from the same vesicular basalt as the flying panel metates, and not from closer-grained rocks as were the earlier maceheads (cf. BC Numbers 139, 146; Graham 1981:122).

Thus, the beak-bird with trophy head theme appears in several categories of jade pendants, and in maceheads and metates. It was argued earlier that this theme is closely related to a complex of avian imagery of the Middle Classic period in southern Mesoamerica, seen most clearly in the "Sun Vulture" theme at Bilbao, Guatemala.

The immediate iconographic source of the beak-bird and trophy head theme in these staff-bearing pendants is obviously the actual maceheads which they copy. The beak-bird and trophy head theme itself is a separate iconographic issue from the source of the staff-bearer imagery. The contemporaneous counterpart of the beak-bird theme in southern Mesoamerica has nothing to do with maceheads or staff-bearer imagery, and there is no Mesoamerican tradition of staff-bearer imagery that could have been a prototype for the Atlantic Watershed tradition. Images of staffs of any kind are rare in Mesoamerica, in sharp contrast to their common depiction in Andean South America. The issue at this point is the depiction of staffs, and here three South American art traditions are temporally relevant: the stone sculpture of San Agustín, Colombia; the Chavin tradition of northern Peru; and the Moche tradition of northern Peru.

The San Agustín stone sculpture tradition of southern Colombia provides a number of images of staff-bearers in contexts both ceremonial and martial. Typical of the San Agustín staff-bearers are those carved in mirror-image pairs to flank a central figure, as at Mesita A and B of the Archaeological Park (Reichel-Dolmatoff 1972:Plates 33, 61-63). The flanking figures have monstrous alter egos, and hold what probably was a wood war club before one shoulder, as in an en garde stance. These martial

figures flank the central figure of a culture hero or deity impersonator. A second type of San Agustín figure seemingly stands behind a mask supported by a staff (Reichel-Dolmatoff 1972:Plates 46, 47). This type is reproduced in Calima cast gold lime spatulae (Bray 1978:Numbers 149, 539). A third type of San Agustín staff-bearer holds one or two paddle-shaped staffs vertically in front of the body (Reichel-Dolmatoff 1972:Plates 67, 93).

All of the San Agustín staff-bearer figures are frontally composed. All the staffs lack decoration and were probably of wood. The associations here are martial and ceremonial, and Reichel-Dolmatoff's (1972:96, 101-102) comments imply that these staffs might have been shamanic power symbols, perhaps with some echoes in the rattle-sticks of contemporary tropical forest peoples such as the Tukano. San Agustín thus provides a source for the depiction and use of staffs which is similar to the martial-ceremonial contexts in the Atlantic Watershed. Staff-bearers at San Agustín do not themselves display trophy heads, but this motif does occur in one of the central figures flanked by staff-bearers (Reichel-Dolmatoff 1972:Plate 59). The differences in representation between San Agustín and Atlantic Watershed staff-bearers are substantial, but iconographically the two traditions are close, and we

have already seen that San Agustín traits could easily have moved through the Isthmian region via the exchange of goldwork.

The Chavín tradition of northern Peru provides what may be the archetypal staff-bearer imagery of the Andes. Cordy-Collins' (1977) work on this theme has been referred to earlier; here it is only necessary to recall her argument that the Chavín Staff God is a shamanic being whose staff is actually the hallucinogenic San Pedro cactus. Cordy-Collins argues that in Phase D (perhaps ca. 500 B.C.) the Staff God replaces the earlier Smiling God, a change which she relates to a shift in the mode of production from horticulture to seedculture.

The later Moche tradition of northern Peru was argued in the previous chapter to have been a possible source of influence on the Costa Rican staff traditions, not so much iconographically, but conceptually or ideationally. In both Guanacaste-Nicoya and the Atlantic Watershed, camelid images in local styles indicate contact of some kind between Costa Rica and the Northern Coast of Peru, the home of the Moche (Fonseca Z. and Richardson 1978; Snarskis 1976). Stone "star" maceheads from the Atlantic Watershed and the Diquís region were apparently copied from Moche copper maceheads (cf. Figure 20; BC Number 140; Donnan 1978:Figure 111). Therefore, there is evidence for both Northern and Central Andean influence

on the macehead and staff-bearer tradition of Costa Rica, and in both cases there are plausible mechanisms of contact. Both San Agustín and Moche staff-bearers have martial and ceremonial associations, and the important Chavín ceremonial staff-digging stick association might have been preserved in either tradition.

There is, finally, ethnographic evidence that may preserve some of the symbolic associations of prehistoric staffs. Reichel-Dolmatoff (1971:113) reports that the shamanic rattle-stick of the Tukano of the Colombian Amazon is called a "cohabiting penis:"

Being a phallic symbol, the stick is essentially a cosmic axis. When it is stuck vertically in the ground, it is imagined that its lower part, called "yellow," penetrates to Ahpikondiá [an aquatic paradisiacal underworld], while the sonorous "blue" part represents the connection with the Milky Way [an upperworld, intermediate between the earth and the sun, "where people establish contact with the invisible world and with the spirits"]. The central "red" part where the payé [shaman] or another man grasps it is symbolic of our world...The rattle-sticks are an important symbol of power of the payé and, theoretically, each sib possesses one of these ritual objects. The sound is "the voice of the sib"

or "the voice of the payé" because he is the representative of his group.

In a later work on the Tukano, Reichel-Dolmatoff (1975:81) describes the rattle-stick as "the phallic rod by which mankind descended from the sky." The top of the rattle-stick is decorated with feathers of the hummingbird, a phallic being for the Tukano. In the Tukano creation myth, the Sun Father's sperm comes down to the earth on the rattle-stick. The Sun Father marks the spot to create humanity by piercing the earth with the rattle-stick until it stands upright. Putting the rattle-stick vertically in the ground is to "center" it, with connotations of sexual penetration. The "center" is a uterine spot penetrated by the phallic axis mundi, and the staff stands erect only when in the properly exogamic female "center" (Reichel-Dolmatoff 1975:101, 111, 140-141).

Afterwards,

When the Sun Father had thrust his stick rattle into the ground, its pointed end penetrated far beyond the earth, down into the land of ahpikondíá. With this term (derived from ahpikon/milk, and diá/river), the Indians designated paradise, the underworld abode of the Sun Father and the source from which all life

springs and to which the souls of the virtuous return after the body's death. This paradise, presided over by the sun, has a uterine character...[Reichel-Dolmatoff 1975:140-141].

After the Sun Father's sperm was deposited in the uterine underworld, the Tukano climbed up the rattle-stick and came full-grown out of the earth (Reichel-Dolmatoff 1975: 145). Finally, during the early stages of the yaje (Banisteriopsis caapi, a narcotic hallucinogen) ceremony which reenacts the myth of Tukano creation, the rattle-sticks become symbolic weapons.

From this account, we can see that the symbolism of the Tukano rattle-stick condenses the three functions that were earlier argued to pertain to the staffs of Costa Rica: ceremonial, martial, and digging-stick. The Tukano rattle-stick is primarily a ceremonial staff with cosmological and sexual codes. It is the axis mundi that intersects the cosmic realms, and the surrogate penis of the Sun Father, delivering his semen to the uterine underworld to create humanity. The top, middle and bottom of the staff correspond respectively to the upperworld, the mundane realm, and the underworld, in a simple vertical code. The ends of the staff thus have upperworld (avian) and underworld associations. The martial aspect of the staff is less prominent, confined

as it is to a symbolic role during the hallucinogenic ritual. Still, it may imply a link between fertility and aggression, or defense of the group.

The digging-stick aspect is concealed in the myth but it is there nevertheless. The bottom of the staff is pointed, as is that of a digging stick, and the Sun Father himself uses the staff as a digging stick, piercing the earth repeatedly until he finds the right spot to deposit his semen, as if it were a seed. The Tukano may use a liquid seminal metaphor to name the underworld, "milk river," but the Sun Father's procreative ejaculation is clearly equated with seedculture, like the planting of maize. This is rather odd, since the Tukano, like most peoples of the Amazon Basin, are horticulturalists, not seedculturalists. Yet the creation myth covertly associates the origin of the Tukano with seedculture, as if to suggest an historical link with a highland region where maize was a staple. Whatever the historical value of this concealment, the Tukano creation myth covertly implies a shift in the mode of agricultural production, from seedculture to horticulture. This is the opposite of the shift proposed by Cordy-Collins (1977) for the Chavín, from lowland horticulture to highland seedculture.

To summarize, then, there are significant structural and symbolic parallels between Atlantic Watershed staff

imagery and Tukano rattle-sticks. The Tukano staff appears to be an ethnographic analogue of the Costa Rican staffs, telescoping aspects of three discrete functions into one artifact. Both have a vertical cosmological code, with avian-solar associations for the top, and terrestrial-underworld associations for the bottom. In the Tukano staff, the bottom is a symbolic digging-stick; in the Atlantic Watershed staff-bearers, the bottom of the staff is a saurian or ophidian head.

We must beware, however, of the logical fallacy of misplaced concreteness, always a potential trap of ethnographic analogy. Yet the symbolic parallels here are precise, and could be explained in historical terms by parallel divergence from a common source tradition located in the Andean regions of northern South America.

Vertical Beads

Most of the long jade beads from Costa Rica were drilled lengthwise and intended to be worn horizontally, but a few long figure-decorated beads from the Atlantic Watershed were meant to be worn vertically, whether drilled lengthwise or not. These figural beads fall into three thematic groups, none of which seems to be very large: saurians, saurian "impersonators," and "tree trunks with figures."

The saurian images are probably crocodilians. A

matched pair of beads from Guápiles in the Línea Vieja zone has double bands around the neck and tail, suggesting to Snarskis (BC Number 159) that the animals are shown tethered. Each bead is perforated through the neck to hang with the head up, as larger animals often are when being skinned and butchered. Uncompounded saurian imagery in Costa Rica occurs in predominantly horizontal compositions, with terrestrial symbolic associations. In the present case, however, it is not known whether, or to what extent, these saurians share those associations.

The saurian "impersonators" are human from the neck down, and stand erect with hands on the belly (BC Number 158). Although drilled lengthwise in the manner of horizontal tubular beads, the two similar examples here are also perforated to hang vertically. They wear truncated conical hats, one with chevron or herringbone bands at the cardinal points. Each figure is fully human except for the projecting saurian snout, probably indicating a buccal mask. These figures are similar iconographically to the saurian impersonators in central position of flying panel metates, except for the difference in gestures and the hats.

The last group of vertical beads is a strange one indeed. A pair of tubular beads from Guácimo in the Línea Vieja depicts, apparently, an upright tree trunk,

with a figure seated in the hollow top, and a zoomorphic being halfway up or down the trunk (Easby 1968:Numbers 49, 50). The tree may be a species of palm, to judge from the compact ring of root nodules at the base. In one example (Easby 1968:Number 50), the figure at the top is probably a monkey, because of the long curved tail, and the being on the middle of the trunk may be a bicephalic frog. The top figure on the other bead may be human, and the other being cannot be identified.

These beads have no apparent relationship to any known iconographic theme in Costa Rica. The unknown theme must have been of some importance, however, because it is virtually repeated in two stone sculptures from the Atlantic Watershed, one of them nearly 1.5 m high (BC Numbers 148, 149). The stone "tree trunks" are identical in form to the jade ones, and both have what appears to be a child seated at the top. The largest of the two stone sculptures has an unidentified quadruped in the middle of the trunk, head downward as if descending. Both the stone sculptures and the jade beads probably date to the middle of Period V, ca. A.D. 700 or later (Graham 1981:122). Although this group of related objects has no apparent association with the major complex of metate-related imagery, it follows the pattern of duplicating monumental imagery in portable form. Very speculatively, this "tree trunk" group might be thought

to illustrate a mythic creation episode, if the top figures have emerged from the earth.

Framed Figures, or Figural Plaques

Framed figures or figural plaques are characterized by an abundance of string-sawing. Hence, they can be dated generally to the later part of the early tradition, probably the first half of Period V, ca. A.D. 500-750. Presumed to be pendants, although lacking suspension holes per se, they depict humans and animals within a variety of rectangular and circular frames.

One depicts a mirror-image pair of monkeys whose tails, ending in serpent heads, curve over their own heads (BC Number 179). Snarskis notes that the posture of the individual monkeys is essentially the same as that of the monkeys on the supports of flying panel metates (cf. BC Numbers 145, 147). The curved tails form most of the frame, and the object may have been worn horizontally, the only position in which the composition would be bilaterally symmetrical, typical of nearly all jade ornaments in Costa Rica. However, if the object were suspended vertically, it would nearly reproduce the asymmetrical composition of the metate supports in which the support forms a vertical side, and the curved tails of vertically opposed animals form the rest of the "frame." The San Rafael de Coronado metate (BC Number

147) shows this clearly: the downward pointing animal is feline, but its tail balances that of the monkey standing on his rump. Either way, the monkey plaque is a miniature version of metate imagery; if it was meant as a vertical composition, it may have "quoted" the support figures of a now-lost metate.

A squarish plaque with rounded corners (Easby 1968: Number 56) depicts an unidentifiable animal, perhaps an avian-headed quadruped (cf. BC Number 183, a Quimbaya style "curly tailed" animal). The notched border of the frame recalls both the stylized "trophy head" notches on the plate border of flying panel metates, as well as the notched border of circular pendants (cf. BC Numbers 145, 147, 180). The curly-tailed animal theme is also common in ornaments of the Coclé style; its meaning there is unknown, but in Costa Rica, as the monkey plaque indicates, they may refer to the curly-tailed animals on monumental metates.

Several plaques depict upright anthropomorphic figures with rectangular or trapezoidal frames. One depicts, according to Easby (1968: Number 57), a human with the "blocky muzzle" of a jaguar; two saurian (?) "alter egos" are opposed on the top of the frame. As Easby notes, the general format recalls the more delicate and elaborate framed gold pendants of Diquís and Chiriquí (e.g., BC Number 269). The resemblance to metalwork is a

further sign that these jade objects are rather late, just as the sloppiness of the string-sawing suggests that jade carving was in decline.

Finally, another framed plaque depicts a very stylized but presumably human figure, spread-eagled within a rectangular frame (Easby 1968:Number 55). Thick diagonal incisions where the hands and feet meet the frame probably represent rope lashings. A pair of opposed beak-birds is carved on the top of the frame. Moche art has a number of examples of prisoners bound to a rectangular frame for punishment or execution. Donnan (1978:Figures 134, 137, 148) illustrates modeled and painted examples in ceramics of the rack alone, and with a prisoner, in one case apparently being attacked by two birds.

Schaffer (1981:Figure 14) illustrates a Moche copper chisel whose decoration clarifies the nature of the rack punishment/execution. According to Schaffer (1981:13-16), the five vultures that surround the male prisoner are pecking at his genitalia and eyes. She follows Donnan (1978:94-95) in interpreting the rack theme as a punishment for theft, as reported by a seventeenth-century Spanish observer, the monk Antonio de la Calancha. Schaffer explicitly disassociates the rack punishment/execution from the sacrifice and decapitation of war captives, the former associated with vultures, the

latter with condors.

Notwithstanding these qualifications, the jade pendant is still very similar to the scene on the Moche chisel. There seem to be no comparable examples of this rack punishment or execution theme between northern Peru and the Atlantic Watershed, even though framed compositions are common in Isthmian metalwork. Moreover, in the Atlantic Watershed the beak-bird is explicitly associated with dead or decapitated prisoners who, in all likelihood were war captives and not criminals. Thus, if this plaque depicts an actual method of execution in the Atlantic Watershed, it probably refers to war captives.

Collectively these jade plaques continue the link between personal ornaments and monumental metates, until the end of the early tradition metate and jade carving. All plaques have late technical traits, and some are related to Isthmian metalworking traditions.

"Curly-Tailed" Animals

Curly-tailed animals are typically quadrupeds with a long tail that curves up over the back. In the Atlantic Watershed, these beings incorporate varying combinations of avian, simian, feline and crocodilian traits. The curly tail itself may be either a feline or simian trait; one example appears to be a seated monkey (Easby 1968: Number 45). Another has been identified by Easby (1968:

Number 58) as a jaguar, and another as either a jaguar or crocodile, depending on which of two suspension holes is used (Easby 1968:Number 67). Avian traits are limited to the tail, appearing as heads or tiny alter egos (?) (Balser 1974:Lámina XXXV; Easby 1968:Number 44). Often no diagnostic traits appear (Easby 1968:Number 43).

In the Atlantic Watershed, then, curly-tailed animal pendants have some of the traits of the animals depicted on the supports of flying panel metates. However, there is no other evidence of a link between pendants and metates, and the pendants lack diagnostic traits such as trophy heads.

The ultimate source of the curly-tailed pendant was apparently the Quimbaya metalworking style of Colombia, but the proximate source was the Coclé style of central Panama. The Coclé people imitated Quimbaya style ornaments locally in metal and stone, and also passed on Quimbaya-made ornaments to the Atlantic Watershed. In Period V graves in the Línea Vieja, Stone and Balser (1965) reported finding early tradition jade, maceheads and metates in association with Middle Classic Mesoamerican mirror backs, and Coclé- and Quimbaya-style gold ornaments, among them a Quimbaya curly-tailed animal with a parrot head. There are slight parallels in imagery between curly-tailed animals and metates, but the curly-tailed animals in jade are essentially local

imitations of Coclé and Quimbaya metal ornaments, and may have shared their still unknown meaning.

"Circle" Pendants

A number of Atlantic Watershed jade pendants depict a perforated disk, often with figural motifs extending from the top or bottom, and usually drilled transversely to hang flat. Balsler (1974) observes that some were probably carved from cut-down axe pendants. Snarskis (BC Number 181) suggests that the basic disk element may be derived from Mayan glyphic signs for seed and jade/water.

One of the simplest circle pendants is squarish in form, similar to the main sign cartouche of Classic Mayan glyphs on stone monuments (BC Number 180). The perforation is round, having been drilled. Projecting radially from the disk are ten stylized heads separated by notches. The cartouche-like disk is similar to the Classic Mayan glyph T511, the sign for the day Muluc, Water, synonymous with jade (Figure 26; Thompson 1971:274). The ring of heads repeats the border motif of flying panel metates; thus they must represent trophy heads. This pendant therefore juxtaposes symbols of life (water) and death, and in the context of metate-related iconography, projects death by decapitation as the equivalent of life or metaphorically as the source of

life.

Another simple circle pendant has an oblong form, with a guilloche or two-strand interlace forming a concentric band interrupted only at the two suspension holes (Easby 1968:Number 2). Since we have seen earlier (Chapter IV) that woven or interlaced geometric motifs probably denote cosmic boundaries or connections, the interlace here, with the sign for water and jade, may denote the subterranean sources of both water and life, since the dead go into the earth and life emerges from it.

A more complex type of circle pendant was achieved by adding motifs above or below the disk, in the manner of adding affixes to the main sign of a Mayan glyph. Two examples have profile saurian heads attached in such fashion, at the top (Balser 1974:Lámina XXX, bottom left) and at the bottom (Easby 1968:Number 1). The first one, according to Balser, was reworked from an axe, and the axe bit became the squarish circle portion, with the perforation having been irregularly drilled and string-sawn. The second example is finer in execution, with stylized saurian heads hanging from a horizontal bar below the disk. In both cases, the combination of jade/water and saurian associations probably refers to the terrestrial sources of water and life.

Balser (1974:Lámina XXX, bottom center) illustrates

another pendant in green slate, reportedly from Guanacaste-Nicoya, with a human (?) torso and head above the disk. This one, too, was probably reworked from an axe, apparently preserving part of the figure.

The Atlantic Watershed beak-bird appears in another pendant said to have been found in Guanacaste-Nicoya, apparently an exchange object (BC Number 181). This pendant is similar in composition to the second saurian pendant discussed above (Easby 1968: Number 1), and like it probably was made in the Línea Vieja zone. Unlike the saurian pendant, here the added motifs are on the top: immediately above the disk is a bicephalic serpent bar, with a chevron band on the body; a trapezoidal zone above has an incised interlaced "X," like chain links, similar to the interlaced Mesoamerican "patolli" cross. Two opposed beak-birds are perched on top.

Thompson (1971:274-275) has remarked on the close association of snakes and water in Mesoamerican symbolism, and here the serpent with chevrons apparently signifies that the sources of water and life are inside the earth. The motifs here are thus arranged in a vertical cosmological code, from the interior of the earth, to the upperworld where the beak-birds wait to take the dead back down to the underworld. The four symbolic elements of this pendant would then describe, in almost mnemonic fashion, the cyclical nature of the

cosmos.

Atlantic Watershed circle pendants form a fairly coherent group whose motifs relate in varying ways to water and life. It would not be surprising, then, if the perforated disk element were based on the main sign of the Mayan glyph for water and jade. Beyond the formal and symbolic associations with glyphs, the circle pendants themselves may have had a quasi-linguistic character, since the other motifs seem to have modified, in a grammatical sense, the "main sign."

"Olmec Masks"

Two Olmec-style jade masks are known from the Atlantic Watershed, one reportedly from Vereh, Talamanca (Figure 11), the other reportedly from the Línea Vieja (Pohorilenko 1981:Figure 9). There is also half of a third mask reportedly from Bagaces in Guanacaste-Nicoya, (Pohorilenko 1981:Figure 8). While each has indisputable Olmec style traits, all were subsequently modified. These masks were found by looters in the late 1960s and early 1970s, and all were initially in private collections, the Línea Vieja mask in Denver, Colorado, the rest in Costa Rica.

On stylistic grounds, both the Línea Vieja mask and the Bagaces half-mask were probably made during the La Venta horizon, ca. 1000-600 B.C., because both have the

classic Olmec infantile mouth. In the Vereh mask, the sensitive modeling of the lips and gums has been replaced by an inverted-V furrow, with the drill pits obvious at the corners and apex. Whether post-La Venta or a coeval "provincial" work, the Vereh mask does not have the classic Olmec style.

A fundamental problem presented by Olmec-style objects found in Costa Rica has always been that of determining when the object arrived there. In the case of the masks, each has been modified by temporally diagnostic techniques. The Bagaces mask was split vertically in the same fashion as the split Classic Mayan celts that also were reportedly found in Bagaces (Balser 1974:Láminas XII-XIV). Pohorilenko (1981:318-319) observed that the single perforation in the top of the mask was drilled after splitting, since the half hangs straight. The horn-like protrusions on the top of the Línea Vieja mask are similar to the harpy eagle crests on jade figures of the Atlantic Watershed (cf. BC Numbers 163, 168). The profile beak-birds on the top of the Vereh mask are similar to those found on jades carved in the Atlantic Watershed during the later part of the early tradition, such as circle pendants (BC Number 181) and framed pendants (Easby 1968:Number 55). Balser suggests that the Vereh mask was reworked ca. A.D. 800-1000, when jade was scarce in Costa Rica. His range may be a bit

late, but his reasoning seems correct.

The reworking techniques and the new features indicate that the masks were altered in Costa Rica during the span of the early tradition. The dating of Costa Rican jade with similar traits suggests that the reworking occurred late in the early tradition, perhaps ca. A.D. 500-800. This does not allow us to determine when these Olmec style objects arrived in Costa Rica, but the fact that the masks were reworked rather than imitated also suggests a fairly late date, when, as Balsler thinks, local supplies of jade were running low.

Summary: Jade and the Iconography of Stone Sculpture in the Atlantic Watershed

In the Atlantic Watershed, Mesoamerican formal categories of jade are relatively less important than in Guanacaste-Nicoya. This phenomenon correlates with the expansion of new, non-Mesoamerican-derived forms of jade artifacts, and the much closer iconographic links between jade and stone sculpture. In axes and celts the most obvious difference between the two regions is the predominance of avian celts in the early part of the Atlantic Watershed tradition, a forecast, perhaps, of the coming importance of the supernatural beak-bird. Still, the two regional traditions are closely related, and the axes of each are associated with the terrestrial and

underworld realms, fertility and death.

The symbolism of winged pendants and bar pendants also must be considered essentially the same in both regions, but only in the Atlantic Watershed is there any evidence of how bar pendants were worn: by saurian-masked figures in stone who may be related to the central impersonators of flying panel metates. The problematic Olmec-made or -inspired spoons also occur in both regions, but the few known from the Atlantic Watershed are very different. The latter originally may have had crocodilian traits, but were reworked to suggest avian beings.

The emergence of new categories of jade ornaments not based on Mesoamerican forms coincides with, and may be related to, the increased use of the string-sawing technique. While Mesoamerican worked jades continued to reach Costa Rica through much of the span of the early traditions, in most cases the imports were altered according to Costa Rican practices. It is probable that much heirloom jade, both foreign and locally-made, was reworked to provide the material for new forms of jade ornaments. This would explain why many of the new jade figural pendants are smaller than axes, and why some follow the same approximate contours.

These new jade pendants are characterized by close iconographic links with the monumental flying panel

metates. While the beak-bird and circle pendants have close links with Mesoamerica (to the Bilbao Sun Vulture and its PCL variants, and to Mayan glyphs, respectively), it seems that forms and subjects increasingly have Isthmian and northern Andean affiliations. This new, or at least more evident, southerly orientation is best seen in staff-bearers, framed figures, and curly-tailed animals.

It appears, then, that jade carving in Guanacaste-Nicoya and the Atlantic Watershed emerged from a common, ultimately Mesoamerican cultural base, evident in form, symbolism, and cosmology. But during Late Period IV the Atlantic Watershed began to diverge, at which time the imagery became more concerned with aggression and violent death. The question now is the extent to which maceheads and metates may reflect these same changes.

2. Maceheads

Given the comparative nature of iconographic analysis, many of the points to be made here have already been made in conjunction with earlier comparisons. Therefore, the following discussion of maceheads and next, metates, can be abbreviated accordingly.

At the beginning of the early tradition, maceheads in the Atlantic Watershed were essentially the same in form and subject as those of Guanacaste-Nicoya. As Snarskis

(BC Number 50) has remarked, this suggests that initially there were few centers of production, and that maceheads, like jades, were widely exchanged among the upper ranks of society in both regions. These production centers presumably were located at or near the larger chiefly centers. In Guanacaste-Nicoya, there was probably a major production center near Las Huacas, and in the Atlantic Watershed, in the Línea Vieja zone. Beyond this the general lack of archaeological control prohibits any analysis of distribution.

Maceheads Shared with Guanacaste-Nicoya

Maceheads common to both regions are generally compact in form, with few signs of string-sawing. Among the most common are avian types, with the head and beak projecting from the spherical or globular main portion. Virtually identical avian maceheads, with large eyes and twin tufts or "horns," have been reported from each region (cf. BC Number 49, Línea Vieja; Ferrero 1977: Lámina Va, Guanacaste-Nicoya). This image is identified by Snarskis as probably a harpy eagle, by Ferrero as an owl.

A number of similar but unidentifiable maceheads have also been reported from each region, variously identified as stylized felines or saurians (BC Number 50, Atlantic Watershed; Lothrop 1959: Number 143, Guanacaste-Nicoya).

It is probable that other macehead types, with animal and human imagery, were either found in the Atlantic Watershed or made there, but the tendency has been to ascribe most unprovenienced maceheads of this form to Guanacaste-Nicoya (BC Numbers 43-46).

A probable forerunner of the later Atlantic Watershed basalt maceheads with the beak-bird (with right-angled beak) and trophy head may be seen in globular maceheads which have a long, curving beak ending in a tight, drilled scroll (Instituto Nacional de Seguros 484). This type may have been made without string-sawing, relying on drilling; provenience is unknown. A similar "proto-beak-bird" with a string-sawn channel defining the beak was reportedly found at Guácimo, Línea Vieja, in a grave that probably dates to early Period V, after A.D. 500 (Stone and Balsler 1965:Figure 16).

In the discussion of Guanacaste-Nicoya maceheads, it was suggested that the images related on one level to cosmic passage and cosmic realms, and on another level to aggression and death, on the assumption that macehead imagery reflects in part the symbolism of jade and metates. Given the indications of a common cultural base, the early Atlantic Watershed maceheads must then have similar associations. To the extent that maceheads also served as symbols of high rank, this commonality between the two regions implies a shared language of such

symbols of rank and authority during the early part of the early traditions, until perhaps the end of Late Period IV, ca. A.D. 400-500.

Maceheads Probably Restricted to the Atlantic Watershed

The diagnostic macehead type of the second half of the early tradition in the Atlantic Watershed is the full-figure beak-bird and trophy head, depicted in jade and on metates (cf. Figure 8; BC Numbers 139, 146). These maceheads are carved from the same vesicular basalt as the metates. Virtually the only variety in these maceheads concerns the number of tufts or horns: most have two lateral tufts, others have one central tuft (Instituto Nacional de Seguros 475). The latter macehead also has remains of a cream or white coating, possibly a thin lime solution, which must have covered the porous stone like fine plaster. These maceheads are intimately related to the monumental flying panel metates in material, style and subject, but they do not exactly duplicate any specific feature. All the maceheads have the angular beak with drilled scroll at the base, where the trophy head is attached. However, no metates are known in which the support beak-birds have both the angular beak and a trophy head or corpse.

As the supernatural avian being who transports the dead depicted on metates, the beak-bird is associated

with cosmic passage and with the consumption and/or execution of victims. These beak-bird maceheads are the only type depicted in use, on jade staff-bearer figures, confirming the contemporaneity of the maceheads, jades and metates, and indicating the basic unity of the metate iconographic complex.

Also apparently dating to the later part of the early tradition are other maceheads made of the same porous basalt, and depicting pot-bellied monkeys with a long tail; human (trophy?) heads; and stylized saurian heads with long snout and tall ears (Instituto Nacional de Seguros 471, 473, 474, 489). On stylistic grounds, these maceheads should be contemporaneous with the basalt beak-bird maceheads. The saurian macehead is identical in form to the head of the central figure on a flying panel metate from the Línea Vieja (BC Number 146). The others likewise may reproduce metate features. No provenience data are available for these maceheads; they seem to be less numerous than the beak-bird basalt metates.

Finally, the basalt star maceheads discussed earlier appear to copy cast copper maceheads made by the Moche of northern Peru (cf. Figure 20; BC Number 140; Donnan 1978: Figure 111). As noted, it is difficult to imagine such a complicated form being carved in stone with any martial use in mind, but the star form cast in metal would have made a good weapon indeed.

Summary

Maceheads in the Atlantic Watershed show the same pattern of development as jade axes and spoons. Initially, there was an essential identity of forms, subjects, and presumably meanings. This shared tradition ends with the divergent development of new forms in the Atlantic Watershed ca. A.D. 400. The new forms are predominantly avian, with explicit links to the iconography of flying panel metates in their references to aggression and violent death.

3. Metates

Early Decorated Metates

Well-made but plain tripod metates with a horizontal plate and a low rim were the first ceremonial versions of utilitarian metates in the Atlantic Watershed. They were also the basis for the first decorated metates (Snarskis 1978:Figures 33a, b). The simplest and perhaps the first actual carved decoration added to the basic metate consisted of vertical notches or ovoid "bumps" on the border of the plate (Figure 12). On the later flying panel metates, notched borders are contemporaneous with finely carved trophy head borders (cf. BC Numbers 145, 146). It therefore seems likely that the notched borders

"represent" trophy heads, whose features may have been painted rather than carved.

The next stage of decoration, typologically, was the addition of geometric knobs or tabs running lengthwise under the grinding plate (Stone 1966a:Figure 2c, e). These motifs seem to occur only on metates with border motifs, suggesting that they represent a later stage chronologically. According to Snarskis (1978:156-157), the pendant knobs or tabs are representations of, or references to, the dorsal scutes of crocodilians. Given the Costa Rican practice of using spikes, knobs, cones, pellets and similar relief and applique motifs to represent the surface excrescences of saurians, the predominance of saurians and especially crocodiles in Costa Rican art of the early traditions, and the temporal primacy of saurian imagery in Type A metates of Guanacaste-Nicoya, Snarskis' identification appear to be well-founded.

At about the same time or slightly later, round tripod "metates" appear, with similar pendant tab decoration under the plate, arranged in three radial rows corresponding to the placement of the legs (Snarskis 1978:Figure 49d). These round platforms, also rimmed and having a notched border, have no utilitarian counterparts in stone, and so must be a special-purpose, ceremonial variant of the oblong metates.

Oblong and round metates may have had different ceremonial uses and meanings, as yet unknown. The elite grave at Talamanca de Tibás near San José, dated ca. A.D. 100-400, provides a well-documented context--rare enough in Costa Rica--wherein oblong and round metates occur in the same grave (Snarskis 1979; 1981:51-54, Figure 18). The oblong metate supported the occupant's head and upper body, with the rest on two round metates. The most precious offerings were a jade shell and axe and several maceheads, placed on or beside the oblong metate. The archaeological context provides no other clues to the differences between the two forms of metates.

The Tibás grave, and a later grave at La Fábrica de Grecia (Snarskis 1981:58-59), also in the Central Highlands, confirm the suspicion that metates were used as burial platforms in elite graves. Archaeological control is still too poor to allow any rank-ordering of the graves beyond the gross distinction between rich/poor and elite/non-elite. It seems probable that multiple-metate burials were among the highest ranking. Multiple-metate burials also indicate a relationship (of possession?) between individuals and metates, but we do not know for certain that this relationship existed prior to burial; presumably it did, since real metates are quotidian tools of food processing, so that one might expect their ceremonial counterparts to see use through

much of a person's lifetime.

At the strictly iconographic level, the dearth of imagery in these early decorated metates precludes any explicit links with jade and maceheads, although their common mortuary association is evident. As "natural" symbols, the use of metates as burial platforms or furnishings associates death with agricultural fertility, the transformation of maize into an edible foodstuff, and the terrestrial origin of sustenance and life. The dead are therefore symbolically and physically associated with maize through its instrument of cultural transformation from the natural state. It is difficult to avoid the conclusion that burial on or with metates--whether decorated or not--symbolically expressed a belief in new life and rebirth, at least for the dead so honored.

The earliest decorated metates thus introduced in succession symbolic references to aggression (trophy heads) and the fertility of the earth (crocodile scutes). According to Snarskis (1980:24), the notched/head borders are references to "the taking and shrinking of trophy heads by warriors in battle" undertaken to capture agricultural land. The deliberate pairing of symbols of fertility and aggression in the earliest decorated metates supports Snarskis' idea in general, although archaeological evidence for head shrinking may be hard to come by.

A probably later variant of the early oblong metates adds hook-like beaks (or birds) underneath the grinding plate, as if replacing the saurian motifs (Stone 1966a: Figure 3b). It should be made clear that this sequence is strictly typological, since no datable contexts are available. Further complicating the picture at this point, similar metates with pendant "hook-birds" are known from the Veraguas region of west-central Panama (Lothrop 1950; 1966:Figure 15a). These putatively early metates in Veraguas grade imperceptibly into more complex types that may be called simple flying panel metates (Lothrop 1966:Figure 15b-d). These latter sometimes have a notched or head border, as in the Costa Rican ones. The flying panel figures include monkeys, serpents and bats, but apparently never more than one species in a metate.

The dating of the Veraguas metates is problematic. An early date of ca. 300 B.C. was claimed for a multiple-metate burial at Pueblo Nuevo, apparently by cross-dating with the supposedly coeval Aguas Buenas ceramic complex of Chiriquí. Aguas Buenas is now regarded as coeval with Late Period IV and early Period V in Costa Rica, ca. A.D. 1-600/700 (Snarskis 1981:73-76). To the southeast of Veraguas, in the Azuero Peninsula, Alain Ichon (1975:28-29) encountered burials on plain tripod metates, dating to his Phase II, ca. A.D. 300-500. These data indicate that Veraguas metates are coeval with or somewhat later

than their Costa Rican counterparts.

Ferrero (1977:329) implies that the Veraguas metates influenced those of Costa Rica. This is most unlikely. First, the Atlantic Watershed has a more complete typological sequence, from plain to very complex. Second, the Veraguas metates really do not develop: there are no support figures, and the central figures are repetitive rather than hieratic. The Veraguas metates give the impression of being quotations of isolated motifs, in much the same way that Atlantic Watershed portable art "quotes" specific metate features. Therefore, at present it is more plausible to regard the Veraguas metates as local versions of the Atlantic Watershed metates. But in either case, such a relationship must have followed from Isthmian-wide exchange networks which circulated metalwork into northern Costa Rican and beyond.

Flying Panel Metates

The monumental flying panel metates are based directly on the earlier simply decorated tripod metates, but are much larger and more complex. The horizontal row of pendant motifs was replaced by an L-shaped septum attached to the single leg and to the opposite end of the plate; the septum was the stage set for the central figures. On each of the metate's supports, figures

project outward 90 degrees from the plate. The border of the plate has either carved human heads or imitative notches.

Fewer than ten of the great flying panel metates are known, none found scientifically or having documented provenience. All but a few remain in Costa Rica, and none seems to have been found since the 1960s or earlier. Several are reported to exist in private collections in Costa Rica, but only one has been published. None of these metates is identical to any other, but all are variations on a set composition and theme.

The central figures are always upright anthropomorphs with zoomorphic heads or masks. Variations include beak-bird "masked" figures with or without wings (BC Numbers 144, 145), saurians (BC Numbers 146, 147), and monkeys (Easby and Scott 1970: Number 212). In several cases the septum is occupied by a symmetrical, hieratic group of three figures: the central figure in both is a saurian impersonator, flanked by smaller musicians or attendants (Ferrero 1977: Ilustraciones III-91, 92).

Often the horizontal portion of the septum is carved as a figural pedestal for the central figure. Thus, a beak-bird impersonator stands on two recumbent and presumably dead humans, placed head-to-head under the talons of the central figure (BC Number 145). Saurian impersonators stand on the back of a feline whose tail

ends in a beak-bird-like scroll, or on a bicephalic crocodile (BC Numbers 146, 147). On the metate in New Orleans, a monkey stands on the back of a giant crab (Easby and Scott 1970:Number 212). In a few cases, the vertical portion of the septum is carved with superimposed figures, otherwise unidentified (BC Number 147; Easby and Scott 1970:Number 212).

The support figures show the greatest variation, but they are always fully zoomorphic (except, of course, for the dead humans) and always have a curving tail or beak motif. Beak-birds appear alone, with trophy heads, or with bound corpses (BC Numbers 144, 146; Ferrero 1977: Ilustración III-92). In yet another variation, a beak-bird with trophy head clutched in the talons stands on the back of a crocodile carved head-downward (Easby and Scott 1970:Number 212). Monkeys, with one forepaw over the mouth and the other grasping the upcurving tail, occur alone, or standing on the rump of a feline who clutches a trophy head between his paws (BC Numbers 145, 147).

Throughout the variation in the zoomorphic traits of the central and support figures, the basic elements of composition and iconography remain consistent. The border always refers to trophy heads, the central figures are always anthropomorphic, and the support figures always zoomorphic.

Doris Stone (1961, 1966a, 1972, 1977) and Carlos Balser (1955), separately and together (1957, 1965) have long argued that the beak-bird on these metates reflects an Antillean myth reported by Pedro Martír de Anglería, in which a long-beaked bird pecked the vaginal opening of a woman and so allowed humanity to come forth. While their concern with fertility is well-placed, the relevance of the Antillean myth is doubtful. Likewise, their vague assertions of "southern" and "Caribbean" sources of the trophy head "cult" have never been given any iconographic basis. As argued at some length earlier, the Bilbao Sun Vulture and associated Middle Classic Mesoamerican imagery provide a coeval iconographic tradition that more parsimoniously accounts for the confluence of avian, fertility and death themes, and furthermore, with evidence of historical links. Additionally, the chronological "downstreaming" followed here has allowed the sequential development of artifacts and traditions to become more apparent, providing a sense of the historical and artistic currents that led to the emergence of the flying panel metates. In the discussion to follow, the point of departure is the premise that the previously argued symbolic and cosmological associations of metates and related imagery in Guanacaste-Nicoya and the Atlantic Watershed are a valid foundation from which to begin.

The clear delineation of a helmet mask on the central figure of the Jiménez Alvarado metate (Ferrero 1977: Ilustración III-91) suggests that all central figures are actually ritual impersonators. A position of authority or leadership for the central figure is also indicated by those metates with hieratic central figure groups in which musicians (playing maracas and flutes) flank the main character (Ferrero 1977: Ilustraciones III-91, 92).

When the septum is figured, the imagery relates to fertility and the earth (saurian), to beings who live inside or under the earth (feline, crab), or to death (human dead). In compositional terms, the ritual impersonators are above terrestrial or subterrestrial images, and may have been depicted as being in the mundane world. The beak-bird impersonator standing on two dead humans also seems to express power and victory.

On the metate in which the central beak-bird is also winged (BC Number 144), the upright stance with wings partly spread recalls the threat display and mantling posture of raptors. According to Leslie Brown (1976:156-157), threat display in raptors may be defensive or offensive, but its purpose is to signal the raptor's readiness to fight. The bird raises itself up, sometimes even leaning back on its tail to display the talons, and the feathers of the head and neck are extended. Mantling is a similar type of threat display, when wings are

extended over the dead prey. As a natural sign of aggression and readiness to engage an enemy, raptorial threat display accounts for the pose of the winged central beak-bird, and further suggests that the ritual impersonator has a martial role. The threat display posture may also have some relevance to the other central figures, who commonly stand erect, with arms partly away from the body, forearms up and palms outward.

The posture of the support figures appears in part to be a function of the presence or absence of the dead. On metates where there are no dead bodies or heads on the supports, beak-birds are depicted both head-down (Ferrero 1977:Ilustración III-91) and head-up (BC Number 144) as if descending and ascending. Where monkeys simply replace beak-birds, they stand erect touching mouth and tail (BC Number 145). Where the dead are shown, the posture of the support figure(s) suggests a lowering of the dead and/or the descent of the support figures (BC Numbers 146, 147; Easby and Scott 1970:Number 272; Museo Nacional de Costa Rica 20787). In one case a larger upper beak-bird and a smaller lower beak-bird together appear to lower or raise a bound body (Ferrero 1977: Ilustración III-92). From these indications, it would appear that one function of the entirely zoomorphic beak-bird support figures was to move the dead to or from the underworld. In another case, a feline performs this act

(BC Number 147).

Therefore, one major difference between the anthropomorphic central figures and the zoomorphic support figures is that only the latter dispose of the human dead. Given the close iconographic links between the beak-bird and the Bilbao Sun Vulture, along with the substitution of monkeys for beak-birds and the identification of jaguars with the interior of the earth and the night sun in the underworld, the disposal of the dead on the metates may thus be modeled on the descent of the sun into the underworld. Violent death thus assumes the cyclical regularity of the cosmos. We can also see now that the relation between the central and support figures reveals a division of labor in the disposal of the dead: natural beings dispose of the human dead, while their human impersonators stand by, threatening but not acting.

Who are the dead, and why were they killed? It would seem obvious, from the way they are depicted, that they are not the honored dead of one's own group. Bound bodies are more likely to be signs that the dead were enemies and/or victims of ritual sacrifice. Ethnohistorical sources for Guanacaste-Nicoya and the Atlantic Watershed indicate that decapitation was practiced on war prisoners, and that raids and wars were commonly undertaken either to settle territorial disputes

or to acquire prisoners for sacrifice (Lothrop 1926,1:50; Stone 1966b:229). Land--presumably good land, worth fighting over--was thus linked with sacrifice by decapitation at the time of Contact. Carlos Aguilar (1952), in his survey of the trophy head complex of the late Atlantic Watershed tradition, specifically connects trophy heads with war. In the Late Postclassic period in Central Mexico, sacrifice by decapitation was linked to deities of the night, vegetation and earth (Moser 1973). Snarskis (1981) attributes the aggressive imagery of the early tradition to competition for good agricultural land brought on by expansive maize cultivation and concomitant increases in population density in favorable zones. In his view, the selection of the metate as the basis for cult art reflects the growing importance of central authorities needed to coordinate agriculture, war and source distribution.

It is probable, therefore, that the bodies and heads depicted on metates are those of enemies who were captured or killed in wars and raids to defend or acquire land. This explains the concern with fertility, since both social reproduction and agricultural fertility are functions of successful aggression: in-group fertility depends upon out-group death.

Utterly lacking, however, in these metates and in virtually all the art of the early tradition, are

depictions of the act of killing. Instead, there are images and artifacts that threaten aggression, and images depicting the fruits of aggression. The concern in these metates with the disposal of out-group dead complements their presumed use as burial furnishings or platforms for the in-group elite. The metates themselves may even have been used as sacrificial platforms, as has been suggested for other metates decorated with trophy heads (Graham 1981:123-126; Stone and Balser 1957:170-171). In that event, of course, the missing images would have been acted out in reality.

Because of their derivation from maize metates, the great flying panel metates inherently equate the production of food for in-group consumption with out-group death. The equation ultimately reduces to "grinding our maize is like (requires) cutting off their heads" and "maize kernels are human heads."

Whether the monumental metates were used as burial platforms is unknown, but simpler ones were. Directly or indirectly, the monumental metates are associated with elite death and burial and symbolically linked to war and fertility. This supports Snarskis' (1980) association of the monumental metates with the managerial and authoritative roles of newly-emerged chiefs and other leaders.

There remains to consider another level of symbolism

in metates. Why were these tools that were traditionally used by women in domestic labor taken over by men and made the basis for a symbolic complex concerning fertility and aggression? Some recent comments by Maurice Bloch and Jonathan Parry (1982:7, 18) on women, fertility and death are suggestive:

If death is often associated with a renewal of fertility, that which is renewed may either be the fecundity of people, or of animals and crops, or of all three. In most cases what would seem to be revitalized in funerary practices is that resource which is culturally conceived to be most essential to the reproduction of the social order.

... sexuality is general--and female sexuality in particular--is often seen as the cause of death; and the fertility which is regenerated by the mortuary rites may be either human or natural (or both)... More specifically, we must examine the fact that female sexuality is often associated with death only to be opposed to the "real" fount of human and natural creativity.

Even though images of women seem to be entirely absent from the complex of metates and related imagery,

they obviously made an important contribution to fertility. Along with whatever field-work they may have done and their natural role in child-bearing we can assume that domestic food preparation was predominantly a women's realm. However, in what seems to have been a perpetual state of antagonism and tension among competing predatory groups, male-organized aggression became increasingly vital to the reproduction of the social order. Consequently, men--leaders and warriors--projected themselves as the essential "culturally conceived" resource, as the source and guarantor of fertility.

The monumental flying panel metates of the Atlantic Watershed interweave themes of fertility, food production and processing, divisions of labor, aggression, death and the display of heads and bodies. The key to understanding these thematic layers seems to be the visual equation between fertility and predation, expressed by a zoomorphic code that both disguises and naturalizes culturally-specific human behavior. Portable images disseminated certain motifs and themes of the metates, but they also fragmented them. The full expression of this visual ideology of human predation was reserved for the monumental metates and the men who used them.

4. Decorated Manos and Pestles

A continuing problem in understanding the ceremonial metates of the early Atlantic Watershed has been the question of what was processed on those which have wear-marks on the grinding plate. Because of the thinness of the plate, even the well-made but plain tripod metates with rim and carved border were not suitable for continued daily use. Stone (1956, 1961) and Stone and Balser (1957) long argued that rimmed metates were used to mash tubers and palm fruits, and that maize was only grown in quantity after ca. A.D. 1000. Recent research by Snarskis (1978), including the discovery in Costa Rica of early types of maize and the utilitarian metates used to grind it, has disproven the earlier hypothesis.

Snarskis (1978:157-159) has shown that the common wear pattern on special-purpose rimmed metates is a small circular depression that was apparently made by pounding and rubbing. Both motions correspond to one type of decorated or undecorated flared hard pestle, and Snarskis suggests that the pestles were used for crushing and pulverizing hard materials such as palm nuts and earth pigments.

A second type of decorated handstone, a stirrup-shape muller, was used with a two-handed pounding, rocking and

perhaps rotating motion. In size, and in the slightly convex contour of the work surface, these mullers also correspond to circular wear patterns.

The third type of special-purpose handstone is a thin, almost flat mano with a handle. Presumably, this type was used with a push-pull motion like normal maize manos, but because of its thinness would only have been suitable for occasional use. Corresponding wear patterns would probably produce longitudinal striations, as yet not noticed.

Because of the small size and functional implications of these handstones, decoration is simple so that it can serve as a handle, or not compromise the usefulness of the object. On pestles, the decoration is confined to the top, above the grasping portion and serving as a pommel. Non-figural decoration is very simple; one example resembles a lower jaw (BC Number 136). Birds are the most common figures, but they are not beak-birds and are not otherwise identifiable (BC Number 135; Mason 1945:Figure 16f-g). Human heads and recumbent humans also occur (Mason 1945:Figure 17). At least one example resembles a circumcised phallus (Mason 1945:Figure 16d).

For functional reasons, stirrup-shaped mullers show less variety in decoration, because it must be confined to the horizontal bridge at the top. Most are well-made but undecorated, and the most common figural decoration

seems to be a recumbent human (BC Number 137).

The flat, handled mano may be the least common of all. One of the few decorated examples shows a curly-tailed quadruped of the type that occurs frequently in Coclé and Quimbaya metalwork, examples of which have been reported from the Atlantic Watershed (cf. BC Numbers 138, 183).

The decorated handstones belong to the functional-iconographic-ritual complex centered on the flying panel metates. Wear patterns indicate that pestles and stirrup-shaped mullers were used with ceremonial metates, though perhaps not exclusively, and iconography supports this association: birds, dead humans, heads, and phalli are all congruent with the multi-layered symbolism of the metates. The handled manos remain ambiguous both in function and association.

The question of what was processed is still open, although ceremonial, special-purpose substances are indicated. Only earth pigments are certain to have been ground, but other plausible candidates include cacao, maize (perhaps for chicha, a fermented beverage), palm and other nuts, and drugs.

5. "Tree Trunks"

Two enigmatic stone "tree trunks" of near-monumental

size have already been discussed in connection with two vertical jade beads which are miniature versions (cf. BC Numbers 148, 149; Easby 1968:Numbers 49, 50).

Accordingly, a summary should suffice here.

The stone objects have no recorded provenience other than Atlantic Watershed, but the jade beads are reported to have come from Guácimo in the Línea Vieja. The group of four corresponds to no known theme, but their presumably coeval appearance in jade and stone follows the early tradition Atlantic Watershed pattern. The tree trunk, if indeed the identification is correct, might be a "world tree" or axis mundi, and therefore be related to a creation myth. In cases like this, unfortunately, the destruction of contextual data through looting makes interpretation nearly impossible.

6. Saurian Masked Figures

The dating of these small figures is still tentative because none has been found under controlled conditions. This standardized figure-type portrays a human male standing with hands on hips or belly, and wearing a saurian buccal mask and a two- or three-tiered feathered (?) headdress (BC Numbers 196, 197). In most cases the boundaries of the masks are visible and the figures have human ears. Invariably, they wear a necklace assemblage

of short beads pendant from a long horizontal bead. Sometimes a short feathered skirt is worn over the hips and buttocks, leaving the genitalia visible, and the figures otherwise nude but for the necklace, mask and headdress.

The saurian mask relates these figures to the central saurian impersonators of flying panel metates, although in form and style the metate figures are different and less realistic. A second temporally diagnostic feature is the necklace assemblage. As argued in Chapter IV, this probably depicts tubular beads of jade. Figural tubular jade beads often are rendered as saurians, so that the wearing of plain tubular beads by the saurian masked figures suggests that horizontal jade beads in general were associated with saurian and terrestrial symbolism. Thus, the saurian mask and the necklace are traits indicative of the early tradition.

On the other hand, independent figural sculpture and strongly standardized types are both characteristics of stone sculpture of the late tradition in the Atlantic Watershed, thought to begin ca. A.D. 1000. Because of the transitional nature of these figures, having early and late tradition traits but seemingly not to belong fully to either, they are presently dated ca. A.D. 700-1000.

Given their early tradition traits of saurian masks

and jade necklaces, we may take as a premise a fundamental continuity with the saurian terrestrial and fertility symbolism of the early tradition metate complex. From this standpoint, the saurian mask and jade beads are congruent with earlier expressions, and the feather headdress is a ritual and/or status marker. Thus, what seems to be innovative in these figures is their explicit coupling of earlier symbols of terrestrial fertility with a newly overt assertion of male sexuality. The latter point thus recalls the suggestion made earlier with regard to the "sexual politics" implicit in the choice of women's tools to project men as the source of fertility. Here again we seem to find rank- and sex-specific interests masquerading--literally--as universal interests, and this, of course, is one definition of ideology.

Now, if we look again at the stereotyped poses of these figures, they may be more meaningful. The small saurian figures portray leaders with two sexual traits, one overt, and one covert and suggestive. Explicitly, the leaders are men, with their often large genitalia deliberately exposed. Their pose carries a covert message: some have their hands on the hips, framing and stressing the nude pelvic region, as if to emphasize their sex; the more common pose is with hands placed flat on the sides of the abdomen, a pose that in real life

would often denote pregnancy or induced labor. The upright, hands-on-the-abdomen pose is common in Guanacaste-Nicoya ceramic figures of both sexes and in zoomorphic effigy vessels in Late Period IV (BC Numbers 54, 55, 57, 59), Period V (BC Numbers 85, 86), and Period VI (BC Number 102) and in Atlantic Watershed ceramic effigy vessels of Period VI (BC Number 210). The ceramic evidence suggests that this pose is a convention more commonly found in funerary effigy vessels that contained food or drink for the dead in the afterworld.

On this level, the pose may connote an equivalence of birth and death, a belief that the dead may be reborn or that society will give birth to a replacement. Maria Bozzoli de Wille (1982), in her studies of birth and death among the Bribri of the southern Atlantic Watershed, describes how pregnant women and male ritual buriers form a complementary symbolic and behavioral set. In the now-egalitarian Bribri society, the male buriers have a symbolic role in social reproduction: they care for the bones of the dead, likened to seeds, which return to the underworld so that new people may be born from the seeds of the underworld deity. Here we have a closed circuit of human and social reproduction with a marked symbolic sexual division of labor, but with complementarity rather than dominance, since "symbolically the buriers plant the seed and the women

bear the crop" (Bozzoli de Wille 1982:164).

While the "pregnancy pose" in the saurian masked figures may be associated with such a complementary symbolic and ritual role of men in human and social reproduction, we might also wonder whether the standardized portrayal of male leaders as "giving birth"--and wearing the mask of the crocodilian symbol of the earth and natural fertility--might actually suggest that men have a role in procreation and fertility superior to that of women. Whereas women give birth to individuals, men give birth to the social order, thus modeling (in reverse) cultural reproduction on natural reproduction in the same logical fashion that natural predation served as a model of and for cultural predation, i.e., war and sacrifice.

7. Conclusions

The iconographic analysis of jade again provided a useful basis for the interpretation of stone sculpture. The close links between jade and stone sculpture in the Atlantic Watershed early tradition are exemplified by the beak-bird, a mythological being of great importance who appears in jade ornaments and stone maceheads and metates. The predominance of the beak-bird in the Atlantic Watershed signals a divergence from the common

cultural base shared with Guanacaste-Nicoya, to an explicit demonstration that natural fertility and social reproduction depend on aggression and human sacrifice. The close iconographic relationship between the Atlantic Watershed beak-bird and the Bilbao Sun Vulture was a key to explaining the beak-bird, and suggests historical ties with southern Mesoamerica during the Middle Classic period (late Late Period IV and early Period V, ca. A.D. 400-700). However, as jade supplies dwindled at the end of the early tradition in the Atlantic Watershed, ties with Panamanian and Northern Andean societies increased in importance.

VI. THE IMAGERY AND THEMES OF BARRILES AND
OF THE EARLY TRADITION IN DIQUÍS

1. The Stone Sculpture of Barriles, Panama

Introduction

As explained in Chapter II, the stone sculpture of Barriles, in the Chiriquí highlands of western Panama, is the earliest known so far in the Greater Chiriquí subarea (which includes the Diquís region of southern Costa Rica). The recent clarification of the dating of the Barriles sculpture now places it ca. A.D. 400-600/800, thus making it coeval with the second half of the early traditions of Guanacaste-Nicoya and the Atlantic Watershed, the periods, respectively, of the Type B and flying panel metates. Thus, at Barriles the first half of the early tradition seems to be missing, and the sculpture appears with no evidence of local development.

This lacuna may result in part from the archaeological sampling, but it may also reflect the art-historical reality. Following their extensive survey of the Barriles zone, Olga Linares and Payson Sheets (1980) concluded that the rise of complex societies and monumental art production around Barriles was the result

of the expansion of seedculture, and perhaps human populations, from southern Costa Rica after A.D. 200. They do not further specify the source of this influence, but if it was in any way connected with the early traditions of Guanacaste-Nicoya or the Atlantic Watershed, then we would expect the stone sculpture of Barriles to reveal some art-historical links with one or both of the Costa Rican traditions. From this perspective, Barriles can be seen as the third early tradition of functional stone sculpture in this area. Like the Atlantic Watershed early tradition, Barriles is characterized by the coupled themes of fertility and predation expressed in ceremonial metates; the early Atlantic Watershed may have been the "missing" early stage of the Barriles tradition.

Unlike the two Costa Rican traditions, however, Barriles seems to have been exclusively a highland phenomenon, since there is no evidence as yet of Barriles-like sculpture in the Diquís and Chiriquí lowlands. The Barriles-like sculptures of "barrels" and figures reported from the adjacent Costa Rican highlands apparently define the zone of influence of the Barriles polity (Snarskis 1981). It may be difficult to accept that no stone sculpture was made in the Diquís lowlands before the Barriles tradition, but this appears to have been the case. Haberland (1973:149) suggests that the

so-called Palmar style of Diquís, initially defined by Mason (1945:293-295), may be dated ca. A.D. 500-800. In Haberland's scheme the Palmar group is later than Barriles, but in the revised scheme they would be in part coeval. Despite general agreement that Barriles sculpture has temporal primacy in Greater Chiriquí, the implications of this with regard to the development of Diquís stone sculpture remain unexplored. Was Barriles a source of Diquís stone sculpture, and if so, in what ways? In order to address this problem, we must first examine the sculpture of Barriles itself.

The clearest and most incisive comment about Barriles sculpture was made by Olga Linares and her co-workers Payson Sheets and Jane Rosenthal (1975:141):

...whatever its specific meaning and symbolic function, Barriles sculpture associates symbols of rank and warlike attributes with maize agriculture. This association is common among many tropical New World societies where fermented maize was made into an important ritual drink [chicha].

This is an essentially materialist conception of the links among subsistence, art and ideology that recalls the by-now familiar syndrome seen in the early traditions of Costa Rica. How does the sculpture of Barriles

project these associations?

Metates

At least five metates are known from the Barriles site, all apparently of different sizes, with tetrapod supports and slightly concave oval plates (Figures 13-15; Torres de Araúz 1972:Ilustraciones 4, 85). Two are reasonably small, and the others range in length from about two meters, to possibly four to six meters (based on a length-to-height ratio of between four- and six-to-one) for the two giant metates of which only the supports were preserved. Of the two largest metates, one had atlantid and caryatid supports; of the second, only three supports decorated with figural reliefs survive.

The atlantid-caryatid metate itself is now known only from photographs of two of its supports (they were stolen soon after discovery and have never been recovered) and from a reconstruction drawing in Torres de Araúz (Figures 13-15). Each figure supports a trophy head in each hand, pendant from a section of the plate, and each figure wears the conical cap and anthropomorphic pendant distinctive of high rank in Barriles sculpture (Torres de Araúz 1972:20). Aside from a belt worn by the male, and a pubic cover worn by the female, the figures are nude.

The sculptors took pains to represent sexual features with unusual clarity. The male has large pointed

nipples, as if tumescent, and though the penis is flaccid, the genitalia are generously proportioned; the navel is large and protruding. In contrast to the straight torso and hips of the male, the female has perhaps the most voluptuous body in all of Precolumbian art, with large breasts, wide curving hips, and a large navel protruding from a swollen belly. This figure, the only woman known in Barriles sculpture, is an extraordinary characterization of feminine sexuality and fecundity.

This colossal metate has been reconstructed as a monolithic oval tetrapod with the plate encircled by a border of pendant trophy heads. This size rather strains the imagination, but the reconstruction follows the form and proportions of a similar but smaller metate that survives in toto.

This similar metate (2.15 m in length) is supported by four atlantid busts, each holding (displaying) trophy heads which form a continuous border of the oval plate (Torres de Araúz 1972:Ilustración 85). One of the four atlantid busts has N-shaped incisors, the only known occurrence of this common Diquís motif in the stone sculpture of Barriles. At each end of the plate surface, a small relief design has been chiselled away (personal observation). This metate, because of its size and remarkable preservation, has become something of a

national symbol in Panama, along with the Barriles statuery. In size, if not in thematic complexity, this metate dwarfs anything known from Costa Rica.

The third of the giant Barriles metates again is known only from the surviving supports (Torres de Araúz 1972:Ilustraciones 86, 87). Only three supports survive, but this does not necessarily mean that the metate was a tripod. The three supports, each nearly one meter high, each have an axe-bearer in relief near the bottom, and trophy head display figures near the top. Of the two remaining tetrapod metates known to have come from Barriles, one is about half the size of the atlantid bust metate, and the other is about half again smaller (Torres de Araúz 1972:Ilustración 4). The larger of the two has a trophy head border.

The so-called "barrels," which gave Barriles its name, are cylindrical stone carvings about two-thirds of a meter long (Figure 16). Two in the Museo del Hombre Panameño have figures in relief on each end: one of decapitated humans, the other of humans missing a foot (Torres de Araúz 1972:69, Ilustración 91). Similar "barrels" have been reported from the Costa Rican site of San Vito de Java, and thought to have been used as seats (Laurencich de Minelli and Minelli 1973). Stone spheres have also been found at Barriles, but they are relatively small and never approach the colossal size of the Diquís

lowland spheres.

Independent Figural Sculpture

The other major category of sculpture from Barriles comprises human figures or pairs on shaft bases (Figure 17; Torres de Araúz 1972:Ilustraciones 5, 81-84). Like the two largest metates, these figures were found in pieces; some are still missing heads and limbs, and all appear to have been deliberately broken (Torres de Araúz 1972:66). Beyond the breaking and decapitation, surface mutilation is also evident. These figures can be divided into four types: "masters-and-slaves," trophy head displays, standing decapitated (i.e. heads knocked off) men, and one torso with arms broken off (perhaps originally a complete figure or master-and-slave group).

The master-and-slave type is so-called because a nude man carries another nude man pick-a-back. The "slaves" have no accoutrements of any kind, while the "masters" wear conical hats and pendants. One of the masters sits imperiously with hands on knees, and the other displays a small human head in each hand. The obvious size differential between the dead and living heads may indicate that head-shrinking and preservation were a Barriles practice. In one case, the "master" has been almost entirely obliterated, and Torres de Araúz (1972: 67) thinks that the "slave" represents a mutilated

person, with lips removed.

Of the three standing figures who display trophy heads (again small), one wears the conical cap, one apparently has had the cap knocked off, and the third has been decapitated. Each figure is otherwise nude except for the same narrow belt as worn by the colossal metate atlantid. Perhaps most significantly, the genitals of each figure have been mutilated so that nothing but spalled stumps remain. The two standing decapitated figures have no accoutrements remaining, and the genitalia of both have also been mutilated. The last figure survives only as a torso with broken arms, but retains the conical cap, and wears a twin-figure pendant which recalls the twin trophy head display figures carved in relief on one of the three legs from a broken metate (cf. Torres de Araúz 1972:Ilustraciones 84, 87).

Function and Meaning

Collectively, the metates, "barrels," and figures from the ceremonial site core at Barriles couple the themes of aggression and fertility, a linkage seen most clearly in the metates. The two smaller metates merely add trophy heads to the plate border, abstractly linking agricultural production (through maize processing) to warfare.

As the metates grow larger, the human dimensions of

this linkage grow more concrete. In the largest whole metate, the torsos of men, perhaps commoners or slaves since they have no attributes of rank, support the trophy heads, their own heads almost indistinguishable from those of the victims. On the three legs surviving from another giant metate, figures wielding axes or knives are paired either with figures who display heads, or who may be victims (one upper figure appears to be decapitated).

On the two remaining supports of the largest metate of all, a man and a woman of the highest rank support the border of trophy heads as they display their sexual and generative features. This explicit linking of elite fertility and sexuality with symbols of war, sacrifice and food production, seems to equate the reproduction or fertility of the elite with war and predation, as if the continuation of the polity were dependent on war, predation and elite reproduction.

While these giant metates are thought by some to have been "altars" or tables of unknown use (e.g., Easby and Scott 1970: Number 209; Torres de Araúz 1972:68), it seems far more likely that they really were conceived as giant metates. The eponymic and mysterious "barrels" have never been explained. The two in the Museo del Hombre Panameño cannot have been seats because they have carved reliefs on each end, leaving only the cylindrical surface usable. Thus, it seems likely that the "barrels" are

therefore manos, proportional in size to the giant metates (Graham 1981:126). The monumentalizing of metates and manos is perfectly congruent with the greatly enhanced ideological value of agriculture as justification for war. The images of decapitated and maimed bodies on the manos make their point with brutal succinctness: grinding maize is like killing the enemy. As with the metates seen earlier in Costa Rica, the recognition that the natural symbolic associations and meanings of metates have been preserved makes the linkage of agriculture and war seem a matter of inevitable logic.

It does not necessarily follow, however, that these objects were only metates. Within the context of ritual, these metates almost certainly had a variety of uses, each enhancing in some way a facet of the basic theme of agriculture and war, or more broadly, fertility and predation. As metates, they may have been used sparingly or in token manner to prepare maize for chicha. As "altars" or display tables, the consistent trophy head borders suggest that real human heads may have been placed on them, thereby visually equating heads with maize kernels. Moreover, since special stone platforms or objects were often used as sacrificial stones in Mesoamerica and Greater Nicoya, it is possible that the great metates were used in like manner (Lothrop

1926,1:71-72). Again, such a ritual use would logically complement the imagery of metates and dramatically enact the link between agriculture and war, and life and death. Finally, although there is no direct evidence that the Barriles metates were, like the Costa Rican and Veraguas metates, commonly used as burial platforms, it is not unlikely that they were.

The Barriles figural sculpture of "masters-and-slaves," head-bearers and attendants asserts the political authority that backs up the ideology of predation expressed in the metates. Not all figure types have been identified as to socio-political position or rank, but the obvious distinction is that between the so-called masters and the slaves, between superior and inferior. Here, both pose and accoutrements communicate the gaps between the lords of predation and their hapless underlings, whether in-group commoners or out-group captives. Of course, since these statues represent the elite as they wished themselves to be seen, we do not know whether the boastful political authority that the figures project actually corresponded to reality or not.

Two factors suggest that it did. The first is the complete absence of any mediating code in the Barriles visual ideology of predation. Unlike the art of the early traditions in Costa Rica, the art of Barriles employs no zoomorphic imagery to naturalize or translate

culturally-specific practices such as war and head-taking. Instead, we have an unequivocal and uncompromising statement that fertility depends on war, and that political authority depends on violence.

The second factor concerns the symbolic implications of the mutilation of Barriles art. Virtually all of the sculpture at Barriles was systematically dismembered and/or defaced. According to Easby and Scott (1970: Number 208), the statues were broken apart with chisels. All but a few of the figures were decapitated, and genitalia mutilated. There is general agreement that this destruction was a political act, and Torres de Araúz (1972:66) suggests that it was carried out by an "invading group." More precisely, one might speculate that the group that sacked and destroyed the ceremonial center at Barriles had earlier been the victim of aggression by Barriles. This might better explain the systematic nature of the mutilation, and the motivation to obliterate the facial and genital features of the statues. The decapitation, dismembering and genital mutilation may therefore have been intended as symbolic revenge for earlier aggression by Barriles, the symbolic counterpart of the actual destruction of the Barriles polity.

2. The Early Tradition of Diquís Stone Sculpture

Introduction

There is little firm archaeological evidence for dating stone sculpture in the Diquís region. Nearly all individual pieces of sculpture lack a recorded provenience or contextual data. Thus, nearly all chronologies have been based on cross-dating categories of sculpture with counterparts in better known sequences such as those of Barriles in the Chiriquí highlands and the Period VI "jaguar metate horizon" that extends from the Atlantic Watershed of Costa Rica through the province of Veraguas in Panama. This method was followed by Haberland (1969, 1973, 1976, 1978) for southern Central American figural sculpture. Unfortunately, Barriles and Diquís share very few categories or even motifs of sculpture.

A second and less precise method has been to devise relative chronologies based on assumptions about the direction of formal development. This method is implicit in the categories of Diquís sculpture delineated by Mason (1945) and explicit in Haberland's (1973) area-wide treatment of figural sculpture, the most detailed scheme to date. Snarskis (1981) and Haberland (1984) provide the latest assessment of archaeological problems in Diquís, both using data gathered by Robert Drolet and

Robert Markens during a surface survey of the Diquís drainage in 1980-1981. Graham (1981) presents a preliminary account of the art-historical problems of Diquís sculpture, emphasizing the need for more controlled comparisons between Diquís and neighboring traditions.

Thus, a major art-historical task remains the clarification of chronological and iconographic relations between Diquís and traditions in Greater Chiriquí and in other regions. So far, attempts have been limited. On the evidence of reports that small stone spheres have been found at Barriles-related sites in the Diquís and Chiriquí highlands, Haberland (1973) has suggested that the great stone spheres in the Diquís lowlands were made at the same time, ca. A.D. 400-600/800. Haberland has also suggested that Mason's (1945) Palmar group of Diquís sculpture may have been the local base of the "classic" style of Diquís stone sculpture. Lothrop's (1963) account of his 1948 excavations and purchases on United Fruit Company farms in the Diquís delta contains an abundance of speculations about the Andean sources of such Diquís traits as "feline deities," but no systematic iconographic comparisons. Likewise, Stone's (1943) report on stone spheres is largely a descriptive account with no chronological anchor. The following discussion is thus aimed at clarifying the basic art-historical

problems of Diquis stone sculpture, beginning with the Palmar group.

The Palmar Group: From Style to Subtradition

In his catalog of the Minor Keith collection of Costa Rican stone sculpture, J. Alden Mason (1945) first isolated the Palmar group of stone sculpture (named after a site on the Río Grande de Térraba), on the basis of formal and technical characteristics. Mason further divided the Palmar sculpture into four groups, of which only Group D actually belongs to the "classic" Diquís style; Groups A-C are those that Haberland (1973) proposed as possibly being the basis of the presumed later style.

The Palmar figures of Groups A-C are characterized by retention of an ovoid or cylindrical boulder form. The figures of Group A are of igneous rocks, while all other figure sculpture of this region is of sandstone. The figures of Groups A-C very seldom have any undercutting, and only rarely is any part of a limb freed from the body (Figures 18, 19). The figures are predominantly male and often appear to be ithyphallic. They range in height from about 12 to 80 cm, and seldom are able to stand by themselves; most have a rounded peg base, a few have a short cylindrical shaft base.

It is not clear whether Mason had access to Minor

Keith's now-lost collection records, but he infers from the absence of any ceramics among the Palmar material, and from evidence of weathering, that all of the Palmar sculptures were surface finds. Lothrop (1963:25-26) reports that most of the complete figures that he purchased in the Diquís region near Palmar had been found set into the cobbled foundations of mounds, but adding that he did not see this himself because the looters refused to guide him to an undisturbed site. This would tend to support Mason's inference that they were surface finds. In his excavations around Palmar Sur on United Fruit Company banana farms, Lothrop also encountered four deposits or caches of broken statues that he interpreted as having been shattered by fire, since there was no evidence of any surface mutilation as at Barriles, for example.

In terms of form and material (igneous rocks), Mason's Palmar Group A figures are similar to early figures from San Agustín, Colombia (cf. Figure 18; Reichel-Dolmatoff 1972b:Figure 8). Although the Palmar Groups B and C are of sandstone, they too also resemble closely San Agustín figures, especially those of a more columnar section (cf. Mason 1945:Plates 54A, D-E; Reichel Dolmatoff 1972b:Plates 24, 25, 27). Somewhat similar but more columnar figures are also known from the province of Coclé in central Panama (Torres de Araúz 1972:Ilustración

93). According to Haberland (1973:136), this "Penonome I" style should also be dated ca. A.D. 500-800. Most of these putatively early stone figures show few attributes of rank or supernatural status, except for the occurrence of feline teeth in some San Agustín figures.

However, there are other figures in Palmar Groups A-C that are more complex than those very early San Agustín figures, and which have rank attributes which are directly paralleled in other and probably later San Agustín figures. For example, the rectangular mouth full of teeth in some Palmar figures is similar to the rectangular mouth with feline incisors found in early columnar figures in San Agustín (cf. Figure 18; Reichel-Dolmatoff 1972b:Plates 25, 27, 28). The most common rank attribute in Palmar figures is a (probably wood) staff, and there are three types of Palmar staff-bearers, depending on the number and position of the staffs. Each Palmar type has parallels in San Agustín figures: single staff held vertically (Mason 1945:Plate 53E; Reichel-Dolmatoff 1972b:Plate 93); single staff held diagonally (Mason 1945:Plate 56A; Reichel Dolmatoff 1972b:Plate 35); and double staffs held vertically (Lothrop 1963:Figure 9c, Plate XIc-e; Reichel-Dolmatoff 1972b:Plate 67). There is also a variant type, in which a masked figure holds a vertical staff so that it appears to be supporting the mask (Mason 1945:Plates 55B, 56F; Reichel-

Dolmatoff 1972b:Plates 46, 47). This mask-and-staff type is exactly duplicated in Calima cast gold lime spatulae (Bray 1978:Numbers 149, 539).

In terms of these attributes of rank and supernatural status, then, the Palmar figures have direct parallels in both very early San Agustín figures and some which are more complex and therefore probably later. However, this correlation may be misleading since the dating of the stone sculpture at San Agustín remains problematic; all that matters here, however, is that the early types be earlier than the Palmar figures, and this seems certain.

Mason's original intention was merely to separate the sculpture from Palmar and Lagarto (a nearby site), from the very different material from Buenos Aires and Paso Real--mostly ceramics, stone tools and functional stone sculpture looted from graves. Though unknown to Mason, his categories are chronologically valid, since the Buenos Aires and Paso Real material belongs predominantly to the Period VI "jaguar metate horizon" which extends from the Atlantic Watershed through Veraguas province, Panama. Similarly, Mason unwittingly grouped the Palmar material itself according to a relative chronology, since Groups A-C now appear to represent the beginning of the Diquís lowland early tradition, while Group D belongs to the "classic" Diquís style of figural sculpture that continued into Period VI.

The Palmar Groups A-C therefore might be more appropriately considered a subtradition, since they represent an intrusion of a Northern Andean stone carving tradition typified by San Agustín, Colombia, and since these Palmar groups preceded the "classic" style of Diquís stone sculpture. The poorly known complex of columnar stone sculpture from Coclé shows some similarity to the Palmar subtradition, and may also have derived from the same northern Andean tradition typified by San Agustín. The Coclé style was shortlived and did not lead to further local developments in stone sculpture. The Palmar subtradition is here dated coeval with Barriles or slightly later, i.e., in Period V, where Haberland suggested it should be, ca. A.D. 500-800. According to information presently available, the Palmar subtradition has no apparent links with the Barriles tradition, nor with the other early traditions of Costa Rica. The absence of functional stone sculpture in the Palmar subtradition may be further evidence of its intrusive nature.

According to Snarskis (1981:76), this same part of Period V may also have seen "the arrival and eventual hegemony of Chibcha-speaking peoples from Colombia." The Palmar subtradition provides evidence of Northern Andean affiliations. Although this does not necessarily imply a population intrusion, it is likely that such an intrusion

did in fact occur. At the time of Contact, Macro-Chibchan languages were spoken in all of Panama and all of Costa Rica except Guanacaste-Nicoya, where Chorotega-Mangue and Nahuat-Nicarao were spoken (Stone 1966b). Before Period V, however, the linguistic geography may have been very different.

If the Palmar subtradition was a consequence of the spread of Chibchan-speakers northward from Colombia through Panama, then Palmar would represent one of the initial penetrations of Chibchan languages. The languages of Barriles and the early Atlantic Watershed therefore may not have been Chibchan, but were perhaps affiliated with the languages of Mesoamerica. This, however, is not an art historical problem. What is important here is that art historical evidence indicates the beginning of the "Chibchanization" of Costa Rican culture in Period V in the Diquís region, supporting inferences drawn by archaeologists from other realms of material culture (Snarskis 1981:54, 76-80).

The Diquís Tradition

Mason's (1945:300, Plates 57E-F, 58, 59A-E) grouping and description of the Palmar figures indicate that the "classic" or typical Diquís stone figure style (Group D) developed directly out of the Palmar subtradition; he himself concluded that Group D was the latest because of

its "superior" workmanship. The Diquís style is characterized by flatter figures of sandstone, which apparently split easily into thin slabs (Lothrop 1963: 25). Nearly all figures have the peg base seen in the Palmar subtradition, but limbs are now usually separated by narrow vertical slots. This "negative space" thus provides an illusion of volume, but the Diquís-style figures are actually flatter than the Palmar figures. In most figures, the short neck, straight-ahead gaze, and bilateral symmetry create an impression of rigidity and stiffness, which is reinforced by the standardization of poses and attributes. The majority of the figures are male, but females and males with animal attributes are also represented. Thus, in formal terms, the figures of the Diquís tradition diverge from the Northean Andean roots of the Palmar subtradition in the direction of flatness, negative space, and abstraction. No figures known from San Agustín, whether full-round or slab, have freed limbs.

There is considerable variety within the rather narrow limits of the Diquís figure style, because of the variable combinations of attributes of sex and rank, as well as zoomorphic features. Many figures are nude males, with no iconographic "adjectives" other than the position of the hands or the up or down direction of the penis (Mason 1945:Plates 57D, E, 58D; Lothrop 1963:Plates

VIII f, XIII, XVII c). Lothrop (1963:27, 28, Figure 7) counted at least eight different arm positions, but neither he nor anyone since has been able to decode the language of position and gesture. He notes that arms crossed over the chest may be associated predominantly with males, but cautions that the corpus is so small that this conclusion may not be valid.

Lothrop more than doubled the number of figural categories perceived by Mason (19 versus 9) but this did not lead to a better understanding of who or what these figures represent. In the interests of clarity, fewer categories may be more productive. We can thus begin with those figures which appear to be fully human, with no zoomorphic or "supernatural" attributes.

Few human female figures have any identifiable attributes beyond sex. They are usually characterized by an inverted triangle to indicate the pubic region, and/or a vertical groove or slot for the vulva. Presumably this treatment of the sex denotes nudity rather than the wearing of a pubic cover or loincloth (Lothrop 1963: Plates XVb, XVIa; Mason 1945: Plates 58A-C, E, F, 59C). When breasts are visible, the figures may also have rows of raised knobs on the shoulders or upper arms (Lothrop 1963: Plate XVIII). Lothrop identified these marks as crocodile scutes, which may be correct, but Mason (1945: 260, 300) on the other hand identified large knobs on

Diquís figures as jaguar pelage markings, and smaller knobs on Atlantic Watershed figures as keloidal scarification or some other form of body decoration. In the absence of other qualifying attributes, identification of these marks as scarification seems most plausible. A Calima-style ceramic vessel from Colombia shows a seated woman with a similar pattern of markings impressed on her shoulders (Reichel-Dolmatoff 1965:Plate 21).

The last-mentioned Diquís figure also holds a barbell-like object in each clenched hand. Lothrop (1963: 33) identifies this figure as a "pouting goddess," for no evident reason. Similarly, Lothrop (1963:34-35, Figure 11, Plate XVIa) identifies as "masked goddesses" a group of female figures that have a horizontal groove between the nose and mouth, but even on the clearest examples it is not apparent that the groove represents a mask. Diquís Period VI "Alligator Ware" solid ceramic pendant figurines commonly have a red line painted across the face in the same position; these figures are invariably female and are often shown nursing a child (BC Number 243). Given the general lack of clearly identifiable attributes there is little basis for meaningful comparisons and interpretations of these fully human female figures.

The fully human male figures, though not much more

common than the female ones, have more attributes of rank. However, a number of these male figures are also shown completely nude (Lothrop 1963:Plates XVIIb, XVIIId, e; Mason 1945:Plates 57E, 58D). One of the largest known Diquís figures, 1.25 m high, belongs to this category, with the rib cage visible, and perhaps knee bands or ligatures (Lothrop 1963:Plate XIII).

Probably most distinctive of the fully human male figures are the "head-bearers" (Lothrop 1963:Plate XIIa) and "bound prisoners" (Museo Nacional de Costa Rica, no number). The head-bearer referred to here displays two human heads slung over the chest and back, and wears a bicephalic serpent belt whose two heads meet above his erect penis. The prisoner has his arms bound together at the elbows and pulled tightly behind his back.

The fully human female and male figures noted so far appear to exhaust the known categories. There are in addition some figures without sexual features or sexually ambiguous (Lothrop 1963:Plate XIVb, c). Altogether, the fully human figures of the Diquís tradition are distinctly in the minority. This resembles the situation at San Agustín, where anthropomorphic figures with zoomorphic traits predominate.

In the Diquís tradition, composite figures generally repeat the categories of the fully human figures, while often being larger, more complex, and more sharply

carved. The last trait may be misleading, however, because, to judge from Lothrop's work, composite figures may more often have been broken and buried and thus spared much weathering.

The most common zoomorphic feature of these figures is the mouth, which is usually rectangular, and filled with even, sharp teeth. This produces a fierce, snarling impression that does not seem human. When the canine teeth are pointed and adjoined to form an N-shape, the mouth is usually identified as that of a feline (jaguar), a common trait in Northern and Central Andean art (cf. Lothrop 1963:Plate XXa; Reichel-Dolmatoff 1972b:Plate 15). Although rectangular mouths without feline canines may have different meanings, they still seem more closely related to the zoomorphic mouths.

Among figures with the simple rectangular mouth as the only zoomorphic feature, females are comparatively rare. There were only a few in the Keith collection from Palmar, of which two have a rectangular mouth but no teeth (Mason 1945:Plates 58A, E-F). The most complex such figure in the Keith collection has, in addition to a toothy rectangular mouth, prominent breasts, navel, and vulva, and keloid-like bumps on each upper arm (Mason 1945:Plate 59C). A similar male figure from Palmar has the same kind of mouth, and keloids (?) on the shoulders, chest and upper arms (Mason 1945:Plate 59E). Lothrop

(1963:Plates XVIIa-b) excavated several broken male figures of this type, with rectangular mouth, and full but not feline teeth, and no keloids.

Female figures with a true feline mouth are rare (Lothrop 1963:Plate XXa), but male figures with this trait are common. There are head-bearers with a feline mouth (Nason 1945:Plate 54C [classed as Palmar Group B, but most similar to the Palmar Group D, or Diquís tradition]), including one with a serpent belt. In the latter (Lothrop 1963:Plate XXIb), the head of the serpent in effect replaces the glans penis, as if they were interchangeable or symbolically equivalent; this recalls the "kennings" in Chavín art (Rowe 1962). Perhaps also related to the complex of trophy head imagery are male figures with a rectangular mouth but without feline teeth, and carrying a hafted war axe with a long handle (Mason 1945:Plate 59A). A variant type of male figure has a rectangular mouth with feline teeth, the mouth wrapping around the sides of a flattened head, which more resembles that of a monkey (Lothrop 1963:Plate XIXb).

What appear to have been the most complex figures exhibiting the true feline mouth are known largely from fragments, probably indicating that they had been deliberately broken and cached. Most presumably are male, but this is an inference from the fact that male figures tend to have more attributes than females.

Lothrop (1963:Plates XXd-e, XXIa-d) purchased a number of upper body fragments which show a feline mouth and single or double serpent tongues. One double-tongued figure (Lothrop 1963:Plate XXIe) also has hair braids ending in serpent heads, symmetrically duplicating the arrangements of the tongues. All of these figures are fragmentary and none wears a trophy head. One of the most complex of these composite feline-man figures, acquired by Keith from Palmar, has a feline mouth, protruding non-serpentine tongue, bulging eyes, and an unusual semicircular segmented (feather?) headdress (Mason 1945:Plate 59D).

Collectively, the human and compounded figures of the Diquís tradition range from fully human men and women with no attributes other than sex (and sometimes without, or ambiguous), to clearly anthropomorphic figures, mostly male, with feline (and possibly simian) facial features. The most extreme compounded figures are those with feline mouth and serpent tongues and hair. Within these nearly continuous gradations, the most obvious ritual characters are the head-bearers, both human and compound, and the bound prisoners, fully human. Axe-bearers probably relate to this theme of human sacrifice and decapitation, too, but the relation of the other figures to this theme is not immediately apparent.

Fully zoomorphic stone sculptures in the Diquís

region are relatively uncommon, amounting to about 16 percent of Minor Keith's figural sculpture from Palmar (16 of the 101 pieces, excluding metates) (Mason 1945: 292, 301). Of these, 12, or 75 percent, were felines, a numerical predominance that (if this is a valid sample) may reflect the importance of feline traits in other sculpture of the Diquís traditions. In composition, the zoomorphic sculptures are either horizontal and usually identified as stools, or vertical, with a peg base for mounting in the same fashion as the human and composite figures.

Felines are apparently represented only as horizontal sculptures (Lothrop 1963:Plate XXa; Mason 1945:Plate 60 C-D). They may be mono- or bicephalic, and seem to be a standardized type. Aside from the number of heads, the major variations are in size, ornamental detail, and quality of carving. According to Mason (1945:302), size and quality are directly related, with the larger examples, up to a half meter or more in length, being the best carved (or preserved).

In subject, the feline sculptures are the same as the "jaguar metates" of the Period VI horizon that extends from the Atlantic Watershed of Costa Rica through Chiriquí and Veraguas provinces of Panama. In form and workmanship, however, the squat, blocky feline "stools" could scarcely be more unlike the thin and elegant

"jaguar metates" (cf. Mason 1945:Figure 41, Plate 60C). Although both types of sculpture may have served as seats and may be in part coeval, other aspects of their function and meaning appear to have been different. This difference, whatever its nature and dimensions, is reflected in the archaeological contexts, since the Palmar "stools" and other animals were apparently surface finds, while the "jaguar metates" from Buenos Aires and Paso Real are reported to have come from graves, as are most of those from the Atlantic Watershed (Mason 1945:205, 293).

Among the remaining horizontal animal sculptures, there are identifiable depictions only of crocodiles (Lothrop 1963:Plate XXIIb). Lothrop (1963:39, 4C, Figure 15, Plate XXIIIId) also discusses some unidentified animal sculptures, which he labels "ghosts," admitting that they actually may be simply unfinished. This seems more plausible.

Among the vertical, peg-base animal sculptures, the depictions are limited to birds, probably owls (Mason 1945:Plate 60B), armadillos (BC/BS Number 247; Mason 1945:Plate 60A), and apparently a camelid head on a tenon (Mason 1945:Plate 59F). The camelid identification, if accurate, is not too surprising, since camelids are also portrayed in Period VI Diquís ceramics (BC Number 240). There also are unidentified, probably unfinished vertical

animal sculptures (Lothrop 1963:Figure 15).

The final remaining category of Diquís tradition stone sculpture, except for the Period VI "jaguar metates" to be discussed in the next chapter, consists of the famous stone spheres. These numerous and still-mysterious carved objects range in diameter from about 15 cm to more than 2 m, and are found chiefly in the riverine lowlands. According to Stone (1943) and Lothrop (1963), small stone balls were found in graves; the larger spheres, when found undisturbed, were usually arranged in front of foundation mounds, or on top of them, and sometimes unassociated with any mounds. Although not specified by Stone or Lothrop, these cobble-ringed platforms are probably not ordinary house mounds, but platforms for high-status residence, burial, and ceremonial activity (Snarskis 1981:80). On one banana farm, Stone (1943:Plate IV) found zoomorphic "stools" near one large mound that had 14 spheres arranged in front of it.

The arrangement of the spheres so far reveals little in the way of standard patterns. Among the probably undisturbed arrangements, there are right triangles of three balls, lines of two and three, irregular T-forms and rows, and isolated balls, sometimes against a mound base. For the most part these arrangements appear to be cumulative or additive, such that more spheres could have

been added at any time.

Stone (1943) early on surveyed the distribution of stone spheres in the Americas, but she offered no detailed or convincing explanations of their function and meaning, and none has been offered since.

Sources of the Diquís Tradition

The immediate source of the Diquís tradition of human and compound figures was the Palmar subtradition, which, as we have seen, derived from the Northern Andean stone carving tradition typified by early sculptures of San Agustín, Colombia. Mason's (1945) analysis of the sculpture from Palmar in the Keith collection shows that the Palmar subtradition grades smoothly into the Diquís tradition, and only with a larger sample do the distinctions become more obvious. In formal terms, the major change in the Diquís tradition is the slot carved out between the legs and between arms and torso. This semi-full-round treatment of the limbs is not a common feature of any South American stone carving tradition (Lothrop 1963:27). The nearest source of this trait would have been the nearby highland tradition of Barriles, which ended at some point during the span of the Palmar subtradition. In most of the Barriles figures, the limbs are carved almost in the round, but not cut free from the body (Torres de Araúz 1972:Ilustraciones

80-84).

The human figures of the Barriles tradition, however, share hardly any iconographic motifs with those of the Diquís tradition, excepting the one known example of the feline mouth in the largest preserved Barriles metate; given the temporal overlap between Barriles and the Palmar subtradition, it is likely that the feline mouth at Barriles reflects the same Northern Andean intrusion into the Greater Chiriquí region. Whether this isolated occurrence of the feline mouth at Barriles refers to an episode of contact with a Diquís lowland polity can only be speculated upon. Lothrop (1963) seems to have been correct when he looked southward for the origin of such motifs as the feline mouth with N-shaped incisors, the wearing of trophy heads on the chest or back, serpent or "dragon" belts, tongues and hair, and staff-bearers. In most cases, however, Lothrop probably weakened his case by settling on the ultimate sources (or so he thought) of such motifs, rather than on proximate sources with plausible modes of transmission. For example, there seems little point in referring to images of staff-bearers on the South Coast of Peru or in Tiahuanaco, Bolivia, when similar images are found in San Agustín stone sculpture, Calima goldwork, and Atlantic Watershed jade (Lothrop 1963:31-32, Figure 9, Plates XIc-e; cf. Reichel-Dolmatoff 1972b:Plates 46-47; Bray 1978:Numbers

149, 538-539). In this instance, proximity, independent evidence of influence, and the exchange of portable objects make a more plausible case.

All of the iconographic traits listed above, with the exception of serpent belts and hair, occur in San Agustín stone sculpture, and the feline mouth and staff-bearers are also common in Calima goldwork (Bray 1978:Numbers 31f, 129, 149, 538-539). Lothrop (1963:113) suggested that the bifurcated serpent tongues, serpent belts (and presumably serpent hair, not mentioned) are Central Andean motifs that "reached the Isthmus and Costa Rica by sea" since they are not present at San Agustín, but are found in Costa Rican and Panamanian goldwork. Serpent belts and hair are practically diagnostic traits of some early Central Andean art styles such as Chavín and Nazca, where they are often found on anthropomorphic beings with a feline mouth, especially the Chavín Staff God (Rowe 1962:Figures 10, 21, 23). However, as Lothrop (1963:31) notes, serpent belts are rare in Diquís stone sculpture, as is serpent hair, and they are also uncommon in Northern Andean metalwork. The immediate source of this motif in Diquís stone sculpture may have been Isthmian goldwork of the Coclé and Chiriquí-Diquís styles (Emmerich 1965:Figures 111-112, 134, 146). There remains a large gap in time and space between the appearance of these motifs in Isthmian art, and their apparent origins

in Chavín art which at present cannot be explained.

The zoomorphic sculptures of the Diquís tradition are unlike any other sculpture from southern Central America in their rough blocky treatment of animal forms. San Agustín seems the only plausible source, since it is the only southern tradition known with both horizontal animal sculpture and vertical based animal figures (Reichel-Dolmatoff 1972b:Plates 32, 100-101). In vertical figures, there is little apparent relationship in style or subject matter. In the horizontal sculptures the similarities are somewhat greater since crocodiles are present in both (cf. Stone 1943:Plate IVe; Reichel-Dolmatoff 1972b:Plate 100). If there is a link between the two traditions, however, it must be mainly conceptual, concerning the use of animal effigies as seats, a trait syndrome that is widespread among historic peoples of the South American tropical lowlands (Zerries 1970).

The great stone spheres of the Diquís lowlands represent the only such tradition known in the Americas. Stone (1943) reports that carved stone balls are known from "Patagonia to Tennessee," but in all but a very few cases they are small and portable, and even some of the larger ones may be naturally worn cobbles or volcanic ejecta. According to Haberland (1973:139), the great stone spheres of Diquís are based on smaller stone

spheres that have been reported from Barriles-like sites in the Chiriquí and Diquís highlands. This body of material would thus provide a local source for the concept of the Diquís spheres, but would not account for their monumentalization or meaning. Carving of the Diquís spheres probably did not begin until the formation of the Diquís tradition, in late Period V. Haberland sees them as being contemporaneous with Barriles, but it is unlikely that the requisite degree of social organization and political authority existed in the lowlands at that time. Given the utter absence of stylistic and iconographic traits in the spheres themselves, any further discussion of sources is pointless.

Two tentative conclusions about the sources of the Diquís tradition emerge. First, the stylistic-technical sources seem to be local, in the lowland Palmar subtradition and the highland Barriles tradition. Second, the iconographic sources point to a continuation of the Isthmian and Northern Andean influences that produced the Palmar subtradition in the first place. This is not surprising, since the Diquís tradition must have generally coincided with the emergence of large-scale local production of goldwork, and the exploitation and control of the gold sources on the Osa Peninsula (Bray 1981:158).

Function and Meaning of Stone Sculpture in the Diquís Region

The human and anthropomorphic sculptures of the Palmar subtradition and the Diquís tradition appear to have been placed in similar landscape-architectural settings, i.e., in the cobbled foundation walls of platforms that served for burial, residence, and ceremonial activity. In general terms, the settings of the Barriles figures and many of the smaller figures at San Agustín were probably similar. However, the Diquís region lacks the underground megalithic architecture of the tombs and barrows at San Agustín. Period VI sculpture in the Atlantic Watershed was also associated with cobble platforms, but the Diquís tradition may have begun a century or two earlier, in late Period V. The Diquís zoomorphs and spheres were found in the same settings, and the stone seats, at least, may have belonged to high-ranking individuals.

The seemingly endless variation in the attributes of the figural sculpture, especially in the Diquís tradition, may indicate that the social referents were correspondingly broad. Such variables could have included rank and status, and age and sexual maturity, perhaps as related to participation in warfare and rituals. The stone spheres were at least physically

associated with the figural sculpture, and their additive arrangements and variations in size and number might again reflect an association with certain social variables. The stone spheres probably have some link with recurrent events of chiefly concern, which, hypothetically, might have included the commemoration of successful raids and wars, shifting political alliances, the rank order of confederates and dependencies, and succession to high office.

The formal and iconographic links between the Palmar-Diquís sculpture and that of San Agustín seem sufficient to suggest some continuity in meaning. Interpretive comments on the stone sculpture of San Agustín have usually identified the man-feline figures as deities or monsters (e.g., Duque Gómez n.d.; Kubler 1984:343-347). The notable exception is Reichel-Dolmatoff's (1972a, b) effort to explain the meaning of the feline traits. Beginning with several sculptures that he identifies as depicting a jaguar copulating with a woman (Reichel-Dolmatoff 1972b:Plate 31, Figures 9-10), he argues that such images can be explained by local ethnographic accounts of sexual assaults on women by jaguars, and the resultant procreation of a hybrid race of humans with feline traits. He shows that such origin myths are widespread among the peoples of northern South America, and argues that in this mythic context the jaguar's

sexual assault "refers in all essence to an underlying principle of exogamic relationships" (Reichel-Dolmatoff 1972a:56).

On a more general comparative level, Reichel-Dolmatoff states that jaguars and humans (i.e., male hunters) are subsistence competitors, and that the jaguar is closely associated with male control of fertility. Jaguar-shaman transformation beliefs, widespread in northern South America in historic times, are argued to embody an elaborate symbolic code dealing with social homeostasis in the realms of fertility, sexual behavior, and marriage rules. He suggests that hallucinogenic drugs were a significant means of communicating the symbolic codes of the jaguar in prehistoric societies of Colombia, as drugs have been historically. For Reichel-Dolmatoff (1972a:62), the jaguar "represents an energetic principle, the natural life force which, on a social level, has to be controlled if a moral order is to be preserved."

By design, Reichel-Dolmatoff's (1972a:62) analysis occurs on the level of the "range of ideas which is expressed by the feline sculptures of San Agustín." Since the stone sculptures of San Agustín and Diquís share the same feline traits, these ideas may have some relevance to Diquís stone sculpture. From Reichel-Dolmatoff's analysis and comments, it is evident that

both fertility and predation are associated with the feline beings of San Agustín. These themes are combined in the copulation or assault figure groups in which naturalistic felines sexually dominate human women, and the infants displayed by other feline beings may be a consequence of this union (Reichel-Dolmatoff 1972b: Figures 9-10, Plates 18, 31, 77).

Among the other attributes of the feline beings at San Agustín are axes or chisels, penis strings, fish, bags, earspools, trophy skulls, snakes, serpent tongues, and staffs (Reichel-Dolmatoff 1972b:Plates 14, 42, 50, 55, 59, 65-67, 93). None of these attributes relates directly to agricultural fertility, but the fish and snakes may symbolize the jaguar being as the bringer of natural fertility. The other attributes are specifically cultural, and may indicate that the jaguar being at San Agustín was a culture hero, a bringer of civilized behavior and certain skills and customs. Some of the largest statues at San Agustín were the principal figures of tomb chambers or barrows; typically, they were flanked by human warriors or armed guardians with animal alter egos (Reichel-Dolmatoff 1972b:Plates 14-17, 33). These symmetrical, hieratic compositions emphasize the central figure, who is always a feline being, and suggest that the tomb occupant was especially associated or identified with the feline being.

Whether the rulers of San Agustín claimed to be descendants of the jaguar, as Reichel-Dolmatoff (1972a: 55) reports for other Chibchan groups of Colombia, of course cannot be known for certain. It does seem likely that the ruling lineages of San Agustín claimed a special relationship with the jaguar, and that one function of the stone sculpture was to press this claim in visual terms, to show that their authority was backed up by natural and supernatural sanctions. From this perspective it would seem that if the feline imagery of San Agustín were associated with the control of fertility and sexuality and the maintenance of proper moral and social order, it would be from the point of view of the interests, rights and prerogatives of the ruling groups, and not of society as a whole. The feline in San Agustín thus may have been most closely identified with the ruling lineages as a source of fertility, through their jaguar-like mastery of aggression and predation.

It is difficult to envision prehistoric San Agustín society being ruled by shamans acting on behalf of an entire group, since the stone sculptures seem to speak so clearly of rank, hierarchy, central authority, aggression and specialized labor. Accordingly, our notions of the jaguar as a generalized personification of fertility might be altered to take account of Mary Helms' (1979:71) use of the Polynesian concept of mana in her study of

Panamanian chiefdoms:

Mana has been described as a form of all pervasive supernatural (as distinct from strictly physical) force or power or influence that was expressed in any kind of ability, skill, or excellence an individual possessed. Mana could be acquired to some extent but was also regarded as an inherited quality, and as such it became a basic aspect or foundation of social rank and status.

Status and mana were inherited together in Polynesia. He who stood in line of succession to a high office inherited great mana along with the right to office, and he who stood in a lower rank possessed correspondingly less mana. The elite stood separate from the common man by virtue of their greater mana--and thus their greater sanctity.

Helms (1979:74) explains that although there is no direct ethnohistorical evidence that Panamanian chiefdoms had a single term equivalent to mana, there is evidence that the contemporary Cuna of Panama have beliefs about degrees of inherent value or worth, which she describes as "sacred mana-like characteristics." Later, in a discussion of native tropical American concepts of universal energy and cosmic life-giving forces, Helms

states that in egalitarian societies it is the shamans who are especially responsible for articulating and balancing the positive and negative aspects of these forces. In rank societies, however, the situation is different:

Although shamans still function in chiefdoms, within rank societies the duty and obligation of establishing contact with supernatural sources so as to control and direct the affairs of human society devolve mainly upon the high elite, particularly the priests or priest-chiefs, men of highest social status who also serve as society's highest religicopolitical practitioners. The sanctity of great mana, or mana-like forces, that these men carry by virtue of their high social status (and that can be re-interpreted now as a personalized expression of universal energy or life-force) authorizes them to seek supernatural associations. It is by virtue of their mediation with the mystical representatives of supernatural energy that priests and priest-chiefs obtain the necessary authority to guide and direct human affairs [Helms 1979:89-90].

Helms (1979:90) then suggests, following an observation by Reichel-Dolmatoff, that the kumú of the Tukanoan

Desana is a contemporary survivor of the Precolumbian priest-chiefs of the Intermediate Area.

The relevance of this analysis to the stone sculpture of the Diquís region should be apparent. The Diquís region, from Period V on, was perhaps the closest thing to a small-scale provincial version of San Agustín: its stone sculpture imitates that of San Agustín; Diquís sculpture was displayed in a fashion more like that of San Agustín than of any nearer tradition. The Diquís region was the largest source of worked and raw gold in Costa Rica, and thus must have been both source and intermediary in the gold traffic northward; hence, like San Agustín, the Diquís region was "a link, an articulation point where different cultural traditions met and fused, and from which new impulses eventually spread to other regions" (Reichel-Dolmatoff 1972b:15)

Of equal importance and relevance, however, are the similarities between Diquís, and the early Atlantic Watershed and Barriles traditions, especially at the level of ideology. The expression of fertility and predation in ranked terms is common to all three, but Diquís introduces a new feline code, a new language of mediation of Northern Andean origin, one that is essentially separate from the earlier dependence on the sexual and fertility symbolism of metates. The late appearance of decorated metates in Diquís may indicate

that predation and competition were directed not so much at land and agricultural fertility, but at control of the gold sources and traffic. The great stone spheres are still unexplained, but they can at least be seen as the visual embodiment of labor, as abstract monuments that witness the real authority of those unknown chiefs.

VII. THE IMAGERY AND THEMES OF THE LATE TRADITION IN THE ATLANTIC WATERSHED

1. Introduction

By comparison to other traditions of stone sculpture in Costa Rica, the span of the late tradition in the Atlantic Watershed is easy to determine. The Contact period terminal date for such major sites as Las Mercedes has been long known because of the discovery of European artifacts in otherwise typical graves (e.g., Hartman 1901). Excavations by Snarskis in the 1970s began to reveal a transitional period between the end of the early tradition and the beginning of the late tradition. In stone sculpture, this is exemplified by small figures of men with crocodile masks, which have formal and iconographic links to both early and late traditions (e.g., BC Numbers 196-198). Regardless of other differences between the early and late traditions, it is now clear that the early tradition technological base and functional orientation were maintained in the late tradition.

The historic period Chibchan linguistic affiliation of Atlantic Watershed peoples can reasonably be presumed

to reflect the ethnic identity of those who made the sculpture of the late tradition. In all likelihood, the major art-historical echo of the cultural succession involved is found in the Period V shift from jade carving of northern affiliation to goldworking of southern affiliation, a geocultural reorientation that was initially observed in the Colombian origins of the Palmar subtradition of Diquís stone sculpture (see Chapter VI).

The stone sculpture of the late tradition maintained significant continuities with that of the early tradition, viz., functional orientation, technological virtuosity, and the primacy of the workshops in the Línea Vieja zone. The most salient innovations of the late tradition appear to have primarily southern origins, such as independent figural sculpture intended for landscape-architectural contexts, a tetrapod format for metates and their derivatives, and the representation of stereotyped categories of ritual actors. All of these traits had previously appeared in Barriles and Diquís.

The stone sculpture of the late tradition poses several art-historical problems, none of which has heretofore been systematically considered. With regard to functional stone sculpture, how can we distinguish between metates and seats? What are the sources of the new configurations of functional stone sculpture? What is the reason for the predominance of feline imagery in

functional stone sculpture? What is the source of the anthropocentric independent figural sculpture, and how does it relate to the functional sculpture? These are not the only art historical problems raised by these materials, but they are among the most important.

2. Metates, Seats, Mortars and Bowls

It is appropriate to begin with functional stone sculpture, because of the technological and conceptual continuity with earlier traditions. There is a bewildering variety of carved stone platforms and containers in the late tradition, with seemingly no consistency in the combination of formats and images. However, a few functional categories can be isolated. Potstands of hour-glass shape can easily be identified, and have ceramic counterparts (Mason 1945:246-247, Plates 29C-E, G-H). Tetrapod bowls and/or mortars can probably be identified by their inclined or vertical vessel walls (e.g., Mason 1945:Plates 15C, 26A, 29A). Some objects might reasonably be identified as seats, such as the tetrapod oval platforms so identified by Mason (1945:238-240, Plates 24A-F, 25A, D). For the rest, however, the smooth gradations in plate form and the unpredictable occurrence of wear patterns make it impossible to establish any regular correlation of plate form with

(empirically probable) function.

Similarly, there is no evident correlation between image and plate format. By far the most frequent support configuration is the tetrapod feline effigy and its bicephalic variant, occurring in objects that variously seem to include seats, metates, mortars, and bowls (Mason 1945:Plates 15-17). Felines, either as effigies or as multiple supports, occur with all variations in plate form. The next most common are monkeys, which occur either as atlantids or in openwork support compositions, but never as effigies (Mason 1945:Plates 22B-C, E, 24C, E-F). The remaining tetrapod effigy beings are tapirs, crocodiles, and birds (Mason 1945:Plates 18A-B, 22D), and turtles or serpents (BC Number 228).

Decorative motifs likewise have no evident correlation with plate form or support configuration, and different motifs are often juxtaposed. Continuous band-type motifs occur usually on the plate border and on the long curving tails of tetrapod effigies (Mason 1945:Plates 15A, 16D). In realistic terms, some motifs might be read as species-specific markings, e.g., the spotted pelage of the jaguar connoted by disks, circles, or concentric diamonds (Mason 1945:Plates 15F, 18C, 22E). In other cases, however, there is not even this tenuous allusion, as with the tetrapod crocodiles and felines with a guilloche or figure-eight scroll on the plate

border (Mason 1945:Plates 15A-B, 18B, 21C).

Size may provide an approximate clue to function. Small rectangular objects supported by reclining felines and circular atlantid "bowls" may have been used as mortars (Mason 1945:Plates 26A-C, 29A-B). Very small tetrapod feline objects, less than ca. 35 cm long, may have been metates or mortars (e.g., Mason 1945:Plates 16A-E). Many of these objects are also comparable in size to the smaller wood seats used by historic peoples of the New World tropical forest. Larger platforms, some more than one meter long, might accordingly have had multiple cult functions, as metates, seats and burial platforms.

Apparently, then, any unitary interpretation of this late Atlantic Watershed functional stone sculpture is bound to be defeated by the ambiguities of plate form, image and function. A more productive approach, conversely, would account for both the predominance of feline imagery and the diversity of forms and functions.

The concept of metates or metate-like objects as the nucleus of a complex of functional stone sculpture is, of course, a distinctive trait of southern Central America, seen earlier in Guanacaste-Nicoya, the Atlantic Watershed and Barriles. The common tetrapod format of the late Atlantic Watershed tradition probably derived from the tetrapod metates of Barriles, and the zoomorphic imagery

or the concept thereof could have originated in the early traditions of Guanacaste-Nicoya or the Atlantic Watershed. However, reference to these earlier traditions cannot explain the predominance of feline effigies in the late tradition.

Thus, the earlier and more clearly metate-based traditions of southern Central America can account for neither the formal diversity nor the predominance of feline imagery in the late Atlantic Watershed tradition of functional stone sculpture. Since ornate cult metates are a distinctively southern Central American trait, that syndrome cannot be explained through reference to foreign sources. Only two traditions in which seats and feline symbolism are represented are relevant to a discussion of foreign sources: a Late Classic Mayan tradition of depicted and preserved stone feline seats, quite restricted in time and space; and a much more widespread South American tradition of depicted and preserved wood "shamans' benches."

Among the Late Classic Maya, the mat-feline-seat (ie., "throne") complex of symbolism of rulership was probably derived from the woven reed mat as a vehicle of cosmic passage. The mat motif was later associated with the jaguar god of the underworld as the about-to-be-reborn night sun, and thus with a cosmic model of the rebirth of the ruler (Klein 1982b; Robiscek 1975). The

conceptual origins of the Mayan feline seats may plausibly be seen in the so-called "Vase of the Seven Gods," a Late Classic vessel probably from the Peten that shows God L, Venus as Lord of the Dawn, seated on a chair-backed throne covered with a jaguar pelt (Robiscek 1975:Figure 85). Tikal Stela 20 depicts a ruler standing in front of a tetrapod feline throne (Jones and Satterthwaite 1982:Figure 29), and the Palenque Oval Palace Tablet shows a ruler seated on a tetrapod bicephalic feline throne (Robiscek 1975:Figure 88).

As Robiscek's (1975) survey shows, preserved examples of Mayan feline thrones are less numerous, and the carving of the preserved thrones has a blocky coarseness absent in the depicted examples. One of the earliest carved Mayan thrones is a bicephalic feline at Uxmal, installed on a small platform east of the Palace of the Governors, approximately aligned with the remains of a giant stone phallus (Robiscek 1975:Figure 87). This Puuc throne, perhaps seventh century in date, probably preceded the more sculptural feline thrones preserved at Chichén Itzá, of which the earliest may be the painted limestone Red Jaguar inlaid with jade mosaic disks, in the Temple of the Castillo-Sub (Robiscek 1975:Figure 83). Other feline thrones at Chichén are at the entrance to the Lower Temple of the Jaguars affixed to the west side of the Great Ball Court; in a mound west of the Great

Ball Court; and in front of the Nunnery (Robiscek 1975: 114, Figure 83). Wall paintings in the Temple of the Chac Mool inside the Temple of the Warriors complex at Chichén show four warriors, each seated on jaguar thrones shown in profile, with the feline's tail curved between the hind legs (Robiscek 1975:Figure 86). Although none of the carved Mayan feline thrones has a free-cut tail, the depictions recall a common feature of the late Atlantic Watershed feline metates, the long, curving, free-cut tail adjoining a hind leg.

The Late Classic Mayan tradition of carved stone feline seats was very circumscribed in time and space. To judge from the small number of preserved examples, stone seats were not common in the Mayan world, and were not imitated elsewhere in Mesoamerica. In all probability, most thrones and other cult seats in Mesoamerica were made of wood and caning. The limited distribution of this tradition among the Maya may account for the rather undistinguished carving of those that have survived, which are certainly far different in technique from the Costa Rican platforms that may also have served as seats. In spite of these caveats, however, the Late Classic Mayan stone feline seats are the only preserved precursors, in material and form, of the Atlantic Watershed feline metate-as-seat tradition.

Direct influence from the Maya cannot be proven, but

there is no reason to believe that the ties that had existed earlier between Costa Rica and Mayaland were abruptly or permanently severed. Goldwork of Costa Rican provenience has been found in the Sacred Cenote at Chichén Itzá, apparently the consequence of marine traffic along the Caribbean littoral (Bray 1977, 1981; Coggins 1984). Woven or plaited geometric motifs on Costa Rican feline metates may signify the woven mat symbol of cosmic passage and political authority (e.g., Mason 1945:Plates 15A, 17A, 18F). A similar meaning was argued for the woven motifs on the Type A metates of Guanacaste-Nicoya, and such a meaning is even more likely in the present case because many feline effigy metates are functionally indistinguishable from seats. In fact, the perceived ambiguity between metates may either have been deliberate, or may not even be ambiguous at all, since both mats and metates are symbols of transformation, of changes in cosmic, and therefore political, status. The Late Classic Mayan data can account for three symbolic traditions that converge in the feline effigy metates of the late Atlantic Watershed: the mat-throne's association with cosmic passage and the ability of the ruler to traverse the cosmos like the heavenly bodies; the mat-throne as the seat and symbol of political power; and the jaguar's role as the divine source and protector of political power.

Given the long history in Costa Rica of the use of ornate metates in a variety of cult functions, we may accept that suitable feline effigy platforms functioned as both metates and seats.

The South American tradition of carved wood "shamans' benches" provides other dimensions of function and symbolism that may further illuminate the late Atlantic Watershed tradition of functional stone sculpture. These dimensions are: the prehistoric-to-historic continuum of the ritual use of wood seats; the association of such seats with drug use and transformation; the prehistoric-to-historic continuum of zoomorphic effigy seats; and ethnohistoric and ethnographic evidence for an association of seats, jaguar symbolism and the use of drugs.

The prehistoric association of wood seats with drug use is shown by numerous Colombian images in ceramic and gold that depict men seated on benches with a coca quid in their cheeks (Bray 1978:Numbers 150-151, 327, 277), and possibly depictions of drunk or narcotized men reclining on benches (Bray 1978:Number 231). Similar wood seats have considerable time depth, as indicated by the chance preservation of a wood seat in a grave in the Cauca Valley of Colombia, which yielded a radiocarbon date of A.D. 1235±60. The numerous Tairona ceramic models of vessels on effigy benches might also suggest

that narcotic beverages were as common before contact as they were historically among the peoples of the Upper Amazon (Reichel-Dolmatoff 1965:Figure 52, Plate 52). Otto Zerries' (1970) survey of wood effigy seats made by historic peoples of the Amazon Basin shows that they reproduce all of the zoomorphic effigies present in the late Atlantic Watershed tradition of stone effigy platforms: jaguar, crocodile, turtle and avian.

Perhaps more penetratingly than any other scholar, Gerardo Reichel-Dolmatoff's (1971, 1975) ethnohistoric and ethnographic research on the peoples of Colombia confirms the linkage of wood seats, jaguar symbolism and drug use. His work with the Tukanoan-speaking peoples of the Colombian Upper Amazon may be useful in explaining the predominance of feline imagery in the functional stone sculpture of the late Atlantic Watershed.

Among the Tukanoan Desana, the simple wood seat is a powerful, functional symbol that expresses notions of male sexual potency, derived from the feline Sun Father who is the cosmic source of human (male) fertility and power, and conveyed by the narcotic drug (Banasteriopsis caapi) considered to be the excrescence of the jaguar. Among the Desana, the act of sitting on the wood seat when in a narcotic trance establishes a vertical cosmic axis that penetrates and unites the upperworld of the Sun Father, the mundane world of humanity, and the underworld

of fertile rivers of semen, thus reenacting the Sun Father's ejaculatory creation of humanity. Although the jaguar is apparently absent as a material image in these seats, it is the copulatory phallic power of the jaguar-shaman that provides a key metaphor and code of Desana religious thought. The essential equivalence of shaman and jaguar is a widespread feature of northern South American tropical forest peoples, and the Tukano linguistic identity of shaman, jaguar, and phallic sexuality indicates the shaman's concern with fertility, and the phallocentric male dominance that marks some of these historic societies.

While the historic tradition of wood seats clearly has its roots in the prehistoric tradition, we must assume that the function and meaning of such seats among prehistoric rank societies differed somewhat from the historic egalitarian societies. Among the Tukano and other groups of the tropical forest, the seats are principally places of meditation and reflection during chemically-induced trances, magically establishing the phallic cosmic axis. The use of these seats by both the shaman and the priest-philosopher kumú of the Tukano indicates how the same artifact can have different social referents and functions.

What is missing in the ethnographic data, however, are any political dimensions of seats and feline

symbolism, because these egalitarian societies have no political offices and no political ideology in the common sense. Somewhat cryptically, Reichel-Dolmatoff (1971: 139) notes that a search of analogues of the Tukanooan kumú "would point to the sub-Andean priest-temple-idol complex," i.e., to the militaristic and aristocratic chiefdoms of prehistoric Colombia. Mary Helms (1978:90), in fact, concludes that the institution of the kumú is a survival of the prehistoric priest-chiefs of southern Central America and northern South America. Reichel-Dolmatoff (1975:246-247 note 48) cites a sixteenth-century account of a chief's funeral in which the ashes of the dead chief were mixed with "wine" (i.e., an alcoholic or narcotic drink), carried in vessels on the dead chief's seat, and drunk by mourners. This account indicates that prehistoric seats were identified with specific rulers, and that seats and drugs or alcohol were employed in the mortuary ritual. The late prehistoric Tairona ceramic models of effigy seats supporting vessels may relate to such rituals (Reichel-Dolmatoff 1965:Figure 52, Plate 52).

The late Atlantic Watershed tradition of functional stone sculpture thus was bracketed by two relevant traditions, but neither is fully comparable. The late Classic Mayan mat-throne-jaguar complex may have provided an impetus for the initial correlation of stone jaguar

seats and political symbolism, and may have temporal priority. Given the highly developed stone carving technology already in place in Costa Rica, with its traditional focus on the elaborate cult metate as a symbol of transformation and political authority, the local transformation of the stolid Mayan seat into an elegant metate-like platform is scarcely unexpected. From this standpoint, the metate-seat "ambiguity" is no more than a logical consequence of such a process.

In late Period V and Period VI, the increasing importance of the southern gold exchange brought Costa Rica and western Panama into close ties with chiefdoms in Colombia (Helms 1978). The emergence of the Diquís tradition of stone sculpture in southern Costa Rica is evidence of what probably was a first "wave" of Colombian influence. As we have seen, the prehistoric Colombian traditions of wood seats were associated with the use of drugs, and with political symbolism as well, echoes of which are still preserved by peoples of the Amazonian tropical forest. Although ritual drug use is documented in Costa Rica from at least Period IV in the form of ceramic snuffing tubes (BC Number 132), the increased commercial and political ties with Colombia in Periods V and VI suggest that drug use and its associated symbolism and ritual became more widespread in Costa Rica.

Peter Furst (1968) was apparently the first scholar

to associate the feline effigy metates with actual drug preparation. It is apparent, however, that virtually the entire complex of late Atlantic Watershed functional stone sculpture--metates, mortars, bowls and seats--is not only functionally suitable for cultic drug use, but logically divided according to stages of preparation and use. Moreover, the entire complex is visually unified by the predominance of feline imagery, the being most closely associated with narcotic and hallucinogenic transformation among historic peoples of northern South America. The natural meaning of the stone metate as a polysemic symbol of transformation probably explains why in Costa Rica this complex of ritual artifacts was uniquely carved in stone, at least for the elite; materially and symbolically, the metate had long been the core of this ritual complex.

The feline effigy format is centered on the metate-throne, but also extended to other cult implements such as mortars and bowls. The metate-throne merges references to agricultural fertility, food processing, domestic labor of women, and transformation, with references (in the throne aspect) to formal political authority and cosmic passage. The dominance of the feline effigy format can be seen as a process of symbolic condensation that expands the symbolic range of the key cult object, while at the same time concentrating the

symbolism of authority in the effigy format itself. One might wonder at this point whether this symbolic condensation might not be a kind of allegory of a political process of centralization.

3. "Chacmool" Sculptures

Chacmools are Postclassic Mesoamerican sculptures in the form of a reclining human figure, always male, with a small, shallow vessel or plate on the belly (See Cuellar 1981 for a nearly complete catalog of known Mesoamerican examples). Both the origin and meaning of chacmools remain problematic. They first appear at the Central Mexican Toltec type-site of Tula, Hidalgo, and at the Maya-Toltec site of Chichén Itzá, Yucatán. At both places they are found near building entrances, as were later Mexica chacmools at Tenochtitlan. The traditional view that Tula preceded and influenced Chichén Itzá would posit a Central Mexican origin of chacmools, but this presumption cannot be tested because of the confused architectural chronology and dating of Chichén Itzá. There is some agreement that the awkward reclining pose, one difficult to sustain in reality, is related to ritual drunkenness (Acosta 1969; Kubler 1961, 1984:303). The belly plate is a diagnostic trait of chacmools, and may have been a receptacle for offerings.

Most recently, Mary Ellen Miller (1985) has argued that chacmools are of Maya origin, based on the supposed resemblance of the pose to Classic Mayan depictions of captives, frequently bound and placed under (on stelae) or near (on altars) depictions of rulers. Her comparisons with images of captives are suggestive but perhaps not convincing. Like most Mesoamerican art historians, she does not discuss the Costa Rican analogues, only noting their existence.

Several chacmool-type sculptures have been reported from Costa Rica. The best documented one is part of the Minor Keith collection, presumably from Las Mercedes, and now in the American Museum of Natural History (Number 15346; Mason 1945:Plate 35C). It depicts an ithyphallic male with a raptorial beak, human limbs and ears, and a sagittal head crest; rattlesnakes crawl over the limbs, and the hooked beak intersects the belly plate. A second example, without provenience, is in the Harry Mannil collection: the figure has the body of a woman, nude, with vulva and breasts obvious; the breasts actually intrude into the belly plate, and the head is that of snarling monkey, with lips everted and teeth bared (BC Number 203). A third example is a human couple, with the plate on the woman's belly (Hough 1912:Plate 3). A "chacmool" seen by Samuel Lothrop (1926:286) in Puerto Limón, Costa Rica, has not been traced; it has not been

subsequently described or published, and it may actually be the one in the Mannil collection, since that one was not cited by Lothrop or Mason, and therefore must have been unknown to them.

The three available Costa Rican "chacmools" each have two of the diagnostic traits of "real" Mesoamerican chacmools: the awkward reclining pose, and the belly plate. In other features, however, the Costa Rican examples are quite different: a raptor-man with an erection and with rattlesnakes; a sexually-mature monkey-woman; and a human couple. All three thus convey an imminent state of sexual readiness, and the raptor-man and the monkey-woman just as clearly combine sexual readiness with a visual stress on their respective weapons of aggression or defense, i.e., the prominent beak and the bared teeth. This concern with both sexuality, even imminent intercourse, and aggression is not found in any known Mesoamerican chacmools, although Tula's chacmools usually have a flint knife bound to an upper arm (e.g., Kubler 1984:Figure 39).

The Costa Rican chacmools must have been inspired by Mesoamerican models, and would thus be distant echoes of the turbulent political and art history of the Toltec diaspora (cf. Kubler 1984:300-301). Neither the pose nor the belly plate have predecessors in the sculpture of southern Central America, and the sculptural treatment,

with its emphasis on volume and mass rather than the interpenetration of space, is distinctively non-Costa Rican. In other words, the Costa Rican chacmools have been thoroughly recast. One may assume that this reinterpretation was deliberate and logical, that some meaningful core was retained and adapted to local concerns--just as much earlier the metaphor of transformation of the Mesoamerican metate motivated the production of the sculpturally elaborate Costa Rican metates.

The thesis that Mesoamerican chacmools portray a figure in a chemically-altered mental state has obvious relevance to the adoption of the chacmool type in Costa Rica. The association of an awkward pose with drug use is not confined to Mesoamerica: Reichel-Dolmatoff (1975: 111), reporting on the physical effects of hallucinogenic snuff among the Tukano, notes that when the drug turns the men into jaguars, "the convulsive behavior [is] described as turning their bellies up." Identical behavior is depicted in a Narino-style ceramic vessel of an "acrobat" (sic), who has a coca quid and whose belly is the vessel opening, while in an exaggerated version of the chacmool pose (Bray 1978: Number 499). The "belly up" pose may actually be a common convention to indicate drunkenness or narcotization, and this might suggest that the belly plate was used to prepare and/or contain the

psychotropic substance. Given, further, the demonstrated link between drug use and seats, the chacmools also may have been used as seats. (Today, visitors to the Temple of the Warriors complex at Chichén Itzá are sometimes seen sitting or even reclining on the entrance chacmool, an obviously spontaneous response.)

Given the immediately preceding argument that late Atlantic Watershed metates, mortars, bowls and seats were designed for the ritual preparation and use of drugs, the selective borrowing and logical reinterpretation of the chacmool type must encompass a knowledge of its function in Mesoamerica. The local reinterpretation of the chacmool to stress sexuality and aggression recalls both the ethnographic syndrome of drug use, and the militaristic nature of prehistoric chiefdoms in the Intermediate Area. As we shall see, sexuality and aggression are key themes in the independent figural sculpture of the late Atlantic Watershed.

4. Funerary Slabs

Funerary slabs, often called altars in the earlier literature, are thin stone slabs with a width-to-length ratio of about one to three. They range in length from ca. 75-200 cm, and are 4-20 cm thick and 25-75 cm wide. In almost all of the known examples, there is a

compositionally defined front and back, and top and bottom. On the front, relief motifs usually parallel the long sides, and openwork figures project from the top and face the viewer. The bottom portion and the back are dressed but undecorated (see Mason 1945:Plates 30-34 for examples from Las Mercedes). The design format thus favors a vertical view of the front; however, since the inner portions of the front are often undecorated, a horizontal placement might not be entirely precluded.

Mason (1945:247-249) concluded long ago that these slabs were quite likely stone versions of the wood tablas or carved vertical panels that Las Casas saw ca. 1520 near Cariari (Puerto Limón) on the Caribbean coast. The wood panels, placed vertically behind the dessicated remains of the dead (presumably men of high rank), were carved with figures of animals and men, the latter said by Las Casas (in Mason 1945:248) to be "the figure of the buried man." Mason concluded that this was a description of the initial, above-ground phase of secondary burial, and that subsequently the remains were disarticulated and interred. While no stone slabs have been scientifically recovered, both Minor Keith (in Mason 1945:247) and Alanson Skinner (in Lothrop 1926:457) reported that the slabs were found in graves; Skinner found the base of one slab in a vertical position, and its upper portion nearby. These accounts indicate that the stone slabs

were initially mounted upright, and then interred with the remains, apparently corresponding to the above-ground and interment phases of secondary burial.

Mason knew of no sources or prototypes for these stone slabs other than the wood planks seen at Cariari, away from the volcanic sources of the basalt used for the stone slabs. However, Snarskis (1978:237) excavated early tradition graves in the Atlantic Watershed in which tripod metates, or metate plates with the legs knocked off, were placed upright in graves. This practice might suggest a functional and symbolic link between metates and funerary slabs, since both practices reflect rituals of termination and completion, and the metates of the early tradition symbolically expressed transformation. Functionally and iconographically, there are other links between early tradition metates and these funerary slabs.

As with the earlier metates, there are no exact duplicates among the funerary slabs, but there are norms of composition and theme. Like the septum compositions of the earlier flying panel metates, the top figures of the slabs always form a symmetrical composition, whether in simple symmetry with an even number of figures, or in hieratic symmetry with an odd number of figures, of which the central one is enlarged or otherwise stressed or differentiated from the others (e.g., Mason 1945:Plates

30D, 32B). Compositions with simple symmetry include pairs of felines, warriors with trophy heads, and nude men (Mason 1934:Plates 30C-D, 31F). Hieratic compositions include a frontal feline flanked by profile felines, a frontal anthropomorphic feline grasping flanking head-down felines by the tail, and a frontal anthropomorphic crocodile (?) grasping flanking crocodiles (?) by the neck (Mason 1945:Plates 30A, 32B, 33B).

Lateral compositions are somewhat less standardized. Several examples have trophy head borders, oriented horizontally and vertically (Mason 1945:Plates 30B, D). One example has alternating swastika-like rosettes and figure-eight scrolls (Mason 1945:Plate 32C). Another has alternating bats (?) and crocodiles, and another has descending and ascending crustacea, apparently langostinos (Mason 1945:Plates 34A-B); the latter also has two mirror-image hocker figures in relief in the front center, with framed panels containing four crosses each above and below.

Michael Snarskis (in BC Number 202) is the only scholar so far who has attempted to interpret the funerary slab images. He suggests that the zoomorphic figures represent clan symbols or "totems," or possibly alter-egos of the deceased. The clan symbol interpretation stems from ethnographic research by Maria

Bozzoli de Wille (1979) among the Bribri of southeastern Costa Rica, who are amalgamated survivors of Chibchan-speaking groups of the Atlantic Watershed. Among the Bribri, Bozzoli worked with matrilineal exogamous clans, each with its own animal symbol or totem. However, it remains very problematic whether the zoomorphic imagery of the slabs can be directly related to such clan symbols, since there are more images than known clan symbols. While Snarskis' interpretation might apply to the slabs with purely zoomorphic figures, it does not account for the top compositions featuring human or animal aggression. From the perspective of what has been argued about earlier occurrences of similar compositions and subjects, a major theme of the top compositions is aggression and authority, depicted in both zoomorphic and human subjects. The presence of trophy heads in top and lateral compositions confirms the importance of human warfare and aggression, whether conveyed in a human or zoomorphic code. The lateral compositions, given their subordinate placement in a vertical theme, might then refer to the conquest of other groups or other environmental zones.

The archaeological data, while somewhat anecdotal, suggest that nearly all of the known funerary slabs, including the 17 in the Keith collection, came from Las Mercedes or nearby sites; another slab is said to have

come from Guayabo de Turrialba, about 30 km distant on the edge of the volcanic Cordillera Central (BC Number 202). Mason (1945:249) was probably right in concluding that the funerary slabs were peculiar to the Las Mercedes vicinity of the Atlantic Watershed, which apparently was the paramount chiefly center of this region, and where Hartman found the debris from a stone carving workshop. The evident geographical separation between wood tablas and stone slabs supports the conclusion that Las Mercedes was a center, perhaps the center, of late Atlantic Watershed stone carving.

5. Independent Figural Sculpture

Independent figural sculpture of the late tradition in the Atlantic Watershed includes male and female figures, male heads, composite human-animal figures, animals, and animal heads. Height of the figures ranges from ca. 10 cm for the small seated sukia or shaman figures, to nearly 2 m for several standing figures. The mean would be ca. 40-50 cm, and there are very few monumental figures. The larger standing figures frequently have a septum connecting the feet, and are thus thought to have been socketed into a stone base, as were several fragments found on mounds at Las Mercedes (Mason 1945:256-257). The majority of standing figures

lack such a device, and experiments with several figures at the Museo Nacional in San José showed that most will not stand freely; they could have been placed in a sand or gravel bed, or otherwise more firmly supported or leaned against a support. Most of the figures are easily portable. While the larger figures must have been more or less permanently mounted in semi-architectural contexts such as the cobbled foundations of mounds and plazas, the majority may have been displayed in structures, or temporarily displayed in a variety of places; there is no archaeological evidence. The smaller figures are thought to have come from graves, but this does not mean that they were made specifically for funerary deposit (Mason 1945:256). Apparently no large figures, i.e., those approaching life-size, have been reported from the Línea Vieja region since the initial surface clearing for the railroad construction and plantation surveying that began in the 1870s.

Male Figures

Male figures constitute the largest category of independent figural sculpture. Like most of the late Atlantic Watershed figures, they exhibit few attributes of gender, age, dress and status. And like nearly all of the human figures, the males are depicted nude or nearly nude, with no items of costume except for thick belts

(e.g., BC Number 204). There are no loincloths, sandals, skirts, or headdresses.

Standing male figures can be subdivided as follows: figures displaying human trophy heads, either in the hands or suspended from a rope (Mason 1945:Plate 40A-D); "warriors" bearing hafted axes (Mason 1945:Plate 41A, D-F); prisoners and/or sacrificiants, with arms bound behind the back or overhead (BC Number 204; Mason 1945: Plate 41B); and standing males without attributes, with arms in front of the chest or at the sides (BC Number 194; Mason 1945:Plate 41C). There is one possibly unique figure of a man grasping his penis, a counterpart of the figures of females grasping their breasts (Ferrero 1977: Plate XXVI; Mason 1945:Plates 36-37).

The standing male figures with trophy heads, axes, and bound arms portray separate stages of warfare: readiness for aggression (or the display of weapons afterward); the display of prisoners, presumably about to be sacrificed by decapitation; and the display of the heads of the victims, presumably out-group war captives.

Nearly all of the seated male figures of the late tradition belong to a type that Jorge Lines (1938) initially identified as sukias or "shamans." This identification has been accepted by all later scholars (Mason 1945:264; Ferrero 1977:201; BC Numbers 217-219). All sukias are seated with knees up, and range from

10-22 cm in height. There are several common variants: those with arms folded over the knees (Mason 1945:Plate 43A-C); those with a cylindrical object held to the mouth (Mason 1945:Plate 43E-F); and those with hands to the mouth (Mason 1945:Plates 43D, G, 44A). The Keith collection includes several less common variants: an attached pair seated back-to-back follows the pose and style of other sukias, but others in this collection are aberrant and may not belong to the sukia category (Mason 1945:Plates 44B-E).

The prevailing interpretation of the cylindrical object held in the mouth is that of a blowing or sucking tube used in shamanic curing (Ferrero 1977:201), although Lines (1938) and Mason (1945:264) thought the object was a cigar or tobacco pipe. Both are well-known curing tools of tropical forest shamans, and they need not be mutually exclusive.

The common trait of all sukia figures is the distinctive seated pose, which has plausibly been identified with shamanic states of reflection and contemplation, and which may be a particularly apt portrayal of the introspective nature of narcotic trances (BC Numbers 218-219).

Female Figures

Female figures are nearly always entirely nude, with

a vertical groove marking the vulva and often a horizontal groove above that probably denotes the pubic region (Mason 1945:Plates 36-39). The most common pose is standing, with legs slightly apart and the hands grasping or framing the breasts. In an earlier work, this characteristic pose was described simply as "breast display," implying a rather vague association between human fertility, and warfare and aggression, the dominant subject of male standing figures (Graham 1981:130). On the evidence of more crisply carved examples, however, the figures actually appear to be grasping their breasts behind the nipples, as if to induce (or imitate) lactation (BC Numbers 220-221). If we compare it to the male figure grasping his penis (Ferrero 1977:Plate XXVI), we have a sexually polar set of figures united by autostimuli that produce milky fluids.

This implied symbolic equivalence of semen and milk is in fact present among the Tukano of Colombia. Reichel-Dolmatoff(1971:46; 1975:94-95, 145) explains that the Tukano underworld paradise that is the source of life is called River of Milk, that it is both masculine and feminine, and that the root word connotes penis, testicles, breast, and coca leaves. The seminal symbolism of drug use is known among other Colombian peoples, and the Tukano data at least explain how native thought could equate semen, breast milk, and drugs.

Without pushing this analogy too far, we might note that induced lactation is an infrequent theme in Precolumbian art, and that the Tukano data help explain why such depictions should be found in a complex otherwise dominated by a phallogentric notion of fertility.

Male Heads

It is seldom explained that the category of independent human heads is assumed to portray males and not females because of the probable association of these heads with warfare and/or chiefly portraits. Physically, this category consists of human heads with a dressed neck/base, thus excluding heads that obviously have been broken from full figures. Since virtually all independent heads are smaller than life-size, size is not a criterion for distinguishing between shrunken heads, and memorial, portrait, or recently-taken heads. Only one known head actually has good claim to being a shrunken trophy head, because the head is bound with a carved rope, as if for suspension, and the eyes are closed (BC Number 212).

The key issue of interpretation here would seem to be the identity of the persons or classes depicted: are they images of decapitated out-group victims of warfare and/or sacrifice, or are they images of in-group warriors, chiefs, or victims of out-group aggression?

Because of the labor invested in production, and the concern to differentiate heads from one another by treatment of features and coiffures, one might argue that the independent heads predominantly portray in-group warriors or chiefs, especially since out-group victims were already depicted as trophy heads worn or displayed by in-group warriors or chiefs. The majority of the Las Mercedes heads apparently came from graves, possibly further evidence of their association with specific individuals.

Composite Human-Animal Figures

Mason (1945) included standing composite human-animal figures in the same group as chacmools, grouping them together on the basis of size as "massive statues." All are thought to have been surface finds, and probably were originally socketed into the cobbled walls of mounds (Mason 1945:256-257). Composite figures are the rarest of all late tradition types, and they have little in common with the small saurian-masked figures that initiated the late tradition of independent figural sculpture.

There are two well-known composite figures in the Keith collection. The smaller, 85 cm high, is a female anthropomorphic raptor, with the beak/mouth broken off; she has small breasts and a prominent pubic region, and

the hands are placed on either side of the swollen belly, as if to call attention to pregnancy or induce labor. Incised guilloche bands run along the length of the arms and legs, in imitation of body painting or scarification (Mason 1945:Plate 35A). The larger figure, 1.55 m high, has a crocodilian snout, human ears, and a mat-motif cap or headband. A human trophy head is slung over the right shoulder and held in the left hand. Guilloche bands run along the left arm (the right arm is broken off) and both legs, and a guilloche sash crosses under the trophy head rope. This figure has small but prominent breasts, and very large male genitalia, although the penis is damaged (Mason 1945:Plate 35B).

Mason observes that the latter figure appears to be hermaphroditic, but does not venture to suggest what this might signify. In both of these figures, however, obvious traits of human fertility and sexuality are combined with references to aggression: pregnancy and the natural aggression of the raptor in the first figure, and human warfare, nurturing breasts, and male potency in the second. Thus, both figures reveal the dialectical interdependence of aggression and fertility in natural and cultural terms.

Keith also acquired several small figures of monkeys or felines with human heads and elaborate coiffures like those of the independent heads (Mason 1945:Figures 24a-

b). The careful carving of the coiffures relates these figures to the standing male figures and heads, but beyond this they have no apparent ties to the major categories of late tradition sculpture.

Animal Figures

Independent sculptures representing animals are also rare in the late tradition. In the Keith collection there are several small crocodylian figures from Las Mercedes, including one with a feline head (Mason 1945: Figure 26a-b). These figures have no predecessors in the Atlantic Watershed, and recall the larger crocodylians of the Diquís tradition. The Keith collection also has three avian and 13 feline figures from the poorly known site of Las Pacayas near the edge of the Central Highlands (Mason 1945:278-283, Figures 32-33). As Mason notes, these figures are unrelated stylistically to any known traditions in Costa Rica, and there is really no reason to regard them as Period VI in date except for the presumption that they all were surface finds, because there was no accompanying pottery in this lot of Keith's collection.

Animal figures were not a major category of sculpture in the late tradition anywhere in the Central Highlands-Atlantic Watershed region. The absence of reliable archaeological data for the Las Pacayas group renders

even the late date suspect.

Animal Heads

The few known animal heads that appear to have been deliberately carved as such are felines. As with the human heads, there is no obvious difference between these independent heads and those broken from larger works, which in the case of the feline heads are metates or related forms of functional stone sculpture. Only two of the nine feline heads in the Keith collection appear to have been made as independent heads (Mason 1945:272). The independent heads are easily recognizable because they have a finished vertical neck/base, while the metate heads have an essentially horizontal neck (Mason 1945: Figures 27a-b, Plate 48).

In the absence of contradictory evidence, it may be assumed that the feline heads, both those carved as such and those broken from metates, were taken from graves at Las Mercedes and other Línea Vieja sites. Thus, there was probably little emic distinction between the two. We may assume further that the feline in question is the jaguar of metates and other functional stone sculpture, and that it connotes elite status, male sexual dominance, and drug use and transformation.

6. The Late Jaguar Metate Horizon

The tetrapod feline metate-throne is the only category of late Atlantic Watershed stone sculpture that was commonly exchanged and/or reproduced beyond its region of origin in the Central Highlands-Atlantic Watershed. Lee Parsons (1969:Plate 25e) published one example that reportedly was a surface find in the vicinity of Bilbao, Guatemala. However, the most common extra-regional occurrence is in the Diquís region of Costa Rica (Lothrop 1965), and eastward through Chiriquí and Veraguas provinces of western Panama (Mason 1945: Figures 42-43; Torres de Araúz 1972:Ilustración 96). Atlantid bowls and ring-base seats or tables are also found in Diquís and Chiriquí (Holmes 1888:Figures 231-232; Mason 1945:Figure 43).

There can be little question that the Atlantic Watershed was the donor region in this process, since only there does the "full" complex of functional stone sculpture occur. There was also an earlier precedent for the copying of Atlantic Watershed metates, in the simplified flying panel metates of Veraguas (Torres de Arauz 1972:Ilustracion 92).

The Diquís and western Panamanian occurrences of feline metates coincide exactly with the source zones of goldworking technology and exchange. There is a

symmetrical relationship, then, between the copying or exchange of Panamanian goldwork in the Atlantic Watershed, and the copying or exchange of Atlantic Watershed metates in western Panama. This adds another dimension to the network of high-level exchanges that Mary Helms (1978) has argued to have existed between the chiefdoms of Panama and Colombia: there appears now to have been another exchange network between western Panama and the Atlantic Watershed of Costa Rica.

7. Conclusions

The late Atlantic Watershed jaguar metates are but one part of a complex of stone sculpture that also includes mortars, bowls and seats. Art-historical analysis now seems to have resolved the metate-seat ambiguity. The tetrapod platforms emerge from a local tradition of ornate cult metates, while shifting to a tetrapod format the better to convey the effigy concept. The "seat of power" aspect is historically related to a Late Classic Mayan tradition of feline effigy thrones, and to a widespread northern South American tradition of wood seats associated with politico-religious authority and the ritual use of drugs. The pervasive feline imagery of the stone seat-metate-vessel complex suggests that the feline is associated with political power as in

Mayan thrones, and with fertility and narcotic transformation as in South American wood seats. The problematic chacmool-type sculptures may also be associated with drug use, as some have suspected for Mesoamerican chacmools, and as well to the coupled themes of fertility and aggression.

The predominant concerns of independent figural sculpture are war and the sacrificial decapitation of out-group prisoner-victims. A small group of male and female figures may equate semen and breast milk, recalling the northwest Amazonian historic equation of these substances with the underworld source of fertility and with certain drugs. Such prehistoric-to-historic correlation is always problematic, but here it provides a parsimonious explanation for the figures, and links them to the wider evidence of concern with fertility and drugs. The late horizon of jaguar metate-seats extends through western Panama, retracing the direction of metalworking influence in Period V, and reflecting the increasing "Chibchanization" of Costa Rica.

VIII. PREHISTORY AND ART HISTORY
IN COSTA RICA

1. Reflections on Method and Theory

The explicit intention of this project has been to proceed from the material to the ideational realm, and thus to attempt to reproduce the process of the social production of art. In retrospect, it is appropriate that this theoretical objective would be worked out in practice with the art of societies that consistently maintained the links between the material reproduction of society, in terms of tools and weapons, and the intellectual production of ideologies to explain and sustain the society's material organization and structure. The focus on functional stone sculpture is justified by its emic validity, since it is the one artifactual category that continually and decisively sets off the prehistoric societies of Costa Rica (and their immediate neighbors) from the rest of Nuclear America.

Processual archaeology and materialist art history were argued at the outset to be complementary rather than antagonistic, and each has been theoretically influential in this project. Processual archaeology is by now an

accepted and perhaps even dominant paradigm in New World archaeology, but its influence on art history seems little greater today than ten years ago. In this study, both the regional scope and the evolutionary premises were motivated directly by processual archaeology. The temporal focus on the evolution of artifact traditions, and the analytical focus on categories and types, were methodological decisions that also seemed to promise the most profitable use of archaeological data.

Materialist art history, by contrast, has been a far more abstract inspiration, a theoretical goal rather than a model to follow. This can be attributed in some measure to the predominantly Western orientation of art history, so that the tradition of materialist art history offers few appropriate models for the study of art in pre-state level, pre-literate, prehistoric societies. Perhaps more significant, however, are regressive tendencies in materialist art history itself, which too seldom feels the blade of its own criticism. Vulgar, reductionist readings that mechanically "explain" art as an unreflective, unmediated product of the "material base" offer no advantage over the "normal" process of treating the ideational realm as an epiphenomenon.

The tangled web of mediations that frees ideologies to work and hide at the same time demands finer methods. In this study, modes of thought and analysis inspired by

symbolic anthropology (for want of a better term) have forced an awareness of explanation as a philosophical problem. Roger Keesing (1982) and Gregory Bateson (1958) have provided the author with models of explanation that squarely confront the contradiction between the limited point of view of the researcher (even more limited in dealing with prehistory) and the infinite complexity of even the "simplest" culture. How can limited perspectives ever lead to adequate explanations? As Keesing (1982:32) observes, "[to] recognize the limitations of a partial theory is to create openings where it logically connects to other partial theories." (This outlook helps to account for Bateson's lifelong disdain for disciplinary boundaries.) We might also recall that functional stone sculpture itself violates the orthodox boundaries between tools and art, and that not until that fact was grasped and made a part of the problem could its logic be seen and eventually explained.

The questions posed at the beginning of this study have been answered. The formal and technological sources of the functional stone sculpture have been specified, in terms that can be supported or, if necessary, refuted. The traditions of Costa Rican stone sculpture have been repeatedly related to the wider art history of Nuclear America, revealing new historical links and clarifying

fundamental differences. In the process, the orthodox boundaries of the high cultures have been shown to be largely irrelevant to defining the character of prehistoric art and culture in Costa Rica. Finally, explicitly materialist interpretations and explanations have been presented for major artifact categories and iconographic themes, with clear attention to the codes that mediate ideological communication. The critique of ideology demands a materialist approach, because the ideational realm cannot be explained except in relation to the material forms of behavior and organization that, out of necessity, co-produce ideology. To conceive of ideology as epiphenomenal is tantamount to saying that it is gratuitous embroidery on the fabric of culture, a position that in Precolumbian art is thoroughly contradicted by the obvious material investment of labor and wealth in ideological expression.

2. Archaeological Perceptions of Rank Societies

Rank societies, or chiefdoms, are a problematic but vital evolutionary level of social complexity between egalitarian societies and fully stratified states and empires. Schemes of social evolution would seem to be untenable without them.

There is virtually universal agreement that the

Circum-Caribbean area (a now somewhat unfashionable term embracing southern Central America, northern South America, and the Greater and Lesser Antilles) was typified at Contact by rank societies/chiefdoms (but see now Creamer and Haas 1985). Carneiro (1981:48) notes that this geographical core of Nuclear America had "the largest number of chiefdoms of any region in the world." This high density of rank societies may be a broad example of Carneiro's notion of circumscription, a key component of his theory of social evolution in which either environmental limits or population density act to prevent fission and instead lead to positive feedback (i.e., "deviation amplification") that produces increased social complexity, rather than merely an increase in the number of social units.

One of the major problems in the archaeological identification of rank societies concerns the boundary between rank societies and states, but that is not an issue here. Any valid criterion for the archaeological identification of rank societies in Costa Rica will therefore distinguish them from their egalitarian predecessors. Robert Carneiro (1981) offers such criteria, in general accord with those of Peebles and Kus (1977). Here, they are ranked (appropriately) in sequential terms according to the relative amounts of labor required, and in their probable order of appearance

in the first rank societies of any region:

1. Evidence of differential treatment in mortuary behavior and furnishings.
2. The existence of ceremonial centers or central places that reflect at least a two-stage settlement hierarchy, i.e., the center, and its dependent villages or hamlets.
3. Monumental architecture or other large-scale labor-extensive projects such as earthworks, fortifications and water-control systems.

In Costa Rica, mortuary ranking is the first criterion to appear, near the end of Middle Period IV. Central places are not clearly evident until Late Period IV, and monumental constructions are not apparent until late Period V. In the most general terms, then, the archaeological record reflects the emergence and growth of rank societies as a steady, accumulative process, broadly paralleling the increasing investment of labor in stone sculpture.

Carneiro (1981) surveys various explanations of the origin of rank societies, concluding that warfare or the threat of warfare is the indispensable factor, arising "naturally" under conditions of circumscription. Here is a plausible scenario: Under conditions of increasing population and/or limits on geographical expansion, competition for resources becomes increasingly

aggressive. Successful raids or threats result in the submission of independent local groups and their forced incorporation into a larger polity ruled by the central place. Such processes are replicated by neighboring groups in self-defense, and periodic warfare between rank societies is probably necessary to achieve and maintain the proper spacing and boundaries between them. These local frontier zones are likely to be the scene of frequent raids, as each neighboring polity seeks advantage. The emergent hieratic polities sooner or later resort to coercive or appropriative redistribution, taxation in disguise, to reproduce themselves (Carneiro 1981:61).

Carneiro's explanation of the coercive origin of rank societies may or may not be universally valid, but it has obvious relevance to Costa Rica, where much of the imagery is aggressive in nature. If war is the origin of the polity, then the value of war must frequently be reinforced via symbols and rituals that convey ideologies of aggression. Stone (1966b:229), in her survey of Costa Rican ethnohistory, notes that wars were fought to settle land boundaries and to acquire captives for sacrifice, and that warriors could keep whatever loot they seized. War also provided at least limited opportunities for advancement in rank. Thus, behavioral and ideological emphasis on war would have been self-reinforcing,

creating a near-continuous demand for aggression, through rituals that depend on war for inauguration and/or completion, or by making war a source of wealth and advancement.

Societies that depend on aggression for survival and subsistence will value aggression above all. As in many Melanesian societies (e.g., the Asmat of Irian Jaya) and some Amazonian societies (e.g., the Jívaro of Ecuador), aggression is enculturated as the ideal code of male behavior.

3. An Evolutionary Perspective on Gender and the Growth of Political Complexity

Ethnohistoric and ethnographic data indicate that mundane domestic food preparation is almost universally a woman's task, and throughout Nuclear America the utilitarian metate is associated with women's work in the individual household. Well-made tripod metates, on the other hand, are identified with wealthy or elite residences, and Oviedo's (in Lothrop 1926,1:32) description of "slave women" grinding maize in a chief's compound in Nicaragua probably was typical of the area.

With very few exceptions, leadership roles in politics, religion and war were held by men, and women may often have been excluded from these and related

ritual activities. Regardless of women's actual contribution to subsistence and other forms of production, the sexual division of labor provides a normative structure of dominance that can be projected into other realms of society, whether egalitarian, rank, or stratified.

In terms of the sexual division of labor, the transformation of the utilitarian metate into an ornate cult object inspires several questions:

Why was a domestic tool of women transformed into a cult object for men?

What are the symbolic and ideological dimensions of this transformation?

How did ideologies of gender change when rank societies began to replace their egalitarian predecessors?

In Guanacaste-Nicoya, sex and gender seem to be of little artistic concern beyond the association of the tripartite mortuary complex with men of high rank. The same holds for much of the early tradition in the Atlantic Watershed, except that the ritual actors are invariably male. This suggests minimally that aggression as a guarantor of fertility and social reproduction was dominated by men--which is not surprising--and conveyed largely through a zoomorphic code. Finally, at the end of the early tradition, with the appearance of the small

saurian masked figures, we find more explicit indications of the construction of a new ideology of power and male dominance appropriate to rank societies. By Period VI in the Atlantic Watershed, elite male dominance is a pervasive theme in stone sculpture.

While we can assume that some degree of male dominance characterized the preceding egalitarian societies, we are entirely ignorant of its ideological expressions. We might look briefly, then, at the egalitarian societies of Melanesia, where ideologies of aggression, male dominance and male procreation are powerfully combined. In recent years, too, ethnographers of Melanesia have been much concerned to explain the ideological dimensions of sexual antagonism and male dominance. Witness the comments of Roger Keesing (1982: 3, 22):

The New Guinea [male] initiation rites enact a philosophy of growth, of human and cultural nature; they define the separation of men and women as a biological and religious as well as social imperative; and they transform gentle boys into warriors capable of killing rage, stealthy murder, and bravery.

Men's labor constructed on the foundations of women's

labor reproduced not only a social order but a cosmic one: a realm of spirits and powers behind the visible. The rituals that reproduce this multiply elaborated or roughly sketched cosmos are a central theme of men's labor. If men in these societies were not as central as women in the realities of material production, they had at least mystified the very nature of production itself: the production of illusion, we might say, and the illusion of production.

Keesing's words here exemplify a growing concern in anthropology with explaining phenomena such as male dominance in terms that avoid the kind of cultural ecological reductionism that characterized some earlier efforts. In important ways, this is a return to some of the ideas first developed by Gregory Bateson (1958) in Naven, his classic attempt to account for patterns of gender opposition among the Iatmul of the Sepik District of Papua New Guinea.

Gender antagonism and structures of male dominance in egalitarian societies clearly provide a crucial base from which supra-gender ideologies of dominance could have gradually emerged in rank societies. In Costa Rica, this is suggested by the uncommon and extreme ritual importance of the metate, the core artifactual symbol,

identified with the egalitarian sexual division of labor, male dominance, domestic authority, food production and consumption, and the reproduction of the domestic unit, but now charged with conveying a new ideology of dominance. The egalitarian gender hierarchy, long in place and normative, with all its ramifications in the areas of production, consumption, and culturally constructed notions of gender, became the metaphorical code for the expression of a rank and prestige hierarchy, in which only elite men (and at Barriles, perhaps elite women) are true men, while the lesser ranks and slaves are like women, equivalent in rank to the wife grinding away every day at her metate. The sexual division of labor has become a "natural" code for a new division of labor based on rank defined in terms of masculine, phallogocentric qualities.

Similar equations of rank and procreative power are common in Polynesia. Among the Maori of New Zealand, for example, the chief is "the bone of the lineage," the progenitive phallus who reproduces the group. Sherry Ortner (1981:385) in a probing essay on gender and sexuality in Polynesia, says:

Both sex and reproduction are thus male in general, and chiefly in particular...married men are metaphoric chiefs, the metaphor referring primarily

to their status superiority vis-a-vis their wives, but also describing their sexual situation, as both sexually active and reproductive.

In the rank societies of Costa Rica, the gender hierarchy of the sexual division of labor was a "natural" model for the progressive differentiation of society, a universal model of inequality and male dominance which domesticated and feminized families and kin groups by subjecting them to a global sexual division of labor based on the "inherent" masculinity of rank, power and sacredness. In these societies, it was not merely men who claimed to give birth to and nurture the social order, but a few men of high rank who treated others like women.

4. Evolutionary Stages and Regional Traditions in Costa Rica

By comparison to other areas of Nuclear America, the emergence of complex societies in Costa Rica was markedly delayed, by at least a millenium. The archaeological data from Costa Rica and western Panama indicate that sedentary farming villages based on intensive seedculture were not established until Middle Period IV, in the final centuries B.C. This process involved the progressive

replacement of an older tropical forest pattern of mixed hunting, gathering, and root- and tree-cropping. There is no evidence that any of these societies went beyond the political complexity of an independent village or hamlet, and likewise no evidence of specialized art production.

By Middle Period IV, however, it appears that sedentary seedculturalists, or the practice, were spreading rapidly southward through Guanacaste-Nicoya, the Central Highlands-Atlantic Watershed, and the Chiriquí highlands of western Panama. Post hoc, ergo propter hoc is a logical fallacy that does not apply to this process: the specialized production of functional stone sculpture follows immediately upon the evidence of expansive seedculture, and the largest item of stone sculpture is an elaborated maize grinding stone based directly on the special-purpose metates of Mesoamerica. These ceremonial metates of Guanacaste-Nicoya and the Central Highlands-Atlantic Watershed regions were complemented by jade axes and hardstone maceheads to form a ritual-mortuary complex that was created locally out of the aesthetic and ideological elaboration of tools used for domestic food processing, land-clearing, and planting (i.e., digging stick weights) and warfare (clubs). The art history of these early traditions is marked by the creation of art-tool symbols out of real tools vital to

the material reproduction of these emergent complex societies.

For these new complex societies to survive and reproduce, material and ideational adaptations were required. Tools had to be made and distributed, choice farming lands and other natural resources had to be acquired and defended, and new, political forms of social organization were needed to organize the larger production systems of larger societies, and to exchange exotica with other groups, both local and distant.

The creation of complex societies clearly demanded fundamental changes in the control of labor. Egalitarian societies are marked by the essentially unspecialized sexual division of labor, but in complex societies this gender-based division must be progressively shattered, beyond the domestic realm, by the increasing differentiation of the elite and specialists. Hence, whatever the actual mechanics of the process, labor differentiation emerged, requiring the production of a surplus by subsistence workers. This surplus supported the production and acquisition of art.

Some version of this ideal scenario unfolded in Guanacaste-Nicoya and the Atlantic Watershed in Late Period IV and early Period V, because specialized craft traditions emerge where there were none before. The creation of functional stone sculpture was one dimension

of the social process that produced the first complex societies in southern Central America. The intimate relationship between elite art and tools must reflect elite concern with the reproduction of the social groups that created wealth for the elite. This context and this point of view provide a new basis for understanding why tools were the models for art.

Utilitarian maceheads, and probably some of the elaborate ones, were close-combat weapons, and at least some men were probably full-time professional warriors serving as the lord's garrison and retainers. By late in Middle Period IV, the fluid process of group expansion and competition for resources, both natural and human, must have made military specialists increasingly important, and themes of aggression and death are found in both early traditions, especially in the Atlantic Watershed. In spatial terms, warfare for defense or expansion determined the boundaries of a group's territory, and warfare must have been almost exclusively a male activity.

Utilitarian axes and celts were used by farmers--most adult males--to clear virgin forest and second-growth fields. In these emergent complex societies, expansion of the agricultural base was probably easier than intensification, especially as choice alluvial lands became scarce. Control of the agricultural base was

certainly a key source of politico-religious authority, and the elite also controlled the production and distribution of specialized stone tools. Historically, the hard work of forest and field clearing is done by men.

Utilitarian metates are a good index to the relative wealth of a household (Michels 1979). Unshaped boulder metates usually denote poorer, commoner households, while shaped metates denote wealthier or higher ranking households. Metates were crucial to the domestic economy, and metate production was apparently largely controlled by the elite. Spatially, utilitarian metates would be found near the group's core, in the individual households of hamlets and villages. Historically, the domestic use of metates is exclusively a female task.

Each category of stone tools thus reflects a realm of work that assumed new importance in complex societies. Efficient organization for war, whether for defense or expansion, was the ultimate guarantor of a group's continued existence. Farmers were the economic and demographic base, whose work supported other forms of labor specialization, which in turn provided them with security, tools, and rituals of "integration." The domestic economy, of course, remained the basic unit of social reproduction (i.e., the material and ideational processes whereby groups continuously replicate

themselves), but increasing social complexity also implies decreasing domestic self-sufficiency and independence. The importance of the domestic economy and its contribution to social reproduction is indicated by the selection of the metate, a tool of women's domestic labor, as the central ceremonial object and symbol of elite authority.

The social and sexual patterns of tool use represent a cross-section of the new organization of work in these complex societies. The selection of these tools--maceheads, axes, and metates--was apparently not a random or uncoordinated process, and they quickly became the standard symbols of authority in both Guanacaste-Nicoya and the Atlantic Watershed regions. From this initial convergence or sharing of political symbols, the two regions gradually diverged. In the Atlantic Watershed, imagery of aggression became increasingly common. It was conveyed via a largely zoomorphic code of natural aggression, and the subjects (victors and victims) were always human. The artistic evidence of death and aggression there implies a state of endemic warfare and subsistence competition throughout the early tradition.

In these early traditions of functional stone sculpture, the ideology of elite male dominance is coded in terms of the sexual division of labor, since the cult metates implicitly evoke the domestic labor of women,

while the axes and maceheads refer to the male realms of field clearing, and planting and war, respectively. The expression of this ideology is coherent and logical, but it remains implicit or perhaps even covert, conveying elite male dominance through the tools that symbolize the sexual division of labor, while covertly or subconsciously the tools might have evoked the expanded spatial dimensions of a rank society, and the new forms of labor specialization.

In Guanacaste-Nicoya, this code never really evolved, and seems to have shifted to a more "orthodox" Mesoamerican code of elite dominance based on cosmology and the rank-ordering of rebirth. In the Atlantic Watershed, the implicit expression of dominance via the sexual division of labor becomes overt and explicit at the end of the early tradition, with the appearance of small saurian masked figures that portray ritual leaders as the source of fertility.

The stone sculpture of Barriles is a third early tradition, but with some significant differences. At Barriles, functional stone sculpture and independent figural sculpture both take on monumental proportions, conveying the link between elite sexuality, and agriculture, war and ritual quite explicitly, with no zoomorphic code of mediation. The astonishing portrayal of elite sexuality on the supports of the giant metate

might suggest that the elite as a group were increasingly differentiated from the rest of society, recalling the strict endogamy of aristocratic lines in historically-known rank societies such as those of Polynesia. The systematic mutilation of the Barriles statuary also suggests that one facet of the ideology of dominance was the equation of elite sexual power with social reproduction since the statues of the ruling men were castrated and decapitated.

The end of Barriles hegemony in the Chiriquí highlands roughly coincides with the appearance of a new, foreign-inspired culture in the adjacent Diquís lowlands. The initial appearance of complex societies in the Diquís region appears to represent a population intrusion from Colombia, and coincides with the emergence of local goldworking of Colombian inspiration. The foreign intrusion into the Diquís region probably marks the initial settlement of Chibchan-speakers in Costa Rica, the start of a linguistic and cultural wave that would overwhelm the Atlantic Watershed.

The late tradition in the Atlantic Watershed marks at least a quantitative climax in the production of functional and independent stone sculpture. The functional stone sculpture is dominated by feline imagery, and combines the Classic Mayan concept of the feline throne as the seat of power, and the Colombian

tradition of elite seats related to ritual drug use, with the feline as the premier, synthetic symbol of transformation, political authority, and phallogocentric power and fertility. The independent figural sculpture of the late tradition portrays stereotyped, conventional categories of behavior that may reflect an increasing rigidity of social rank and elite-commoner separation.

During Period VI, the Central Highlands-Atlantic Watershed region appears to have been politically dominated by a few powerful chiefdoms. Las Mercedes in the lowland Línea Vieja zone was perhaps the most important politically, and may also have been the major center of stone sculpture production. The most significant political symbol was apparently the jaguar metate-seat, which appears now in Diquís and in western Panama. This link duplicates an early tradition relationship between the Atlantic Watershed and western Panama (with flying panel metates), and reverses the flow of influence that initiated the late tradition and the "Chibchanization" of the Atlantic Watershed.

The evolution of ideologies of male dominance, coded in terms of the sexual division of labor and conveyed through stone sculpture, reveals a progression from implicit, to overt, to pervasive. The domestic work of women served as a model for the creation of political structures of dominance and helped to mystify the process

of rank differentiation, naturalizing the cultural roots
of inequality, and transforming the work of women into
the art of men.

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APPENDIX
DATING THE STONE SCULPTURE OF COSTA RICA

This appendix provides an explanation of the chronology presented in Chapter II, giving the evidence for dating the stone sculpture, and references to excavation data and archaeological contexts. Essays by Lange (1984), Snarskis (1984), and Haberland (1984) are the most recent published chronological syntheses.

1. Period III (4000-1000 B.C.)

No ground stone production can be securely dated to this period in Costa Rica. However, in neighboring western Panama small preceramic sites have yielded edge-ground cobbles and boulder milling stones dating to the Boquete phase (2300-300 B.C.), along with a very few ground and polished stone tools (Ranere 1980 a,b). According to Anthony Ranere, the cobble grinders and milling stones probably were used to mash tubers, but it is not known whether they were collected or cultivated. Lithics of the so-called Tropical Forest Archaic stage are thought to reflect an efficient, rather specialized sedentary adaptation based on mixed hunting, gathering,

root- and tree-cropping, but with no evidence yet of seedculture.

2. EARLY PERIOD IV (1000-500 B.C)

This period marks the tentative and delayed emergence in Costa Rica of lithic assemblages of the type associated elsewhere with sedentary plant exploitation. Two sites are presently known for this period, both excavated in the late 1970s by Michael Snarskis in the Atlantic Watershed region.

At the site of La Montaña in the Turrialba Valley, Snarskis (1978, 1984) has described a utilitarian assemblage of chipped and ground stone, associated with monochrome ceramics that includes rimmed flat trays tentatively identified as budares, or manioc griddles. The single exception to the otherwise undecorated utilitarian lithics was a crudely pecked tripod zoomorphic bowl, found with a slate celt in what may have been a cache or offering.

Perhaps the most significant feature of the La Montaña complex was the presence of ceramic griddles and edge-ground cobble manos, which Snarskis suggests may have been associated with a specific manner of preparing manioc. Cobble grinders were also a feature of the Boquete phase (2300-300 B.C.) in western Panama, for

which Ranere suggests the same function. According to Snarskis, both the monochrome ceramics and the rimmed griddles are confined in Costa Rica to the La Montaña complex.

At the site of Claudio Salazar in the San Carlos subregion of the northern Atlantic Watershed, Snarskis excavated a second Early Period IV lithic assemblage, predominantly chipped chert, but with a large use-modified milling stone. There were no budares and no evidence of an emerging ground stone industry. As analyzed by Snarskis, the Chapparón bichrome ceramic complex at this site is related to southern Mesoamerican Middle Preclassic ceramic traditions, and is more directly ancestral to the important El Bosque ceramic complex than the contemporaneous monochrome La Montana ceramic complex. Neither the Chapparón nor the La Montaña lithic complexes, however, appears to be in any way ancestral to the El Bosque lithic tradition which probably began in Middle Period IV (500 B.C.-A.D. 1).

In Guanacaste-Nicoya, no lithic production has yet been assigned to Early Period IV. Middle Preclassic ceramics have only recently been recognized by Frederick Lange (1980, 1984) in the Orso phase at the Vidor site, in the Loma B phase at Bahía Culebra, in the Chombo phase on the Santa Elena peninsula, and at sites along passes in the volcanic cordillera separating Nicoya from the San

Carlos subregion of the Atlantic Watershed.

In the southern Pacific coast and highlands of the Diquís region, dated archaeological sequences are not available until Late Period IV (A.D. 1-500), or shortly before (Drolet in Haberland 1984).

Early Period IV in Costa Rica thus appears to have been characterized by utilitarian lithic production dominated by cutting, chopping, pounding and mashing implements. For neighboring western Panama during this period, lithic production is better known, and equates with our view of Costa Rica, with generalized production of utilitarian lithics, predominantly chipped stone, with ground stone production at a very low level (Ranere 1980a, b).

3. Middle Period IV (500 B.C.-A.D.1)

This period in Costa Rica is defined by the wide distribution of Zoned Bichrome ceramic types, but evidence for the existence of similarly widely shared lithic traditions remains meager, and may not be due entirely to gaps in the archaeological record. In the Atlantic Watershed region, the still poorly known La Montaña and Chaparrón ceramic complexes probably ended during this period. Chapparón perhaps contributed to the El Bosque ceramic tradition, which probably began in the

later part of this period. In the Central Highland subregion of the Atlantic Watershed, Carlos Aguilar (1975, 1976) has defined the local Pavas phase from his work at the sites of Pavas and El Molino. Aguilar has dated the Pavas phase to 300 B.C.-A.D. 300 on the basis of ceramic comparisons, without radiocarbon dates. However, his beginning date may be too early, since his own ceramic comparisons to the El Bosque complex suggest a date after A.D. 1. Pavas lithics are also similar to those of the better known El Bosque complex, indicating that the Pavas and El Bosque phases are essentially contemporaneous, A.D. 1-500. In the Nicoya region, four subregional ceramic phases--Chombo, Orso, Catalina and Monte Fresco--have also been dated 300 B.C.-A.D. 300, but dated lithics appear to be absent until after A.D. 1. In the Diquis region there are no securely dated lithics from this period. In all probability, the last century or two of this period saw the local beginnings of the ground stone tradition that became so widespread in Late Period IV, after A.D. 1.

4. LATE PERIOD IV (A.D. 1-500)

This period is characterized by the abrupt appearance of ceremonial and mortuary complexes with technically refined ground stone and lapidary work. The emergent

phase of stone sculpture production in Costa Rica appears to have occurred between A.D. 1 and A.D. 300, followed by a sustained climactic phase from A.D. 300 to perhaps A.D. 800, in both the Guanacaste-Nicoya and Atlantic Watershed regions. Robert Drolet's (in Haberland 1984) recent survey of the Diquís Valley of southwestern Costa Rica indicates a roughly contemporaneous or slightly later development there, associated with the expansion or influence of the Chiriquí highlands site of Barriles.

In Guanacaste-Nicoya, three sites provide evidence for the emergence of stone sculpture in this period: La Bocana in the Tempisque Valley, and Las Pilas and El Hacha in northwestern Nicoya. At La Bocana, Baudez (1967) excavated in a small cave that he thinks was used as a seasonal camp or shelter. Ceramic analyses indicated early use in the local Catalina phase, 300 B.C.-A.D. 300, with a later brief use in the Period VI Bebedero phase, A.D. 1200-1550. Baudez found several fragments of a circular tripod metate on the cave floor, and assigned them to the Catalina phase, because this was the period of principal occupation and because the metate type is not reported for later periods. Although only two-thirds of this metate were found, it was sufficient to show that it was a utilitarian implement, whose slightly concave plate had wear patterns (Baudez 1967: 181). Two mullers or pounders (cobble grinders?) were

found on the surface; three manos, two in fragments, were also found in the first three excavated levels.

From this somewhat problematic association of a metate, manos and mullers, Baudez inferred that metates and manos were used to prepare maize during the Catalina phase. Subsequently, both Ferrero (1977:68) and Stone (1977:31) described this same metate as rimmed, and designed for the preparation of root crops such as manioc, an apparent misreading of both the object and Baudez' description of it. In fact, the tripod trough form of the La Bocana metate relates it to utilitarian metates of the Atlantic Watershed El Bosque complex of Late Period IV, and like them, it may originally have been more oval in shape. Snarskis (1978:170-172, Figure 33) identifies El Bosque metates as implements for maize preparation, adducing sufficient evidence to counter arguments that trough and rimmed metates were designed for the preparation of root crops. Both the seasonal nature of the La Bocana cave site and the simplicity, even crudeness, of its ground stone artifacts suggest that specialized ground stone tools for sedentary plant exploitation were not used at La Bocana. Whether such specialized production of food processing tools even existed elsewhere in Guanacaste-Nicoya at this time is an open question.

Las Pilas and El Hacha in northwestern Nicoya also

belong to the period 300 B.C.-A.D. 300, in the local Chombo phase, and probably to the second half of the phase. Both of these cemetery sites were salvage-excavated after they had been looted, Las Pilas by Lange and Scheidenhelm (1975) and El Hacha by Stone (1977:32-34). Only Las Pilas has been adequately published, but both sites had similar mortuary assemblages. In addition to the diagnostic special-purpose Zoned Bichrome ceramics which established the date of the sites, some burials were furnished with three important new lithic types: plain tripod rimless metates (without manos), jade or greenstone axe pendants, and hardstone maceheads (these latter at El Hacha only).

Las Pilas and El Hacha thus represent the first appearance of finely made ground stone tools deposited in mortuary contexts with presumed ritual connotations. The El Hacha site marks the earliest instance of the three-part mortuary-ritual assemblage of metates, jade axe pendants and maceheads. Other sites with this assemblage appear to be slightly later in date, and to occur farther south and east in Guanacaste-Nicoya, and in the Central Highlands-Atlantic Watershed region. Although archaeological evidence remains limited and the dating approximate, this mortuary complex appears to have emerged in Costa Rica between A.D. 1 and 300. Furthermore, the apparent pattern of its subsequent

distribution suggests the intrusion of this complex into Costa Rica from the north. Maya-sphere Chicanel phase ceramics--Paso Caballo Waxy Ware sherds at Las Pilas, and an Usulután ware vessel at El Hacha--further suggest influence from southern Mesoamerica at this time, at least with regard to mortuary ceramics. In the absence of any known local antecedents for the lithic mortuary complex, it would appear that the Guanacaste-Nicoya ground stone and lapidary industries of this period were intrusive either from southern Mesoamerica or its southern frontiers.

The development of this complex into a regional tradition, along with the social differentiation that it seems to have expressed, is evident from an analysis of excavations at two slightly later sites in southern Nicoya, Bolsón and Las Huacas. Bolsón is a small cemetery on the middle Tempisque River that was also excavated by Baudez (1967). The ceramics provide a firm dating extending through the local Ciruelas phase, A.D. 300-500. The twelve burials excavated by Baudez were mostly secondary, with ceramic offerings predominating. Ground stone was limited to three jadeite beads, and two small plain tripod metates. Of the latter, one was a fragmentary surface find, but the second had been placed in Burial 3, one of the richer ones, and was accompanied by a tapered cylindrical mano. Manos of this type are

not often encountered with metates in Nicoya. Aside from the jade beads and the whole metate and mano, obviously special-purpose and wealth-associated artifacts in the Bolsón graves were limited to a few ceramic ocarinas and zoomorphic vessels. Thus, the people who used the Bolson cemetery during this period appear to have had scant access to many ritual artifacts and symbols of status, and Bolsón appears to have been a minor, provincial site, perhaps serving only a small village or hamlet.

In contrast, the famous site of Las Huacas which lies to the south of Bolsón near the town of Nicoya was surely one of the local centers at this time. The large cemetery at Las Huacas had already been extensively looted when the pioneering Swedish archaeologist Carl V. Hartman (1907) worked there in 1903, and he bought locally many more artifacts than he was able to excavate. Hartman's carefully recorded excavations and purchases enabled his successors Baudez (1967) and, more recently, Oscar Fonseca Z. (Fonseca and Richardson 1978), to establish the temporal dimensions that were denied to Hartman. From his work at Bolsón and at stratified sites in the Tempisque Valley, Baudez determined that Las Huacas was a multicomponent site whose ceramic sequence extended from the later Catalina phase (300 B.C.-A.D. 300) to the San Bosco phase (A.D. 500-800), with the principal use throughout the Ciruelas phase (A.D. 300-

500). The variety of functional stone sculpture at Las Huacas, along with Baudez' observations about their ceramic associations, provide a considerably better view of the development of stone sculpture than could more recent but more meager excavations in Nicoya.

The Catalina phase at Las Huacas includes plain tripod metates and serpentine axe pendants of humans with a bifid tongue (Burials IX, XIII). This datable context at Las Huacas supports the early Late Period IV dating of Las Pilas and El Hacha.

The Ciruelas phase (A.D. 300-500) at Las Huacas saw the emergence of low relief geometric and figural decoration on tripod metates with conical legs. At its simplest, this decoration is limited to geometric interlace motifs on the upper and lower borders of the thin curving plate. A metate from Burial VIII adds to this basic format a germinal effigy concept, with the front leg incised as the head of a raptor (or parrot), the rear legs representing the feet, with the body and wings thickly incised underneath the plate (Hartman 1907: Plate VIII). There were other variations on this theme, evident in many unprovenienced objects which are probably contemporaneous. One has an inverted human head carved at the top of the front leg (BC Number 15), and another has a crocodilian spread out in low relief underneath the plate, with the front leg of the metate rendered as the

saurian's raised head (BC Number 16). Plain tripod metates also continued in use in the Ciruelas phase.

From a disturbed part of the cemetery, without definable graves but with Ciruelas phase ceramics, came a "toy" tripod metate (minus mano) closely associated with remains of a red mineral thought by Hartman (1907:26) to have been used in painting ceramics. This suggests that one function of small undecorated metates may have been grinding earth pigments, for which any suitably smoothed small stone could have served as a muller or pestle. Also found in the same part of the cemetery were an avian axe god and avian-headed maceheads (Hartman 1907:27-32).

In northern Guanacaste-Nicoya, then, early Late Period IV was marked by the local beginnings of ground stone and lapidary sculpture destined for high-status mortuary use, as exemplified by the cemeteries at Las Pilas and El Hacha. In late Late Period IV, the social differentiation expressed by this tradition of functional stone sculpture is apparent in the contrasts between the mortuary offerings at the "village" cemetery of Bolsón, and those of the larger and richer cemetery at Las Huacas, in southern Guanacaste-Nicoya.

In the Central Highlands-Atlantic Watershed region, the development of the early traditions of stone sculpture was coeval with that in Nicoya, emerging clearly only in early Late Period IV. In some respects,

even, these two regional traditions, although developing in different natural regions of Costa Rica, appear as divergent developments from a similar base, notably special-purpose tripod metates of Mesoamerican origin.

The regional El Bosque phase (A.D. 1-500) in the central Atlantic Watershed is characterized by the widespread production of utilitarian chipped and ground stone tools used in land clearing and plant exploitation, and the related emergence of finely made special-purpose ground stone artifacts whose ultimate context and function were mortuary (Snarskis 1978). The typical domestic metate was a trough-shaped tripod, used with a loaf-shaped mano. This type actually appears to be a synthesis of two metate types from Mesoamerica: the Lowland Maya domestic "turtle-back" metate, and the Highland Mesoamerican flat-topped tripod metate, which seems to have been the common special-purpose metate throughout Mesoamerica (Snarskis 1978; W. Coe 1965).

The simplest and apparently the earliest special-purpose metate of this tradition is an oblong or round tripod with a horizontal, rimmed plate. Snarskis (1978: 159) observes that the frequent wear-patterns on these metates were probably made by stone pestles of a type that is often figure-decorated, and perhaps used in the preparation of special foodstuffs or drugs. The outer rims of these metates are often notched, or carved with

very stylized human heads (Figure 12).

As in Guanacaste-Nicoya at this time, the basic special-purpose metate was elaborated by the carving of motifs underneath the plate. In oblong metates this takes the form of a longitudinal row of rectangular projections, and three radial rows in the round metates (Stone and Balser 1957:Figure 14). Snarskis (1978:157) identifies these geometric motifs as stylized representations of the dorsal scutes of crocodylians, noting the ubiquity of more realistic images. Thus, in both Guanacaste-Nicoya and the Atlantic Watershed the first phase of metate figural decoration involved the placement of saurian imagery underneath the grinding plate. These underside motifs initiated the development of that most spectacular and unique of Costa Rican stone sculpture, the "flying panel" metates of the Atlantic Watershed (BC Numbers 144-147). Although simple flying panel metates were made during Late Period IV, their climactic development apparently occurred in early Period V (Snarskis 1978:157).

Maceheads were also made in the Central Highlands-Atlantic Watershed during the El Bosque phase, at first indistinguishable in style and technique from those found in Guanacaste-Nicoya (cf. BC Numbers 46, 49). Lapidary production of beads, axe pendants and other personal ornaments is also similar to that known from Guanacaste-

Nicoya. Archaeological contexts in the Atlantic Watershed thus show a correlation of special-purpose metates, maceheads and jade in high status burials, a pattern familiar from Guanacaste-Nicoya at this time.

Perhaps the best illustration of the fundamentally elite archaeological context of these artifacts comes from the burial excavated by the National Museum of Costa Rica at Tibás, on the outskirts of San José in the Central Highland subregion (Snarskis 1979). The deceased was an adolescent who was interred extended on three special-purpose metates, one oblong and two circular, each with a raised rim and stylized head border. Among the grave offerings were two quartzite maceheads, an avian jade axe, a jade necklace, a jade bivalve mollusk pendant with incised figural decoration, and several Central Highlands Pavas and Curridabat phase vessels of Late Period IV (Snarskis 1979). Except for the locally made metates and ceramic vessels, most of the offerings were imported. One ceramic vessel, a monkey effigy, was imported from Guanacaste-Nicoya, as were some of the 25 maceheads found in and near the grave.

The Tibás grave offerings indicate that local and long-distance exchange of "art" was important in the mortuary expression of social status. Snarskis further notes that at Tibás this status was probably ascribed or inherited, rather than achieved, since the adolescent

deceased probably would not have amassed such wealth in his (?) young life. The Tibás grave appears to exemplify the kind of high-status mortuary context for which much of the stone and lapidary sculpture of this period was ultimately intended. The subsequent climactic development of these artifacts, especially the metates, occurred early in Period IV (A.D. 500-1000).

The development of stone sculpture in the Diquís region remains poorly understood, largely because of the lack of systematic archaeology. It has been evident for some time, however, that a clearer view of the development of stone sculpture in this region of Costa Rica must take into account the enigmatic complex of monumental stone sculpture associated with the site of Barriles in the Chiriquí highlands of western Panama, near the border with Costa Rica. The stone sculpture of Barriles includes giant tetrapod "metates," nearly life-size human figures on shaft bases, and the decorated cylinders or "barrels" which gave the site its naming (Figures 13-17).

The dating of the Barriles sculpture has usually been tied to the dating of Aguas Buenas ceramics, whose association with the sculpture was thought to be well-established. However, the recent work by Linares and others at the Barriles site indicates that the ceremonial part of the site, where the sculpture was found, dates

rather late in the occupational sequence there, around A.D. 400-600 or even as late as A.D. 800 (Linares 1980a: 91-93; Linares and Sheets 1980:53-55). While Haberland and others (Haberland 1973:139; Linares 1980a:92, 108) have reported that sherds of the poorly-defined Aguas Buenas-Concepción-Scarified ceramic tradition were found in the southern highlands of neighboring Costa Rica in association with fragments of Barriles-like stone sculpture, at the Barriles site itself such ceramics were scarce, and confined to earlier levels of the site. However fragmentary these ceramic data may be, they support the hypothesis of Linares and Sheets (1980:54) that the expansion of maize agriculture, or even maize agriculturalists themselves, from southern Costa Rica into the highlands of western Panama was a significant factor in the rise of rank societies and monumental art production around Barriles after A.D. 200.

As it stands now, the sculpture of Barriles appears to have developed somewhat later than the early traditions of Guanacaste-Nicoya and the Atlantic Watershed. While genetic links with these Costa Rican traditions would seem probable, convincing antecedents in Costa Rica are not yet apparent. Barriles sculpture is quite different from known coeval traditions in Costa Rica because the Barriles tradition emphasizes large tetrapod "metate" platforms and explicit imagery of human

sacrifice or killing, with a monumentality unknown in Costa Rica. The abandonment of Barriles and nearby sites early in Period IV, between A.D. 600 and 800, after the great eruption of Volcan Baru, may help to explain the selective diffusion of Barriles sculptural traits in Period V in the Diquís region. The exact prototypes of the Barriles sculptures remain unknown. No lowlands or delta Diquís stone sculpture is known which definitely predates Barriles.

5. PERIOD V (A.D. 500-100)

The first half of Period V, A.D. 500-800, witnessed the rapid climax and apparent decline of the early traditions of stone sculpture in both Guanacaste-Nicoya and the Atlantic Watershed, and also at Barriles. In Guanacaste-Nicoya, this period marked the end of a widespread regional tradition of stone sculpture, while in the Atlantic Watershed a new, late tradition of stone sculpture had begun to emerge by the end of this period. In the Diquís region, the first half of this period, ca. A.D. 500-800, provides the first clear evidence for a regional tradition of stone sculpture, with problematic links to the Barriles complex of western highland Panama.

In Guanacaste-Nicoya, the great cemetery at Las

Huacas again yields the best evidence for the continued development of the early tradition of stone sculpture (Hartman 1907; Baudez 1967). A San Bosco phase (A.D. 500-800) ceramic context, Burial I, yielded two small plain worn metates, and a large tripod metate with conical legs, guilloche and "net" or "mat" interlace designs on the border underneath (Hartman 1907:16-17). A small bird was carved in low relief in the center of each end of the plate, and the tips of the conical legs were carved in a motif suggesting a bundle of reeds or sticks.

While the conical leg tripod metates were being made more elaborate during the San Bosco phase, a variant tripod metate type showing a more difficult carving technique was also introduced during this time, perhaps about the middle of the phase, ca. A.D. 650 (BC Numbers 72-78). The new type has openwork carved slab legs, and Hartman (1907:22-23) was able to excavate only one example, in Burial XI. In this example, the legs are carved as inverted and very stylized monkeys with erect tails, while two similar monkey heads decorate the lugs that project from the single-leg end of the plate (BC Number 72 is a nearly identical metate, shown with a mano in the form of a "reed bundle"). This new metate form, and the associated technique of openwork carving, were the basis for the most complex of Guanacaste-Nicoya

metates, "effigies" with a projecting head and slab legs, carved in a delicate openwork technique. The development of this climactic type of metate apparently began about the middle of the San Bosco phase, ca. A.D. 650, and the most elaborate examples were probably made later in the San Bosco phase, before A.D. 800. Hartman also purchased a number of such metates from Padre Velasco at Las Huacas, whose collection was formed there.

Artifacts from Las Huacas illustrate all of the categories of stone sculpture of the early tradition in Nicoya, and the archaeological contexts there suggest that this tradition should be dated ca. A.D. 300-800. This tradition probably began to emerge in northern Guanacaste-Nicoya ca. A.D. 1-200, as represented in small cemeteries such as Las Pilas and El Hacha, but the progressive elaboration of metates must have occurred at larger sites such as Las Huacas, where there was more demand for mortuary offerings and probably more wealth to support continued specialized art production. In terms of labor expended in production, decorated metates were clearly the most important component in a complex of functional stone sculpture that also included maceheads, jade axes and other items.

In the Atlantic Watershed, the basic stone sculpture types of the El Bosque phase continued through the La Selva phase, reaching a climax in the first half of

Period V and ending by around A.D. 800-900 (Snarskis 1978:234). Carving techniques developed to the point of virtuosity as the tripod rimmed metate grew larger and more complex. The flying panel underneath the plate became the focal point of enigmatic scenes of masked figures, predators and trophy heads. These monumental flying panel metates were apparently the most important ritual objects of this time, but their complex imagery remains poorly understood. As with virtually all special-purpose metates in Costa Rica, their ultimate function and context appear to have been mortuary, but none of the complex flying panel metates was excavated scientifically. The most spectacular are reported to have come from graves in the Turrialba Valley and Línea Vieja subregions (Snarskis 1978:157; BC Numbers 144-147).

The technical progress evident in these metates is also reflected in other types of stone sculpture. While the production of polished hardstone maceheads may have continued from the El Bosque phase, a new and more standardized type emerged, made of the same porous basalt as the flying panel metates, and representing the "beak-bird" with trophy heads (BC Number 139). This new type of macehead repeats in portable form a recurrent motif of the flying panel metates. This type was not represented at Las Huacas or Tibás.

The technical achievements in metate carving may have contributed to the emergence of the earliest independent figural sculpture known from northern Costa Rica. To date this is limited to a single type from the Atlantic Watershed, a small anthropomorphic figure, wearing a suarian buccal mask, a tubular bead pectoral and multi-tiered feathered (?) headdress (BC Numbers 196, 197). Similar masked figures are sometimes found standing in the central position on the septum underneath flying panel metates, suggesting that the small stone figurines are another example of a portable (and less socially restricted?) image taken from flying panel metates.

Most other developments in stone sculpture during the first half of this period were minor. Stirrup-shaped mullers and flared-head pestles were refined and elaborated, in keeping with the overall tendency to increase the figural decoration of special-purpose stone tools.

In the Diquís or southern Pacific region, Late Period IV may have begun in the highlands with the fragmentary and poorly documented stone sculpture of possible Barriles affiliation. The sculptural complex at the Barriles site itself, in the highlands of western Panama, is later than has commonly been thought and may not have begun until after A.D. 200.

The emergence of a tradition of stone sculpture in

the Diquís lowlands apparently occurred after the emergence of the Barriles complex, and it may incorporate certain technical features of Barriles sculpture. This early complex in Diquís, the Palmar subtradition, is so far limited to based standing figures, zoomorphic effigies and perhaps spheres, the latter often of monumental size (Mason 1945; Lothrop 1963). The generally anthropomorphic standing figures have a functional support in the form of a peg or shaft base that apparently was mounted in a cobbled foundation, or only a small rounded base (Figures 18, 19). This early Palmar complex develops into the "classic" Diquís tradition of stone sculpture in late Period V. The explicit human trophy head and axe-bearer themes of the Barriles shaft-based figures appear in the Diquís figures as less realistic and more static images of trophy head display. The human axe-bearer or "sacrificer" of Barriles is replaced by a semi-human figure with the N-shaped feline incisors that are so common in composite figures of the San Agustín stone sculpture tradition of southern Colombia. Often, these Diquís figures have a single or bifid serpent tongue, and thick hair braids ending in serpent heads. The treatment of the zoomorphic features in Diquís figures is thus quite different from that in the central figures in the flying panel metates of the Atlantic Watershed, where the animal attributes

are confined to masks or alter egos.

The emergence of a stone sculpture tradition in the Diquís lowlands probably did not occur until the first half of Period V, after ca. A.D. 500, and after the beginning of stone sculpture production in the nearby highlands of western Panama. The emergence of stone sculpture in southern Central America thus follows a general north-to-south pattern, with the earliest traditions approximately contemporaneous in northern Costa Rica in the Guanacaste-Nicoya and Atlantic Watershed regions, followed by a gap of several centuries before such traditions are visible in southern Costa Rica and western Panama.

In all three regions of Costa Rica, the second half of Period V was marked by significant changes in the production of stone sculpture. In the Atlantic Watershed region, this period saw both the decline of the early tradition and the emergence of new forms characteristic of Period VI. In the Diquís region, figural sculpture based on the early Palmar subtradition apparently continued into Period VI, along with new functional types derived from the Atlantic Watershed. In Guanacaste-Nicoya, however, late Period V essentially marked the end of functional stone sculpture, and the apparent beginning of the localized production of based and free-standing figural sculpture.

The unique biconical effigy seats of Guanacaste-Nicoya probably were made from middle Period V, ca. A.D. 800, until early Period VI, perhaps ca. A.D. 1100. None has been found scientifically, and their absence at Las Huacas, the greatest repository of Guanacaste-Nicoya stone sculpture, suggests that they were made only after A.D. 800, by which time that site apparently was abandoned (BC Numbers 99, 100). Their prototype remains unknown. The saurian motifs are rather similar to the small saurian-masked figures of Period V in the Atlantic Watershed.

Archaeological evidence for the dating of the few known examples of independent figural sculpture in Guanacaste-Nicoya is meager. Almost all of these seem to be isolated southern examples of the type that Haberland (1973:144-150) and others have reported from western Nicaragua, where they have been known since the nineteenth century in the Lake region. Similar sculptures are known from Nacascolo at Bahía Culebra in Nicoya (Stone 1977:Figure 61). They have been dated to the Nicoyan Middle Polychrome period (A.D. 800-1200/1350) on the basis of vague ceramic associations. Baudex (1959) has reported on a nearby site, Papagayo, with crude and smaller but similar stone figures, likewise associated with Middle Polychrome ceramics. All these figures remain so poorly documented that little can be

said about them, beyond their apparent northern origin (i.e., in Nicaragua) and their dissimilarity to other known Costa Rican traditions. In all probability, the large alter ego figures were made only after the decline of the "indigenous" traditions of functional stone sculpture, and might therefore be associated with the arrival of new ethnic and/or linguistic groups in Guanacaste-Nicoya in late Period V (i.e., in the Mesoamerican Early Postclassic period).

6. PERIOD VI (A.D. 1000-1500)

Period VI was a time of uneven development of stone sculpture in Costa Rica. In Guanacaste-Nicoya the early tradition of functional stone sculpture apparently ended by late Period V, while the new type of monumental figural sculpture centered in western Nicaragua never became widespread. In the Atlantic Watershed, however, this period saw some remarkable changes, revealing some continuity with the early tradition but with new forms, a more refined technique and a reinterpretation of early themes. Functional stone sculpture remained important, as it had from the beginning, but independent figural sculpture gained prominence for the first time, perhaps in part the consequence of a change in ritual activity. In the Diquís region, functional stone sculpture of this

period is a simplified regional variant of the late Atlantic Watershed tradition.

In the central Atlantic Watershed, metate-like lithic platforms were made in two basic types, oblong or oval, and circular. The oblong or oval platforms all have tetrapod supports, and were made in a wide variety of effigy and non-effigy formats. The oblong or oval platforms commonly have a plate border of stylized human heads, while the supports may be plain, or human atlantids or caryatids, or large human heads (BC Numbers 233, 234). The type with head supports nearly reproduces the largest whole metate-platform from Barriles. At each end of the Barriles platform there originally were low reliefs, since chiselled away. The low reliefs in this position on the Costa Rican version (BC Number 233) depict decapitated human figures lying on their backs, the same image that is found in low relief on the ends of one of the cylinders or "barrels" from Barriles. This decapitation imagery on the plate of the Costa Rican platform, and on the ends of the Barriles cylinder, suggests that the Barriles "barrels" were actually monumental manos, and that the platforms accordingly were colossal metates. The Costa Rican variants of this sacrificial platform type may have been made as early as the second half of Period V, but there is no evidence that they are earlier than the Barriles examples.

The Atlantic Watershed tetrapod effigy platforms are overwhelmingly feline and occur in three basic variants: a "true" effigy, with the curving tail connected to a hind leg; a bicephalic form; and an effigy in which the side supports are connected by a septum which serves as the support for other figures, commonly monkeys (Figures 21, 22). In the latter variants, the septum obviously appears as a holdover from the flying panel metates of Late Period IV and early Period V.

Among the largest lithic platforms of this period are the circular pedestal base "tables," with vertical slots carved out of the base and small feline figures or feline heads pendant from the table border and carved almost in the round (BC Numbers 199, 200). Wood versions of these tables, probable prototypes, are known from the unique cache of wood sculpture found at Retes in the Central Highlands in 1952, with an associated radiocarbon date of A.D. 960 (uncorrected and probably too late; Aguilar 1953; Stone 1958). A second type of circular table has a cylindrical openwork base carved with monkeys or felines supporting the table surface and standing on a ring base.

The *Línea Vieja* subregion is especially noted for the great variety of figure-decorated stone bowls made in Period VI. Bowl forms may be oblong, oval, or round, supported by openwork carved humans, monkeys and felines.

Much rarer than these small "offering" or "cult" vessels are the so-called "chacmools," nearly lifesize reclining figures with a shallow bowl in the belly. True chacmools are Mesoamerican sacrificial vessels of the Early Postclassic period that depict a reclining male figure with belly plate or depression. The best known of the Costa Rican examples, acquired by Minor Keith at Las Mercedes, has feline fangs, a raptorial beak, large male genitalia, and rattlesnakes crawling over the body (Figure 23). Mason (1945:258) mentioned two other Costa Rican chacmools, one in the United States National Museum of Natural History, the other then on display in the municipal park in Puerto Limón. There is a female monkey chacmool in a Costa Rican private collection (BC Number 203). The iconographic variety of the Costa Rican chacmools is a notable contrast to the rather rigid consistency of their Mesoamerican counterparts.

Among the many technical masterworks of Costa Rican stone carving are the thin figure-decorated slabs, thought to be grave markers (see Mason 1945:247-256, Plates 30-34). Known principally from sites in the Turrialba Valley and the Línea Vieja, these slabs typically have a row of figures in low relief along each long side, and full round figures at the top. The slabs were thus made to stand vertically, with the plain base set in a cobble foundation. A local prototype for the

grave slabs may have been the custom of placing metates or metate plates vertically in graves during Period V (Snarskis 1978:237).

Independent figural sculpture of Period VI in the Atlantic Watershed comprises a number of relatively standard types, which empirically concern human sexuality, individual (domestic?) religious activity, warfare and sacrifice, and composite human-animal imagery. Human sexual functions and differences are represented in female figures of breast display and male figures of penis display or masturbation (BC Numbers 220, 221; Ferrero 1977:Lamina XXVI). The so-called sukia or shaman figures, invariably small and portable, depict men seated in apparent attitudes of contemplation, smoking a cigar or blowing an ocarina (BC Numbers 217-219; Mason 1945:263-265, Plate 43).

Human sacrifice or killing are represented by figures of prisoners, and of "sacrificers" bearing axes and human heads (BC Numbers 204, 205). Independent human heads with the neck smoothly finished as a base display a variety of facial features and hair motifs, and may represent ancestors or trophies taken in battle (BC Numbers 212-216; Mason 1945:Plate 48). Independent feline heads are also known, but some were broken from effigy "metates" (Mason 1945:Plate 48). Although the types described here do not exhaust the repertory of

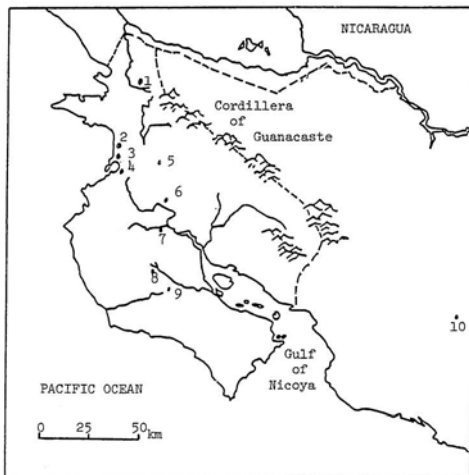
stone figures from this period, these are the most numerous, and are the most refined technically.

In contrast to the variety and quantity of stone sculpture produced during this period in the Atlantic Watershed, the Diquís region was marked by the absence of such innovation. The only known new types were feline effigy platforms and bowls, and ring-base circular seats or tables. These belong to the late Atlantic Watershed tradition, and also are found through western Panama. The absence in the southern regions of the numerous other types of Period VI stone sculpture from the Atlantic Watershed leaves little doubt as to the origins of the platforms and seats.



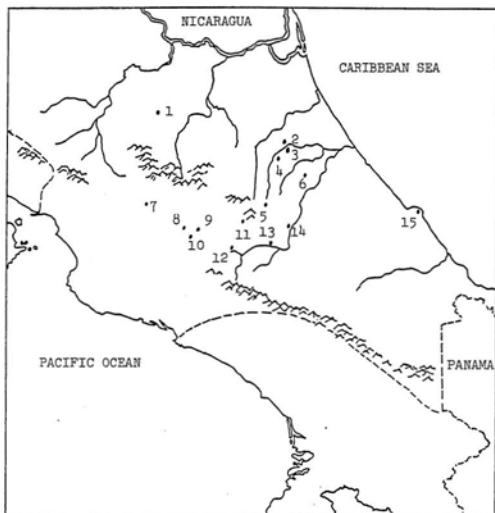
1. Liberia
2. Nicoya
3. San José
4. Puerto Limón
5. Buenos Aires
6. Palmar Sur
7. Golfito

Figure 1. Map of Costa Rica.



- | | |
|----------------|---------------|
| 1. El Hacha | 6. La Guinea |
| 2. Papagayo | 7. Bolsón |
| 3. Nacascolo | 8. Nicoya |
| 4. Sitio Vidor | 9. Las Huacas |
| 5. Liberia | 10. San José |

Figure 2. Map of the Guanacaste-Nicoya region of Costa Rica.



- | | | |
|-------------------|-----------------|------------------|
| 1. Chaparrón | 6. Las Mercedes | 11. Retes |
| 2. Anita Grande | 7. La Fábrica | 12. El Molino |
| 3. Severo Ledesma | 8. Pavas | 13. La Montaña |
| 4. La Cabaña | 9. Tibás | 14. Turrialba |
| 5. Guayabo | 10. San José | 15. Puerto Limón |

Figure 3. Map of the Central Highlands-Atlantic Watershed region of Costa Rica.



1. San José
2. San Isidro
3. Buenos Aires
4. Palmar Sur
5. San Vito
6. Aguas Buenas
7. Golfito
8. Barriles

Figure 4. Map of the Diquís region of Costa Rica.

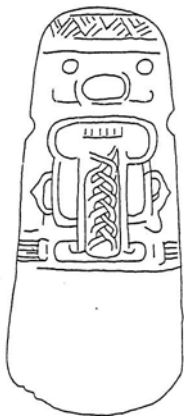


Figure 5. Anthropomorphic half-figure axe, jade.

Guanacaste-Nicoya.



(a)



(b)



(c)



(d)

Figure 6. Tubular bar pendants with saurian motifs, jade. Guanacaste-Nicoya (a-c), Atlantic Watershed (d).



Figure 7. Beak-bird pendant with trophy head, jade.
Guácimo, Línea Vieja zone, Atlantic Watershed.
H 7 cm.

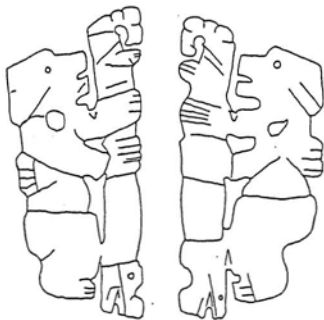


Figure 8. Staff-bearer pendants with trophy heads, jade.
Guácimo, Línea Vieja zone, Atlantic Watershed.
H 8.4 cm.

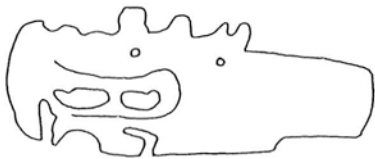


Figure 9. Avian spoon with "flame eyebrows," jade. Guácimo,
Línea Vieja zone, Atlantic Watershed. L 10.3 cm.



Figure 10. Split winged pendant with incised bat, jade.
Atlantic Watershed.



Figure 11. Reworked Olmec or Olmecoid mask, jade.
Atlantic Watershed.

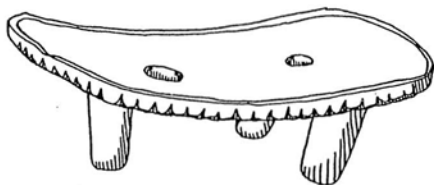


Figure 12. Tripod metate with notched border and "kill" holes,
basalt. Las Mercedes, Línea Vieja zone, Atlantic
Watershed.

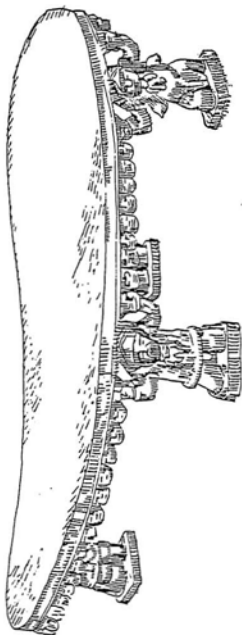


Figure 13. Reconstruction of giant tetrapod metate, basalt.
Barriles, Chiriquí province, Panama.



Figure 14. Female support figure (now missing) of giant tetrapod metate, basalt. Barriles, Chiriquí province, Panama. H ca. 1 m.



Figure 15. Male support figure (now missing) of giant tetrapod metate, basalt. Barriles, Chiriquí province, Panama. H ca. 1 m.

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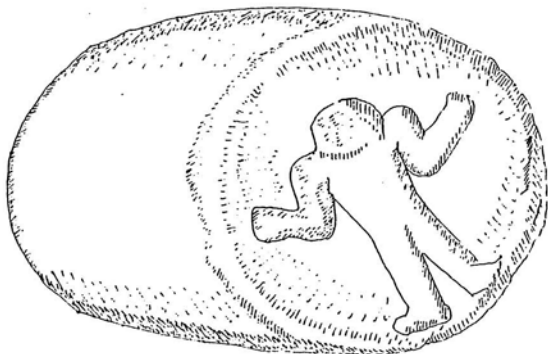


Figure 16. Cylindrical mano with decapitated figure on end,
basalt. Barriles, Chiriquí province, Panama.
L 65 cm.

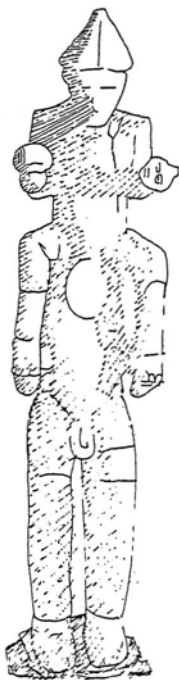


Figure 17. "Master-and-slave" group, basalt. Barriles,
Chiriquí province, Panama.



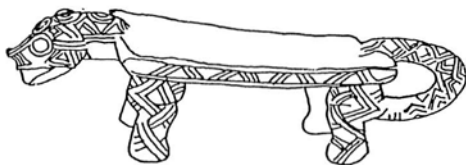
Figure 18. "Group A" figures, sandstone. Palmar,
Diquís. H 65 cm, 80 cm.



Figure 19. "Group B" figure, basalt. Palmar, Diquís.
H 37 cm.

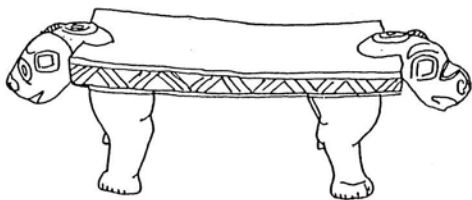


Figure 20. "Star" macehead, basalt. Buenos Aires,
Diquís. D 16.1 cm.



480

Figure 21. Feline effigy metate-throne, basalt. Las Mercedes,
Línea Vieja zone, Atlantic Watershed. L 60 cm.



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Figure 22. Bicephalic feline effigy metate-throne, basalt.
Las Mercedes, Línea Vieja zone, Atlantic Watershed.
L 60 cm.

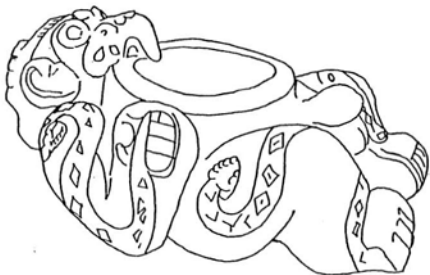


Figure 23. Ithyphallic raptor chacmool, basalt. Las Mercedes,
Línea Vieja zone, Atlantic Watershed. L 1.14 m.



Figure 24. Mat border of Kaminaljuyú Stela 10, basalt.
Kaminaljuyú, Guatemala. H of preserved
fragment 1.22 m.

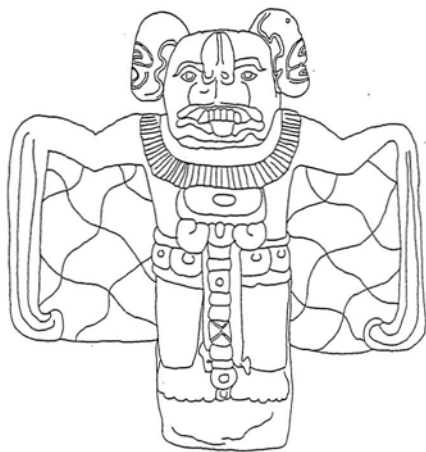


Figure 25. Bat man with Muluc (jade) glyph pectoral, stone. Copán sphere? H 67 cm.



Figure 26. Mayan glyphs of possible iconic value, according to the Thompson numbers. T511, Muluc, day sign, jade; T551, Pop, month sign, mat; T625, turtle-shell; T714, Hand-grasping-fish, lordly apotheosis; T756a, Zotz, month sign, bat; T756d, Copán Emblem Glyph.