DRESSED TO KILL: JADE BEADS AND PENDANTS IN THE MAYA LOWLANDS

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Jade was a material of paramount importance in ancient Maya life owing to its symbolic significance. The meanings of jade's color lent to the stone, and to those adorned with objects fashioned from it, an unmistakable aura of power. As a result, jade objects figure very prominently in the archaeological record, and their forms and contexts bespeak their ancient meanings. The tracing of the shapes, carving, production techniques, and use history of jades underscores the role of jade in Maya belief, political economy, and personal ornamentation.

INTRODUCTION

From very early in their history until at least the opening years of the Spanish conquest, the ancient Maya revered jade as a sacred material, suited to the most important ritual and ceremonial uses that their religion and social structure dictated. The importance of jade in ancient Maya life is only hinted at by Spanish chroniclers, whose principal concern was generally to describe a culture that they sought to transform. Even Diego de Landa, whose 1560s account of Maya social and material culture is the most extensive one produced, makes just a few maddeningly brief mentions of Maya uses of stone beads as he had observed them, and mentions only once the function of beads as ornaments of nobility:

> The occupation to which they had the greatest inclination was trade... exchanging all they had for cacao and stone beads, which were their money, and with this they were accustomed to buy slaves, or other beads, because they were fine and good, which their chiefs wore as jewels in their feasts (Tozzer 1941:94-96).

Insulated as he was from much of Maya daily life in 16th-century Yucatan, de Landa barely skimmed the surface of the meanings and uses of jade and other beads among the people whose culture he strove to understand. In addition, he could not have been aware that the cultural context in which he found himself was different in many substantial ways from that of earlier centuries, and hence allowed him only a slightly opened window on the Maya past. Luckily, archaeological work during the past hundred years has gone a long way toward opening the window fully.

JADE AS A SACRED MATERIAL

The fundamental significance of jade to the ancient Maya resided in symbolism rooted in religious belief. The critical aspect of the stone was not its rarity, its tensile strength, or its ability to take a high polish, but rather its green color. Because jade's green hue was seen as representative of water and of fertility, the material was of critical value for a variety of ritual uses. The symbolism presumably derived from mimicry of the color of much tropical water and of the living plants–corn, beans, and squash–on which life depended. Among the lowland Maya of the Yucatan Peninsula, the Guatemalan Peten, and western Honduras, the stone's importance was enhanced by the fact that it was a highland product, brought long distances to the great cities and small communities in which it was as essential a commodity in ceremonial contexts as other imported goods were in secular settings.

Because it was color rather than mineralogical properties that lent jade its importance, the Maya included many other types of stone with even the slightest greenish tinge in their repertoire of materials suitable for ceremonial use; the term "social jades" has been suggested for such objects (Hammond et al. 1977:61). Hence, whereas the archaeological assemblage includes a great many beads and pendants

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of jadeite, there are also large numbers of artifacts that embody mixtures of jadeite and albite, as well as serpentine, and even quartz with slight copper inclusion (*see* Bishop, Sayre, and Mishara 1989). It follows from this that in archaeological parlance the term "jade" denotes not jadeite alone but rather the variety of materials that held importance for the ancient Maya. In fact, in their quest for the color green, the Maya overlooked nephrite, which in truth fits the description but generally appears black; the material, not uncommon in the archaeological record, was favored for axes and wood-splitting tools because of its physical properties but was never recognized as appropriate for ceremonial use.

THE TECHNOLOGY OF JADEWORKING

The symbolic significance of green stone was so great that it led the Maya to develop a very specifically focused set of attitudes toward and techniques for the production of beads and pendants. The overriding consideration appears to have been conservation of the precious substance, with the result that stoneworkers avoided potentially wasteful procedures and concentrated on ones designed to permit maximum use of every bit of the raw material. This meant, first of all, that the approaches to bead production and to the designing of elaborately carved pendants were generally structured to minimize alteration of the natural shapes available to the carver. Second, the conservation approach dictated a drilling method that produced material suitable for other uses, and finally, the specialized production techniques were employed with great care in order to preserve the limited wastage for specific non-artifact use.

Retention of natural shape insofar as possible often meant that beads were made in irregular rather than spherical shapes, and in many instances were little more than polished and drilled river pebbles (Pendergast 1979: Fig. 55g-h; 1982:Fig. 35a) (*see* cover; *see also* Pl. IA). In other cases, necklaces consist of irregular bits of jade, many almost certainly offcuts from larger objects, that have been polished and drilled. The variety in bead form and color surely indicates that although intensity of color was the principal indicator of the importance of a piece of raw material, importance could be established by bead size and sphericity even when the object's color was not of the finest.

Figure 1. Obese human-figure pendant with truncated legs, Tomb B-4/2 Altun Ha, Belize, ca. A.D. 675; height: 8.35 cm (all photos: D. Pendergast and Photography Department, Royal Ontario Museum, Toronto).

Pendants posed a much larger challenge than beads for the artisan, because ceremonial requirements for presentation of a ruler or a deity had to be met within the confines established by the shape of the raw material. Solutions to such problems were as varied as the lumps of green stone themselves, but usually involved contorting the poses of figures (Pendergast 1979:Fig. 19k; 1982:Fig. 31d) (Pl. IB top), truncating limbs or other features (Pendergast 1982:Figs. 35b,

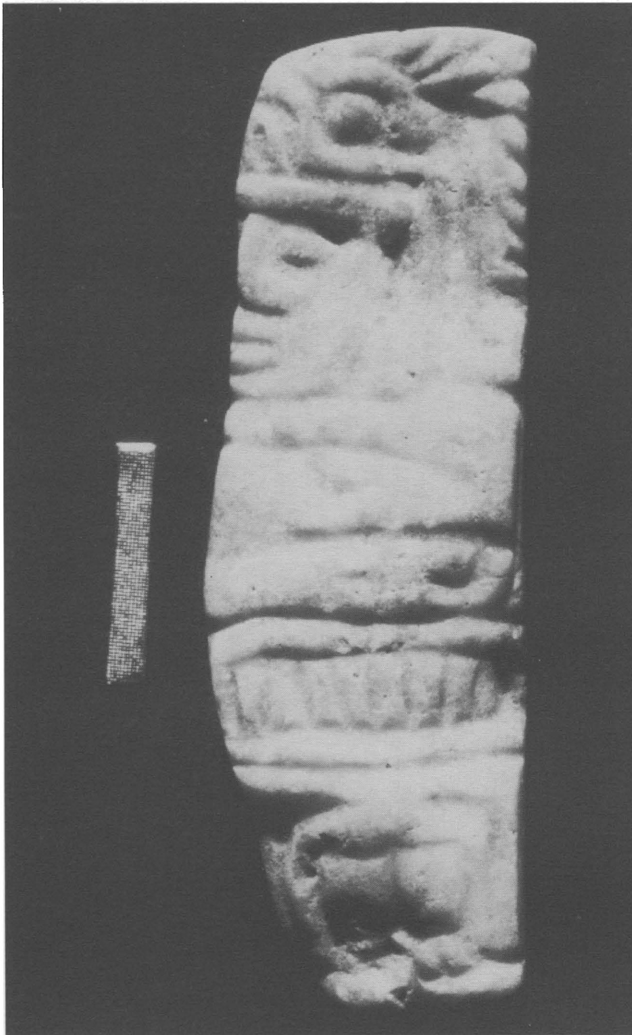

Figure 2. Human-figure pendant with bird-head headdress and truncated legs, Tomb B-4/2, Altun Ha, Belize; height: 10.55 cm.

Figure 3. Human-figure pendant with disproportionate head and truncated legs, Tomb A-1/1, Altun Ha, Belize; height: 5.0 cm.

56a, b, e) (Figs. 1-3; *see also* back cover), altering proportional relationships among the distinguishing features of deities, or a combination of all three (Fig. 4). In some instances the presence of incompletely obliterated production cuts on the reverse surfaces of pendants tells us that when sufficiently large lumps of raw material were available they were sawn into pendant blanks, but even in these cases the retention of edge irregularities was essentially universal (Figs. 5-8; Pls. IB bottom, IC, ID, IIA, IIB, IIC).

Drilling posed singular problems for the conservation-minded stoneworker, because control of the apparatus was less than absolute and the dimensions of the area to be perforated were often highly limited. For most beads and pendants, drilling was unavoidably destructive in the sense that it cored out from the body of the object a quantity of powdered stone. In addition, rocking of the drill in the hole resulted in a considerably greater diameter at the object's surface than at the centre. These considerations led to drilling from opposite ends, with a resultant biconical perforation in which only the point at which the two shafts join represents the drill diameter. In some beads and a very few pendants, however, entry diameter carries through the piece even though opposite-face drilling was employed (Pendergast 1979:Fig. 20c). Perforations of this type permitted extraction of a core that could be sliced into

Figure 4. Human-figure pendant with disproportionate head and truncated legs, Tomb B-4/2, Altun Ha, Belize; height: 7.95 cm.

Figure 5. Sawn-slab pendant, Structure J-9, Altun Ha, Belize, ca. A.D. 450 (?); height: 11.2 cm.

small discs to be perforated for use as minor beads. Such disc beads are, in fact, moderately common in the archaeological record, but traces of their perforation-core history have generally been eradicated by polishing.

In spite of the problems in drill control and the need for retention of the waste material, Maya jadeworkers managed to perform many truly remarkable feats of pendant-drilling. Most oblong pendants are pierced longitudinally, an arrangement that permitted suspension with the carving in natural orientation only by the passing of a cord down through the perforation to be tied off with a small bead and passed back up through the hole. The longitudinal drilling was in itself an achievement that required very considerable manual dexterity, but larger objects not infrequently also have a transverse perforation, presumably to allow for insertion of a stabilizing cord that passed around the wearer's chest. The fact that such perforations either intersect the longitudinal one or pass very close beside it provides further documentation of the artisan's skill.

We must remember also that in producing any object of jade, but particularly a large and elaborately carved pendant, the worker was entering an awesomely special religious context in which error, especially one that damaged an object and hence probably destroyed its symbolic significance and power, was fraught with risk both for the individual and for the community. The tension that surrounded such endeavors must therefore have been of the highest order. Among the truly striking examples of the jadeworker's art and the risks it entailed is the

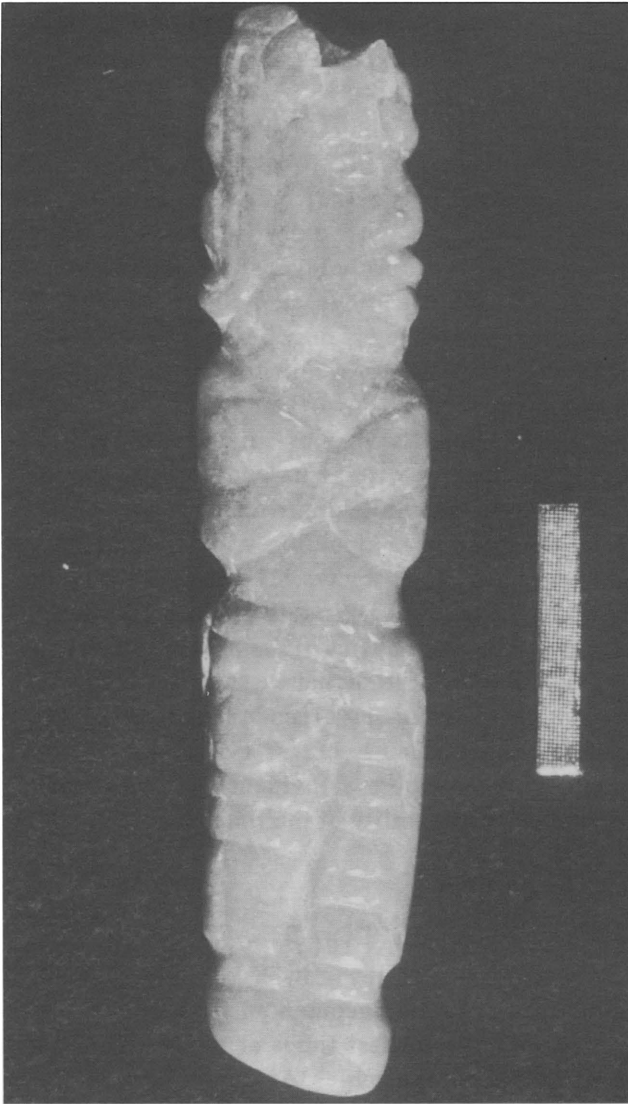

Figure 6. Human-figure pendant in submission pose, Tomb A-1/1, Altun Ha, Belize; height: 10.35 cm.

20.3-cm-long pendant (Pl. IIC) from Altun Ha, Belize, with an elaborately carved scene on the obverse and a hieroglyphic text on the reverse (Pendergast 1982: 84-85, Fig. 55), that is drilled both longitudinally and transversely as well as at various spots around the perimeter. The production of a 20.3-cm.-long hole was undoubtedly the supreme challenge of the pendant-maker's life, and one that he nearly failed; inspection of the perforation under bright light shows that the drilling came within just a bit more than a millimeter of piercing the pendant's rear face.

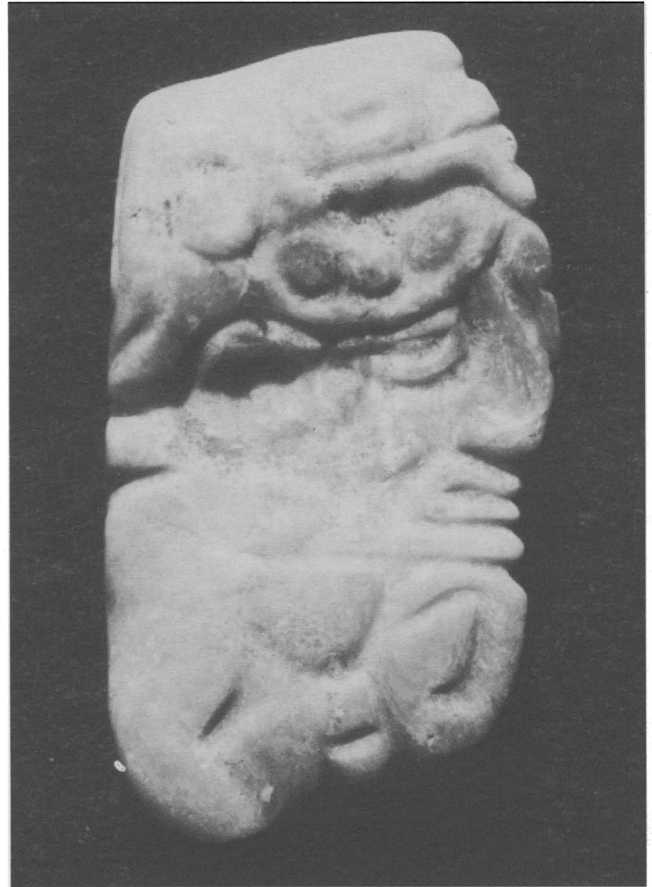

Figure 7. Human-torso pendant, Tomb B-4/2, Altun Ha, Belize; height: 5.5 cm.

THE JADEWORKER'S TOOLKIT

The remarkable feats of jade carving and drilling that abound in the Maya archaeological record pose one major question for which there is, sadly, very little in the way of an answer: How was the work done? The difficulty in providing an answer to this very important query is essentially the same as that encountered in all areas of ancient Maya technology; it results from the extremely poor preservation that characterizes the tropical environment, combined with the fact that the Maya left virtually no pictorial record of daily life. Hence, although we have not only the archaeological objects themselves but also numerous depictions in stone and pottery of rulers and nobles in their finery, we know next to nothing about the people who produced jade beads and pendants and only slightly more about how they carried out their work.

Figure 8. Jaguar-head pendant, Tomb A-1/1, Altun Ha, Belize; height: 3.45 cm.

The techniques employed by Maya jadeworkers have perforce been more a subject for speculation than an object of scientific analysis owing to the absence of jade-workers' toolkits in the archaeological record. Studies such as that by Kidder, Jennings, and Shook (1946: 118-124) and the pioneering work of Foshag (1957) have suggested a variety of techniques based on observation of the finished products and, in Foshag's case, knowledge of the mineralogical and physical properties involved. The sum of our knowledge as provided three decades ago by Rands (1965) has been significantly augmented in a broader study of jade in Mesoamerica (Bishop, Lange, and Easby 1991). The problem is that much of the jadeworker's equipment no longer exists because it was made of wood and other perishable materials, and the remainder very probably consists of objects unlikely to be identifiable as artisan's tools, although one potential jadeworker's kit has been recovered in northern Yucatan (Andrews, Rovner, and Rovner 1975:91).

Sawing with a very thin wooden blade either edged with or driving a finely powdered abrasive, or with a string coated with abrasive-impregnated resin, is obviously in evidence on unfinished objects, but it is equally obvious that the tools have long since succumbed to the rigors of the tropical environment. A wooden drill tipped with chloromelanite (Foshag 1957) or corundum, probably used in a bow-drill apparatus (Kidder, Jennings, and Shook 1946:123) would be represented today only by the unidentifiable tip, and a bird bone used as a core drill might very well be classified only as a worked object, not as a jadeworker's tool. Carving of complex scenes was probably carried out with stone and abrasive-tipped wooden gravers, and polishing with stone or wooden objects, probably in conjunction with cloth in later stages, and a very fine abrasive. The issue of the types of abrasives used can clearly never be resolved, and the debate regarding the physics of the process continues to this day. It is frustrating that we shall never be able to reconstruct the labors involved in the production of jade beads and pendants, but at least we have the products of those labors as evidence of the artistic talent and technical ability of their makers.

JADE AS ADORNMENT, JADE AS POWER

The use of jade is documented from only a few centuries after the earliest times at which the Maya were culturally recognizable. At Cuello, in northern Belize, jade objects appear as early as 900 B.C. (Hammond 1991:199), and jades, in the form of simple beads that are largely albite, are known from Altun Ha at about 450 B.C. (Pendergast 1982:179-184, 200-201). Complex jade carvings are, however, much more common, as are quantities of jade in general, during the Maya Classic period (A.D. 250-925). The discussion that follows is focussed on the Classic, although many of the practices examined were surely part of the cultural repertoire prior to the Classic as well.

The variety among jade pendants is tremendous (Pendergast 1979, 1982, 1990a; Proskouriakoff 1974; Rands 1965), and can often be judged even in relatively limited archaeological assemblages (Taschek 1994:67-104). The uses to which jades were put in ancient Maya society were, however, far less varied; in general terms they fall into three primary

categories, which we shall examine in a moment. In all three categories, the uses of jades reflect the essential quality of the stone as the signifier of concepts important in Maya religion, and hence as a symbol of power.

The most frequently recurrent and most generally visible use of jade beads and pendants occurred in the costume of royal personages and of their attendant nobles. Here the visual magnificence of raiment was given additional impact not only through the incorporation of specific religious imagery in virtually every part of the regalia but also in the use of the essential green color in necklaces, chest ornaments, belts, wristlets, anklets, headdress elements, and elsewhere on the royal body. Schele and Miller (1986:67-72) provide a short but evocative description of royal costume and the place of jade within it, but in truth no summary of such finery can begin to do justice to the handiwork of Maya craftspeople and the effect it exercised over the populace. Every bit of royal costume bespoke the link between the ruler and the gods, and defined the role a leader played as intercessor for the community's well-being. Jade was of especial importance in the conveying of this message, for even though the use of the precious material was not confined to the nobility, the concentration of jade in royal costume spoke of power in a voice that no one could fail to understand.

If we move for a moment from the message to the medium, we enter a realm in which simple principles of physics may tell us something about the display of power by the nobility. The dressing of a ruler in the mass of finery surely took place in a cloistered spot but, of course, the object of the endeavor was to produce a manifestation of power that would be visible throughout some ceremonial occasion. Imagine if you will a royal person clad in a large and complex headdress, numerous elements of body-covering including a massive backrack, then adorned with one or more jade necklaces, a number of pendants, a belt with jade elements, anklets, wristlets, and other pieces of the precious stone, and you will recognize immediately that when in full finery the ruler must have been nearly immobile. Combine this knowledge with the requirement that the individual climb temple stairs, perform a complex ritual, and then descend the stairs in a dignified manner, and you cannot fail to conclude that the weight of raiment must have dictated that the personage be assisted at every step–and particularly in the descent of the stairs–by a coterie of retainers. The very stone that underscored royal power must, at the practical level, have been a tremendous impediment to the carrying out of essential royal public duties with the proper amount of decorum.

JADE AS A GIFT TO THE GODS

The power demonstrated by jade in its role as royal adornment was given a second meaning in one of the critical, though not universal, elements of Maya construction. Whether in major temples or in minor structures, whether in a city's heart or in outlying residential zones, the practice of placing an offering either at the base of a new building or near its summit was of major importance. The purpose in every case was presumably to ensure the success of the endeavors for which the structure was intended. Because of its ceremonial importance, jade often appeared in such construction offerings (*see*, for example, Pendergast 1982:42, 46-47, 53, 75, 81, 82, 106, 109; Taschek 1994:67-104; Willey et al. 1965:482-483), even in buildings in which no subsequent use of jade is in evidence, or would be expectable.

Offerings of jade extended beyond the construction-related sphere to situations in which massive disposition of the valuable material, almost certainly aimed at propitiation of the gods or at enhancing connections with them, were the order of the day. The most famous of such offerings involved the Cenote of Sacrifice at Chichen Itza, in northern Yucatan (Proskouriakoff 1974), into which huge quantities of objects, imported from many spots, were cast. A different type of destructive offering is represented by successive altar-top events at Altun Ha, Belize, that involved shattering of jades, either before or as the result of huge fires lit on the altars (Pendergast 1982:104, 110, 117-118). In these instances the effect as regards the jades was the same as in construction offerings: objects of incalculable value, often of heirloom status, were given up for the good of the community.

JADES AS AFTERLIFE ACCOMPANIMENTS

The third category of jade-object use involves the placement of beads and pendants with the deceased, both in royal tombs and in burials of lower rank or status. I cannot begin to attempt an exhaustive discussion of burial-related jades, either as regards their variety or as regards their quantity, both of which vary greatly from site to site and over time. It is worth noting, however, that the concentration of carved jades in royal tombs reflects, at least to a fair degree, the concentration of such wealth depicted on monuments and pottery vessels (e.g., *see* Pendergast 1979:Fig. 34b). As in the case of offerings, the deposition of jades in tombs removed the objects permanently from view and from use, and hence signalled the overwhelming importance of the individual interred. When such efforts involved pieces of unquestioned major significance and considerable antiquity, such as the jade plaque from Altun Ha (Pendergast 1982:Fig. 55), the impact on the community must have been immeasurably great. The most outstanding example of voluntary relinquishment of a jade of unspeakable importance is surely the full-round jade carving of the sun god from another Altun Ha tomb (Pendergast 1982:57-59, Fig. 33a-c).

JADES AFTER THE CLASSIC

As the fabric of Maya society began to disintegrate in the 8th century A.D., the power exercised by rulers over many aspects of life, including the importation and use of jade, must have begun to diminish. By the end of the 9th century or the opening years of the 10th, royal control over trade in jade, and indeed the very need for such trade, had effectively ceased in most lowland Maya cities. Virtually all of the cities investigated throughout the southern part of the lowlands (modern Belize, the Peten, and portions of the Mexican states of the Yucatan Peninsula) had ceased to function as centers of social and political power by about A.D. 900-925; only two communities, one the major center of Lamanai and the other a small island community linked to the mainland city, are known to have survived the Classic collapse essentially unscathed (Pendergast 1990b, 1993). One can only speculate about the fate of jadeworkers when their skills were no longer needed, just as one ruminates on the changes that must have affected all who had toiled in the service of rulers who no longer held sway in lowland centers.

With the onset of the Postclassic in the 10th century, the focus of Maya life changed sharply in both the southern and the northern sections of the lowlands. In the north, the arrival of central Mexican peoples brought about shifts in religious belief and practice, but seem not to have reduced the focus on jade as one of the essential ingredients of a successful existence. In the south, in contrast, jade came close to disappearing as an element in offerings and burials, and the few pieces that do occur were surely heirlooms, or occasionally were reworked from fragments of larger objects of considerable antiquity. The place of jade may have been taken by shell and other materials suitable for beadmaking, and the tradition of use of certain shells that were once conjoined with jades in royal raiment, notably *Spondylus*, as indicators of rank or status may have continued in a limited fashion. To all intents and purposes, however, the role of jade was reduced to so low a level as to be effectively nil in the southern lowlands Postclassic, even though occasional use of pieces continued through the early 16th century.

JADES, BEADS, AND EUROPEAN ARRIVAL

Although jade no longer held the place of eminence it once enjoyed in Maya religious practice, the significance of its color was certainly not lost on the southern lowlands Maya of the 16th century. The economics of obtaining jade were, however, apparently beyond the capacity of the people. Reuse of ancient pieces, which may have been recovered through accidental digging or intentional search in abandoned structures, was therefore apparently the standard practice. Sources of exotic shell seem also to have dried up, with the result that beads of clay came to be the common adornment, an immeasurably large step down from the grandeur of earlier centuries.

With the arrival of the Spaniards in what is now Belize around 1544, the Maya had opened to them a source of an entirely new kind of ornament, the glass beads that the Europeans brought for trade and other purposes. Much of the use of beads at Tipu, one of the two excavated Historic-period native communities in Belize, focussed on children (Pendergast 1993:128-

129; Smith, Graham, and Pendergast 1994:Table 3), presumably in reflection of the conversion and catechizing process. In contrast, all but one of the glass beads recovered at Lamanai come from the presumed house of the community's leader (Pendergast 1993:128; Smith, Graham, and Pendergast 1994:23-25, Table 1), and hence can probably be seen as having performed a different version of the validation of power that characterized jades in earlier times. Neither the Spanish hold on Tipu and Lamanai nor the quantity of European beads brought into the communities was sufficient to disrupt native production, and so pottery beads continued in use alongside glass from the mid-16th century until rebellion brought an end to European presence at both sites in 1638-1641. The disappearance of Spanish influence was followed by resurgence of some pre-contact offering and other practices, but also by Maya continuation of a mixture of native and Christian religious practice. All evidence suggests, however, that the now centuries-gone use of jade as personal adornment to denote power did not reappear. Yet jade had not lost its significance, even though in their time in the southern lowlands the Spaniards had succeeded in altering Maya belief and daily life more than they knew. Sometime after 1641, when the Maya of Lamanai erected a monument in what had been the nave of the Christian church, they included among the offerings at the great stone's base a reshaped piece of a centuries-old carved jade pendant.

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