

PROSPERITY, REVERENCE AND PROTECTION: AN INTRODUCTION TO ASIAN BEADWORK

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Fascinating and diverse beadworking traditions have flourished in Asia for more than 1000 years, with the preponderance of surviving specimens dating to the 19th and 20th centuries. Based on a lecture presented at the Third International Bead Conference in Washington, D.C., in 1995, this article introduces Asian beadwork as a fruitful topic of inquiry for bead specialists. Representative examples produced in the last millennium by various cultures in South Asia, mainland and island Southeast Asia and East Asia are shown and discussed. Although they certainly testify to the material wealth of their makers, in many cases these pieces also carry spiritual implications. As the study of Asian beadwork is still in its infancy, it is hoped that this article will inspire others to conduct further research on the subject.

INTRODUCTION

In these heady days of great interest in all things beaded, when monographs on African and American Indian traditions abound, it is curious that so little attention has been devoted to Asian beadworking traditions. There are plenty of studies on the beads themselves, whether of indigenous or foreign manufacture, but comparatively few on the objects created or embellished with beads, beyond simple necklaces. This article begins to redress this imbalance by introducing general cultural, historical, iconographic and technical issues raised by an examination of items "composed or adorned with beads, with units subordinate to the whole" (Dubin 1992). Usually, "beadwork beads" are small, measuring less than 5 mm in diameter (*see* Francis 1980,6[3]:7). Colloquially, they are called "seed" and "bugle" beads. This discussion focuses on representative examples drawn from a wide variety of cultures in South Asia (India and Nagaland), mainland

Southeast Asia (Myanmar and Laos), East Asia (China and Japan) and island Southeast Asia (Malaysia, Indonesia and the Philippines) (Fig. 1). Such a broad perspective, touching upon many environments, languages, religions, social systems and aesthetic sensibilities, necessarily leaves out much of interest. Nevertheless, it does afford opportunities for comparisons between beadworking traditions, thus revealing significant similarities and differences. Considered together, the examples gathered in this article constitute an impressive array and demonstrate a multitude of approaches for assembling beads in two- and three-dimensional compositions. Before discussing each of these pieces in some depth, I will present more general information concerning sources for the study of Asian beadwork, early examples of Asian beadwork, the social, economical and spiritual contexts of Asian beadworking traditions, and Asian beadworking materials and techniques.

Sources on Asian Beadwork

Any review of the literature on Asian beadwork is destined to be rather brief as so little has been written and so few examples have been published. A careful search turns up six monographs devoted largely or wholly to the subject, one on South Asian beadwork (Nanavati, Vora and Dhaky 1966) and five on island Southeast Asian beadwork (Chee 1989; Dunsmore 1978; Ho 1987; Loebèr 1913; Whittier 1973). Of these, only Loebèr pursues a comparative approach, examining beadwork from a number of Indonesian traditions. Fewer than three dozen recent articles or book chapters address aspects of Asian beadwork in some depth, and many of these also concentrate on single traditions in island Southeast Asia: Chen

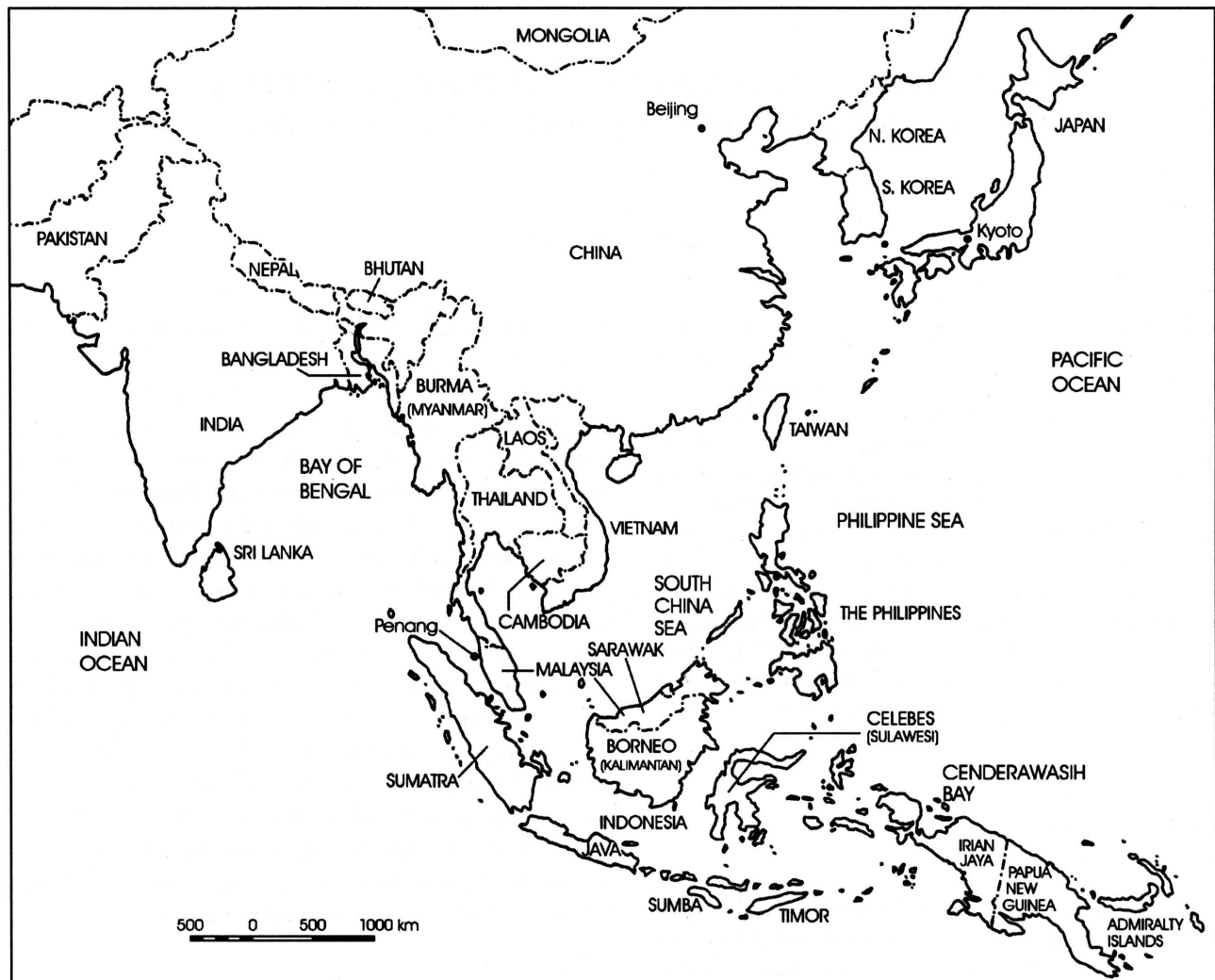


Figure 1. Map of Asia showing places mentioned in the text (drawing: Dorothea Kappler).

(1988); Dubin (1987); Francis (1992a, 1994); Holmgren and Spertus (1989); van Hout (1995); Liu (1995); Maxwell (1980); Maxwell (1990); Munan-Oettli (1983, 1989); Nooy-Palm (1969); Pastor-Roces (1991); Sibeth (1991); Solyom and Solyom (1984); Taylor and Aragon (1991); and Whittier and Whittier (1988). By contrast, mainland Southeast Asian and East Asian traditions have fared relatively poorly, perhaps because of their seemingly limited scope and inaccessibility to researchers. It is entirely possible that important, but little-known, reference works on Asian beadwork exist in various Asian languages.

Notwithstanding this dearth of written material, much can be learned by studying museum and private

collections which contain examples that are occasionally well documented as to date and place of manufacture or acquisition. Needless to say, a great many collections must be consulted before the scope of even one tradition can be comprehended in all of its aesthetic and technical complexity. Moreover, it bears remembering that every collection suffers from an inherent bias in that it contains "material the original owners/manufacturers were prepared to part with, for whatever reason," and consequently cannot be considered representative (Heidi Munan 1996: pers. comm.). While this kind of collections research is costly and time consuming, it yields insights that cannot be obtained in any other way. Rewarding results can also be gained from fieldwork, with close

study of a particular tradition in the context of daily life. The most comprehensive recent example is Herbert Whittier's (1973) study of the Kenyah Dayak peoples of Borneo. Whittier elucidates the intricate network of social relations and religious beliefs that are involved in the production of Kenyah baby carriers decorated with beads and beadwork. Of course, fieldwork can be undertaken only in cultures with ongoing, or not-yet-forgotten, beadworking traditions. With the inevitable push to modernize in so many formerly remote parts of Asia and the continual erosion of longstanding cultural values, traditional art forms like beadwork are rapidly becoming irrelevant. In the present study, I have drawn heavily upon the sources listed in the References Cited and tried to synthesize information from textile historians, bead specialists and anthropologists. Although I have examined hundreds of pieces in museums and private collections in the last ten years, I have not undertaken any fieldwork or investigated other arts besides beadwork. In some cases, my observations will undergo future correction or refinement.

Early Asian Beadwork

Thanks to the ravages of climate and use, the natural fiber threads used in many pieces of beadwork disintegrate quickly, leaving behind masses of individual beads with little clue as to their original order. Most surviving examples of Asian beadwork are no more than 200 years old. Consequently, the early history of Asian beadwork is not easily written. Archaeological evidence suggests that spectacular beadworking traditions may have existed thousands of years ago in Asia among the Harappan peoples who lived during the third and second millennia B.C. in the Indus River Valley of what is now Pakistan and Gujarat State, India. Thousands of tiny beads made of steatite paste, each measuring 1.0 mm in diameter by 1.0-3.0 mm in length, have been found in excavations of Harappan towns (Hegde, Karnath and Sychanthavong 1982:239). The Harappans also manufactured other types of stone beads. Unfortunately, it is impossible to know what kinds of compositions were formed with them, apart from the simple necklaces which are depicted on clay figurines of this era.

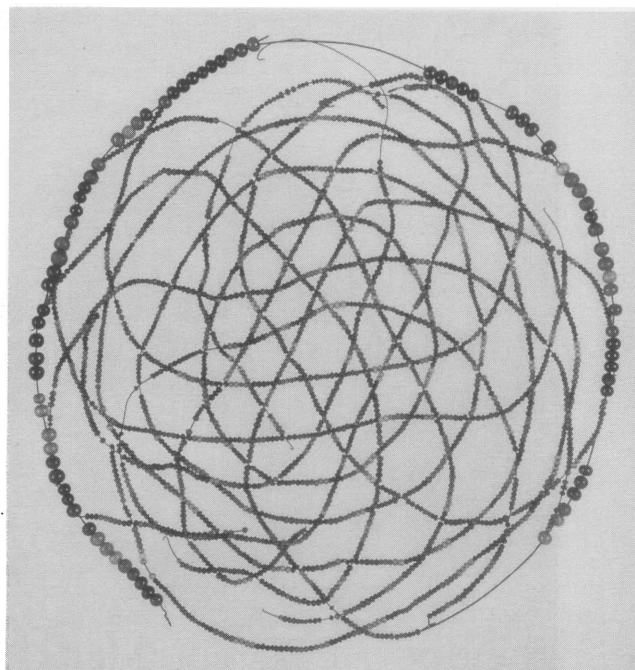


Figure 2. Flower basket, 8th century. Japanese glass beads, silver wire; 36 cm diameter. Courtesy of The Shōsō-in Treasure House, Nara, Japan (photo: Benrido Co. Ltd.).

Some of the earliest intact examples of Asian beadwork were made in Japan using durable silver wire and Japanese glass beads. Fascinating beaded baskets have been found in the Shōsō-in imperial storehouse on the grounds of the Todai-ji temple complex at Nara (Fig. 2; *see* Blair 1973:Pl. 89). Dating to the 8th century, these baskets were used by Buddhist monks during temple flower-scattering ceremonies (Blair 1973:383-384). Other singular artifacts have survived as well, including a braided belt with bead embellishment, also from the 8th century (Blair 1973:Pl. 5), an 11th-century lantern bearing blue glass beads in its niches (*see* Blair 1973:Pl. 13) and two bead-decorated pagoda-shaped containers (Blair 1973:134). Clearly, these few centuries gave rise to beadwork of surpassing beauty and diversity in Japan.

According to Peter Francis, Jr., the first "unequivocal literary reference to the art of beadwork" appears in the 13th-14th-century writings of the Indian poet Nam Dev:

Everything is Govinda
 Everything is Govinda
 There is nothing without Govinda



Figure 3. *Thangka*, showing the Buddhist deity Vajrantaka. China, Xixia empire, early 13th century. Silk slit-tapestry weave, inwoven pearls; 102.3 cm h. x 74 cm w. © The Cleveland Museum of Art, 1996, J.H. Wade Fund.

Just as there is one thread
 And on it are woven breadthwise and lengthwise
 Hundreds of thousands of beads
 So is everything woven unto the Lord
 (Francis 1981,6[6]:6, citing *Grantha Sahib* 2352).

In this potent metaphor, beadwork forms the very fabric of the universe, implicitly joining secular and sacred realms; a humble activity becomes a transcendent endeavor. No examples of these early panels seem to have survived, but if Nam Dev's bead count can be taken literally, they must have been quite large, measuring many feet across. Probably, they were composed of very small glass beads of Indian manufacture, connected in a technique that was already old in Nam Dev's day (Francis 1981,6[6]:6). Also by the 13th century, weavers in China were inserting tiny pearls into the ground of silk slit-tapestry-weave *thangka* panels depicting Buddhist religious figures (Fig. 3; see Reynolds 1995:Pl. 9). Beads were surely put to more prosaic uses as well in these early centuries, but the tendency to incorporate them into objects with overtly religious themes or functions cannot be ignored. As we shall see, this tendency continues in later centuries.

The Social, Economical and Spiritual Contexts of Asian Beadworking Traditions

We do not know when the early Asian beadworking traditions got underway or, indeed, whether some of them should be called "traditions" at all. We are on firmer ground when discussing traditions of the last century, ones which vary considerably in scope. Extensive traditions, with regional stylistic variations, flourished in some areas such as Gujarat State and Borneo (see Nanavati, Vora and Dhaky 1966:73-75). More limited traditions developed in southern Laos and northwest Myanmar where beadwork was used sparingly to decorate woven textiles. These variations may reflect cultural preferences for bead embellishment or access to suitable materials, or both. Whether large or small, each tradition comprises conventional types of articles worked in conventional motifs, colors, compositional formats, materials and techniques. Such homogeneity derives from culturally prescribed

rules of design and function which have prevailed for many centuries. According to customary belief, if these rules are not observed, an object may not properly fulfill its intended function (see Taylor and Aragon 1991:27 ff.). Still, we can often discern the subtly personal within the formulaic: in the fluidity with which a motif is rendered, or the care with which a technique is executed, or the striking manner in which colors or motifs are juxtaposed. Thus, no matter how closely tradition regulates appearance, there is always some potential for individual creative expression. A beadworker's talent, inclination and technical expertise determine to what extent this potential is realized.

Many Asian beadworking traditions were practiced by women who drew upon the same repertoire of designs that they used in other textile arts, such as barkcloth, embroidery, weaving and basketry. In a few cases, some beadwork was made by men (see Maxwell 1990:63; also Hamilton 1994:109) or by professional embroiderers (see Chee 1989:78; also Nanavati, Vora and Dhaky 1966:68). In most of the cultures under discussion, daily life was organized around the demands of agriculture, horticulture and animal husbandry. Beadwork was done in the quiet hours. Like other textiles that consumed large quantities of effort and expense, beadwork was often, but not exclusively, reserved for special ceremonial occasions when prosperity was celebrated, or protection from negative influences was requested, or reverence for beneficent spiritual forces was expressed. During these ceremonies, beadwork helped connect the world of man and the world of the gods or spirits. This generalization holds true whether Hindu, Buddhist, Islamic or animist beliefs influenced the production of the piece under consideration. The major principles of Hindu and Buddhist religions may not need rehearsing, but those of animism may be less familiar. Briefly, animism posits the belief that every entity in the universe possesses a soul which deserves respect (see Taylor and Aragon 1991:29).

Many animist religions also involved veneration of deities and ancestors who were believed to regulate events on earth. Although we cannot describe any of these in depth, various animist worldviews permeated the cultures of the Naga, Chin, Alak, Toraja, Dayak, south Sumatran, Sumbanese and Cenderawasih Bay

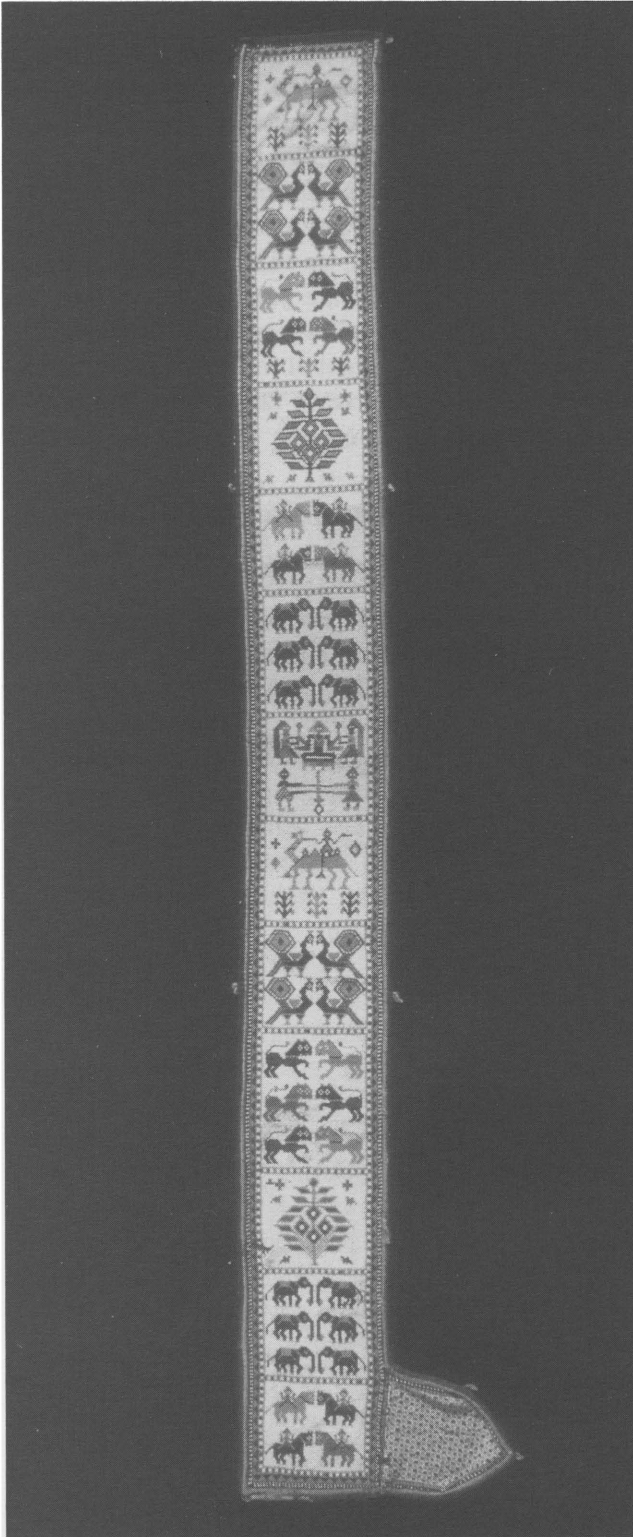


Figure 4. Vertical door panel (fragment), Kathi peoples, Saurashtra region, Gujarat State, ca. 1900. European glass beads, cotton; 182 cm h. x 36 cm w. Private collection (photo: Chris Cassidy).

peoples whose beadwork is discussed herein. In addition to its role in the spiritual realm, beadwork simultaneously served a more secular purpose by advertising the owner's prosperity, social status and group affiliation. In many Asian cultures, ownership of beads and beadwork affirmed a level of social and economic success beyond the reach of the poor. In several respects, then, the examples pictured in this article should be viewed as "small pieces of vast symbolic worlds" that cannot be adequately understood apart from the contexts in which they were created (*see* Rodgers 1985:21; *also* Maxwell 1990:63-66; Schneider and Weiner 1989:4-10). Only the barest details of these spiritual, social and economic contexts are touched upon in this article.

Typically, when not in use, pieces of beadwork lay stored away in quiet, dark places; such periods of rest might enable them to survive a century or more. From time to time, repairs or alterations might have been necessary. The upper left corner of the dance apron in Pl. IA, for instance, was obviously restored at some point. Less kindly, the vertical portion of the *sakhia* in Fig. 4 was cut horizontally into two pieces, possibly to reduce its size. Eventually, as natural fiber threads began to disintegrate, some pieces might have been taken apart and reconstructed (*see* Nooy-Palm 1975:36). Thus, the same set of beads could have been used in several consecutive editions of the same type of piece over the course of several centuries. Alternatively, an entirely different piece may have been fashioned with the old piece serving as a guide, other beads being incorporated as needed. In this way, traditional designs, techniques and materials were perpetuated from one generation to the next with subtle changes being introduced along the way. In some cultures, preserving traditional ways of doing things honors the ancestors, deities or spirits who were believed to have initiated these ways generations ago.

Beadworking Materials

Of course, only beads made of sturdy materials such as glass, stone and metal could survive repeated wear. By contrast, beads made of certain plant materials might begin to fragment after only a few decades. Fragile and desiccated, the tubular bamboo



Figure 5. Vest, China, late 19th century. Bamboo beads, linen, cotton; 55 cm h. x 45 cm w. Private collection (photo: Chris Cassidy).

beads on the vest in Fig. 5 split easily when pressed between the fingers. Despite their perishability, a great many other plant materials appear in any inventory of the beads used in Asian beadwork. These range from orchid stems to cloves or other dried flower buds, and seeds such as Job's tears (*Coix Lacryma-Jobi*) as well as various fruit pits (see Loebèr 1913:8-13). More durable beads of various modified animal substances also occur regularly in Asian beadwork, especially beads of bone (Pl. IB) and shell (Pl. IIA), which often had to be shaped and drilled

with simple tools. Long before the process of beading began, countless hours were expended in the manufacture of the 3 mm x 0.5 mm mother-of-pearl discs that adorn the B'laan blouse in Figs. 6-7 (see Pastor-Roces 1991:104 ff. and Pls. 69-70, 153-159; also Maxwell 1990:Fig. 83). Similar disc beads have been produced in Asia for more than 10,000 years, since beadmakers in India first learned to make them from ostrich eggshell (Francis 1988:102). Indeed, some of the earliest examples of Asian beadwork may have featured shell-disc beads. In contrast to beads



Figure 6. Blouse, B'laan, southern Mindanao, Philippines, ca. 1920. Mother-of-pearl-disc beads, cotton; 34 cm h. x 113 cm w. Private collection (photo: Eileen Ryan).

made of other materials, one rarely encounters metal beads in Asian beadwork. Their conspicuous absence might relate to prohibitive weight, cost or size factors.

The emergence of glass as a beadmaking material in China and India around 1000 B.C. (see Francis 1988:106; Francis 1990:119) led to new possibilities for beadwork, especially in the area of color. Over the centuries, as technology improved, major manufacturing industries got underway and eventually exported their products to other parts of Asia and the world. Peter Francis, Jr., has studied these industries and their products in great depth (e.g., Francis 1982, 1988, 1990, 1992a-d). Francis identifies two major types of Asian glass beads measuring 5 mm or less in diameter which are relevant to our discussion as they can be found in extant examples of Asian beadwork:

"Indo-Pacific" beads and "coil" beads (see Francis 1992a:Pl. 4A; also Adhyatman and Arifin 1993:Pl. 77). Indo-Pacific beads probably originated with Tamil Indians at Arikamedu in southeastern India during the 3rd century B.C. or earlier (Francis 1992d). These beads were fashioned from drawn glass tubes in a variety of sizes and monochromatic colors (Francis 1990:8 ff.; see also Adhyatman and Arifin 1993:Pls. 37-39). In time, Indo-Pacific beads were manufactured not only in South Asia, but also at sites in mainland and island Southeast Asia (Francis 1990). Until the 13th century, "Indo-Pacific beads were *the* trade bead of the ancient world" (Francis 1990:20), being exchanged for all kinds of products and services. Indo-Pacific beads have apparently embellished objects for about two millennia; bronze

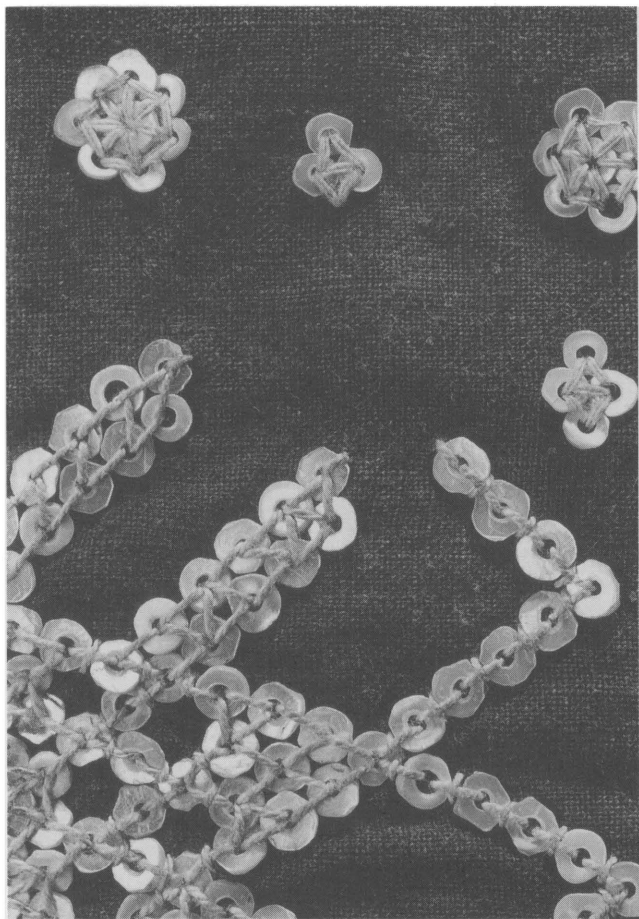


Figure 7. Detail of the beadwork on the B'laan blouse shown in Fig. 6 (photo: Eileen Ryan).

objects found in Dongson-era (200 B.C.-A.D. 200) archaeological contexts in Indonesia still have such glass beads adhering to their surfaces (Thomas Murray and Frank Wiggers 1996: pers. comm.; *see also* Shirley Day Ltd. 1993). As we shall see, both the Naga belt in Pl. IB and the south Sumatran mat in Pl. IIB contain beads that may have come from the Indo-Pacific beadmaking tradition.

"Coil" beads, formed by winding molten glass around a mandrel (*see* Francis 1992a:2), constitute a second major type of Asian glass bead (*see* Francis 1992a:Pls. 3B, 4A). While some may have been made in northern India (Peter Francis, Jr. 1996: pers. comm.), others were made in China, as well as by Chinese beadworkers outside of China (Francis 1990:123), possibly as early as the 10th century (Francis 1992c:11). Monochromatic and typically fairly irregular, Chinese coil beads were produced in

one-, two- and three-twist varieties, all generally distinguished by a significant lead content (Francis 1990:123). Large-scale exportation of Chinese coil beads to Korea, Malaysia, Sumatra, Borneo, the Philippines and elsewhere was under way by the 12th century (Francis 1992c:11-12); *see also* Francis 1990:122). At about this same time, parts of the Indo-Pacific beadmaking empire began to collapse. In the resulting vacuum, coil beads flourished from the 12th to the 17th century, but eventually declined in popularity, though some are still made today (Francis 1992c:12). Older examples of Southeast Asian beadwork may contain Chinese coil beads, sometimes mixed with European and Indo-Pacific glass beads (Pls. IIB, IIIA-B). Rarely, coil beads appear exclusively, as on an old fragmented *kandaure* in the Tropenmuseum collection (personal observation: cat. no. 3733-1; *see also* cat. no. 3865-25, and Rijksmuseum voor Volkenkunde [RVV] cat. no. 2107/13). *Kandaure* are large conical beadwork ornaments created for ritual display and wear by the Sa'dan Toraja peoples of Sulawesi. Given the range of dates for Chinese coil beads, it is reasonable to postulate that the Toraja's glass beadworking tradition commenced some centuries ago.

Compared to Indo-Pacific and Chinese coil beads, European glass beads arrived late in Asia. They did not begin to dominate in the Asian maritime bead trade until the late 19th or early 20th century (Peter Francis, Jr. 1996: pers. comm.). It seems to be the case, however, that at least by the 1830s, if not before, European drawn-glass beads occasionally found their way into beadwork produced in parts of Indonesia. For example, the RVV has a beadwork belt collected in the Lesser Sundas region in 1837, which appears to have European drawn-glass beads 3-4 mm in diameter on it (pers. obs.: cat. no. 1/155; *see also* cat. no. 1/158). By about 1865, as we shall see, European drawn-glass beads were surfacing in beadwork made in western India, albeit in smaller sizes and more vivid colors. Judging by the sheer volume of pieces produced with them in the late 19th and early 20th centuries, European drawn-glass beads inspired many Asian beadworkers. Because of these beads, new saturated colors entered the repertoire, such as deep pinks, rosy reds and subtle purples. With this magnificent rainbow of colors, beadworkers achieved new effects, such as the delicate shading of foliage

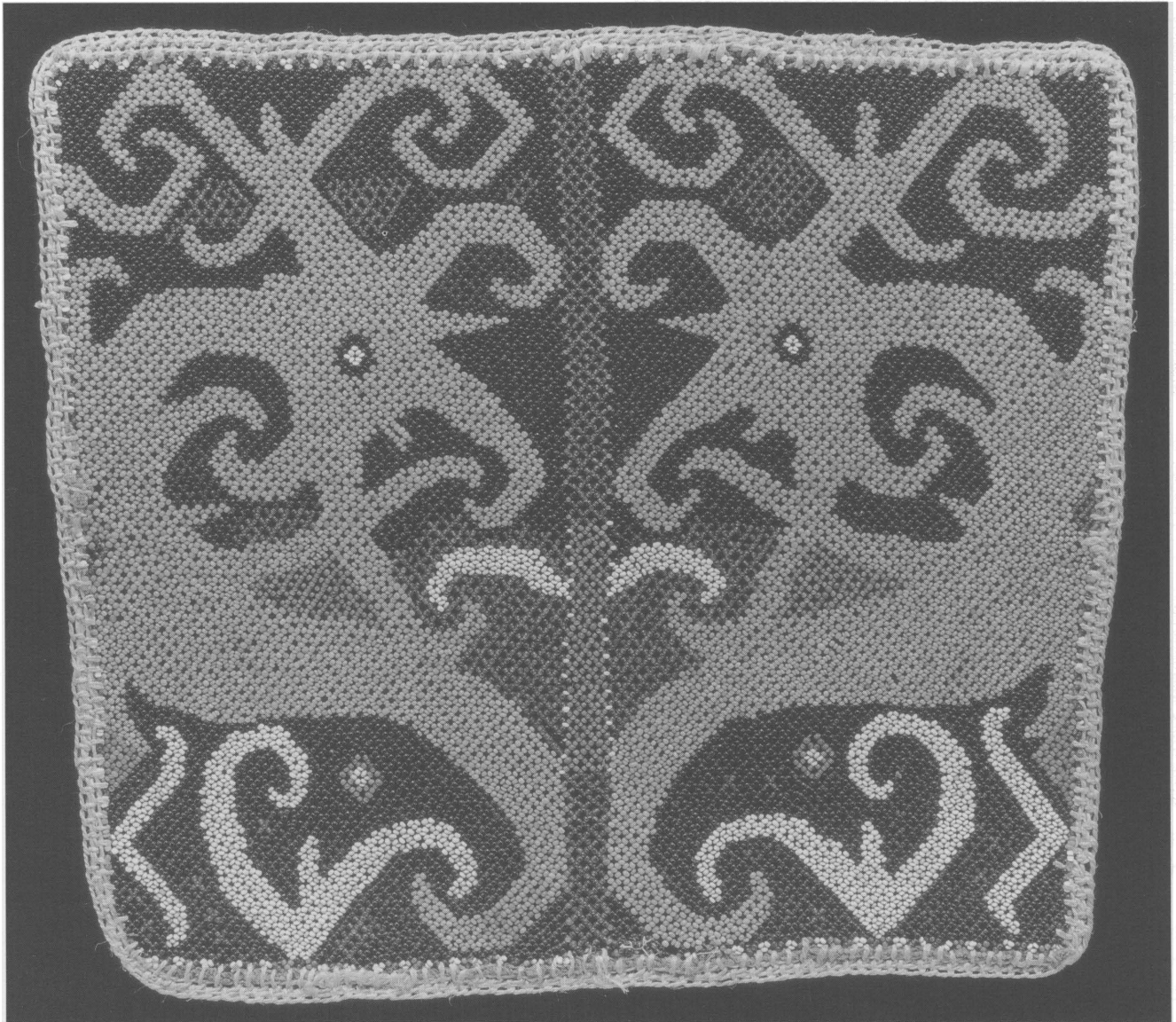


Figure 8. Beadwork panel from a baby carrier, Kenyah Dayak, Borneo, ca. 1900. Glass beads, pineapple-fiber thread; 21.5 cm h. x 25.5 cm w. Private collection (photo: Don Tuttle).

(see Pl. IVB). Also, because they could be obtained in very small, uniformly graded sizes, European beads made possible the production of exceedingly fine beadwork with precise delineation of curvilinear forms (Fig. 8). In addition, faceted varieties lent new shimmer to compositions in which they were used (Pls. IVA-B).

With notable exceptions—such as the silver-wire threads used in 8th-century Japan—beads in Asia have for millennia been strung on threads culled from animal or, more commonly, vegetable materials. Just

producing these threads necessitated great labor. Where weaving traditions existed, beadworkers might appropriate the same hand-spun cotton threads that were used in cloth. In the case of the Dayak peoples of Borneo, on the other hand, while a few beadworkers used handmade cotton threads, most individuals used threads scraped from pineapple-tree leaves, or creepers (see Tillema 1989:Pls. 150-151). These threads could be made fine and stiff enough to pass twice through beads as small as 1.5 mm in diameter without the use of a needle. While needles were not

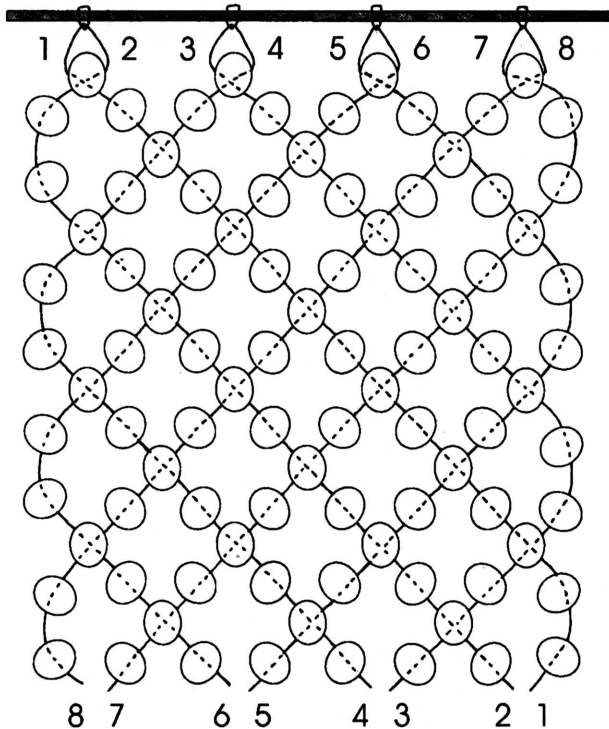


Figure 9. Multiple diagonal-thread weave that yields a diamond-like pattern, with connections formed through the beads (*see Pl. IVB*) (this and all the diagrams that follow were prepared by Alice Scherer of the Center for the Study of Beadwork, Portland, Oregon).

necessary for weaving beads of any size with such stiff thread, such threads could not pierce cloth (Munan 1989:60). Long before European steel needles were introduced, needles of bone, thorn, horn and shell were used for beadwork in many areas. Even after commercial, mercerized cotton threads began to appear in Asia in the second half of the 19th century, given a choice, most Asian beadworkers apparently continued to use their own indigenous threading materials.

Beadworking Techniques

Little that is definitive has been written about Asian beadworking techniques. Some writers provide verbal accounts of marginal value (*see* Nanavati, Vora and Dhaky 1966:76-77). Others include excellent diagrams, showing techniques used in specific traditions: Blair (1973:Fig. 68); Bolland (1980:301); Dunsmore (1978:11 ff.); Ho (1987:49 ff.); Lemaire (1953, 1960); Munan-Oettli (1983); Nooy-Palm (1975:35). The writings of Lemaire must be singled out for their great accuracy and scope. Even taken together, these studies form an incomplete survey. At least part of the problem lies in the potentially destructive nature of technical analysis: as so few

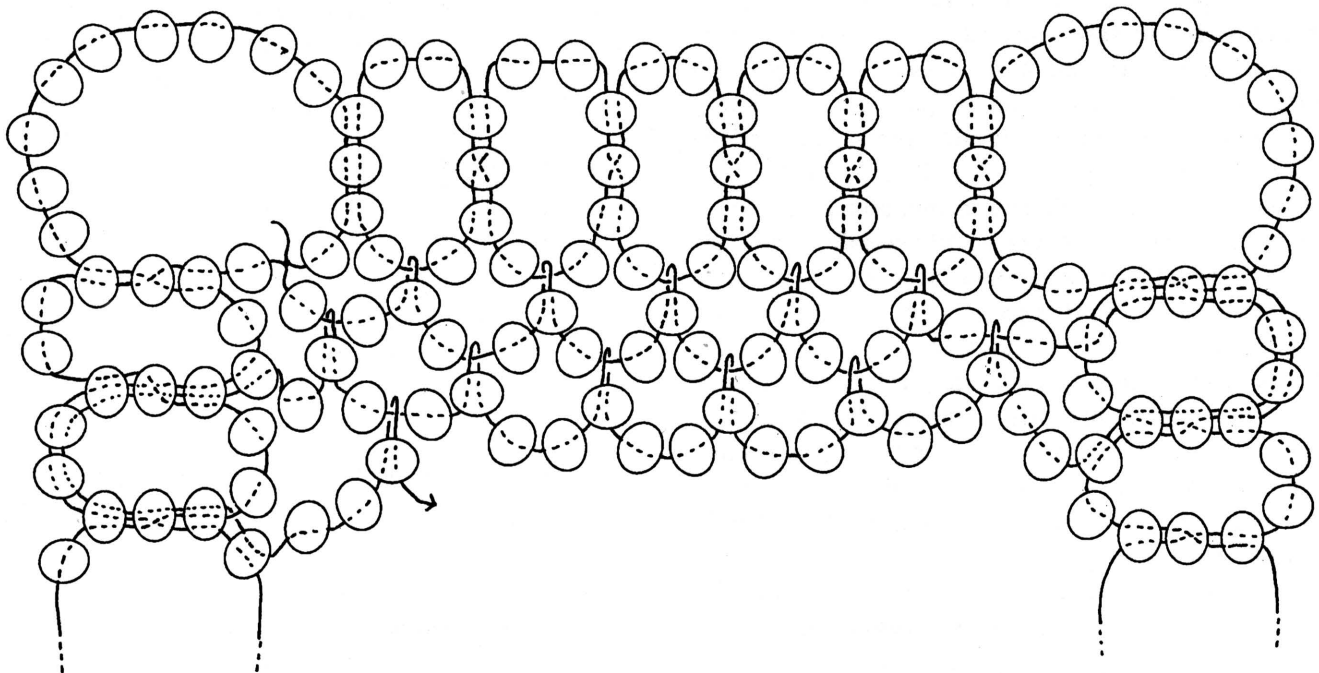


Figure 10. Continuous horizontal-thread weave, with connections formed by threads passing through the beads and over threads in the preceding row (*see Fig. 4*).

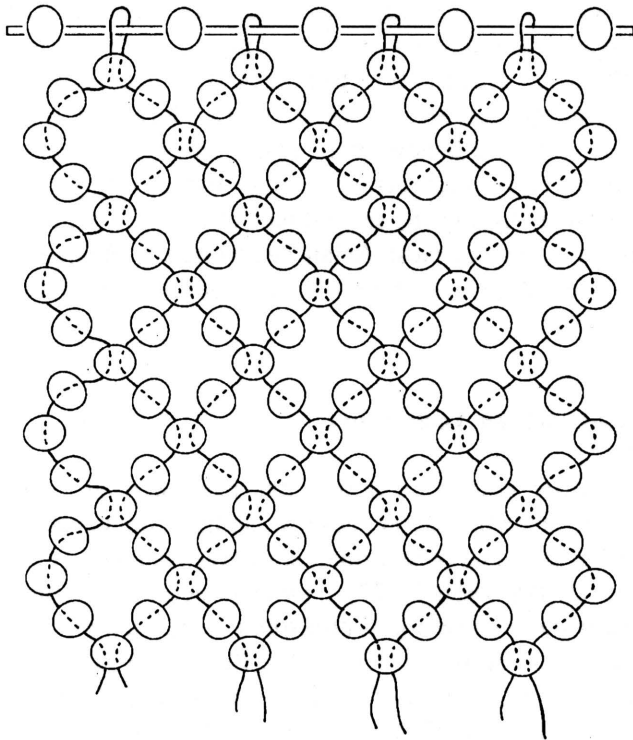


Figure 11a. Multiple vertical-thread weave, open variation, that yields a diamond-like pattern, with connections formed through the beads (see Pl. IIIA, cover).

pieces can be studied in progress, finished pieces must be cut apart or otherwise unravelled to ascertain thread structure (see Orchard 1975:104-106). This kind of careful examination is essential, especially with more complicated techniques, as completely different underlying thread structures can produce very similar bead patterns (cf. Figs. 9-11a). Much remains to be accomplished in this arena. To begin with, we might inquire how widely certain techniques are distributed in Asia and how closely they resemble techniques used in other parts of the world. Because so many beadworking techniques are based on, or related to, textile techniques, and because some techniques may have spread from one area to another due to trade or movements of peoples, we can expect considerable overlap across the continents. Indeed, some of the techniques diagrammed in this article (and variations thereof) have also been used by North, Central and South American Indians, among others (see Orchard 1975:esp. Figs. 107, 116, 118, 199, 123, 125).

Most scholars agree that beadworking techniques in general can be divided into two broad categories

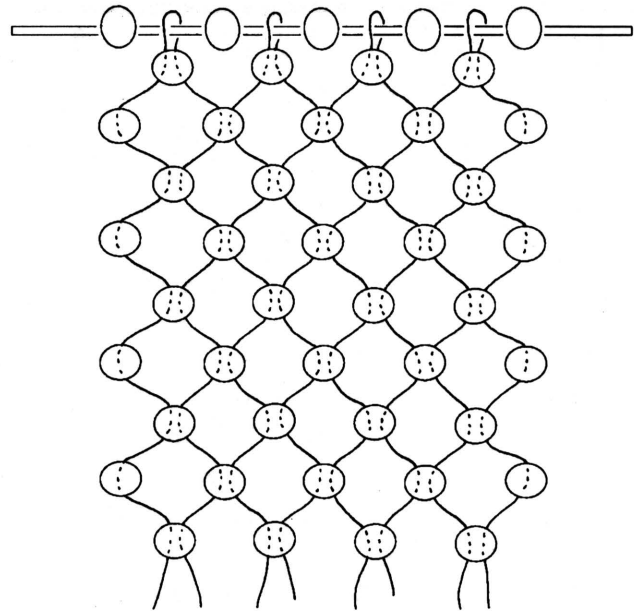


Figure 11b. Multiple vertical-thread weave, closed variation, that yields a brick-like pattern, with connections formed through the beads (see strap of bag, cover).

(see Lemaire 1960:215; also Seiler-Baldinger 1994:114). The first category encompasses techniques in which the beads are affixed to a ground of cloth or other material, by the appliqué methods of sewing or couching (Figs. 12a-c; see also Pls. IIA-B, IVA), or by pressing beads into a malleable compound such as resin or wax (see Francis 1981,6(4):6; also Indonesisch Ethnografisch Museum 1973:Fig. 103;

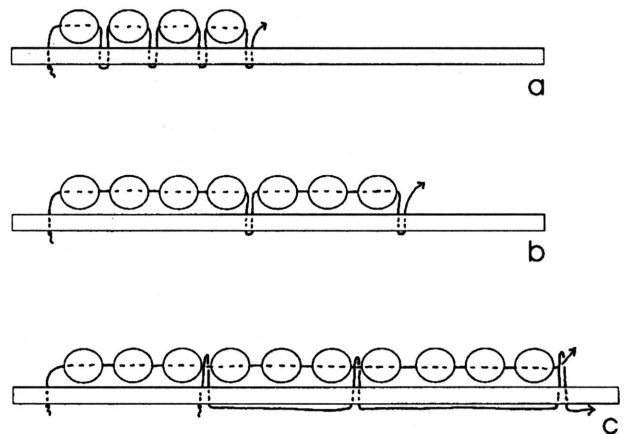


Figure 12. Appliqué method: a, involving beads sewn individually to a ground material (see Pl. IVA); b, involving beads sewn in small groups to a ground material (see Pl. IIA); c, involving the couching of strung beads to a ground material (see Pl. IIB).

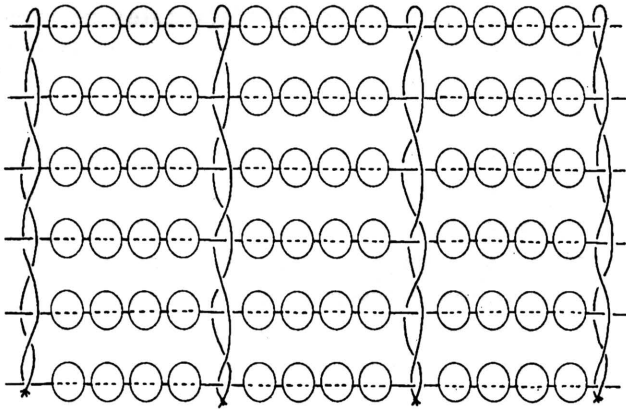


Figure 13. Weave involving twined vertical threads looping over bead-bearing horizontal threads (see Pl. IB).

Jacobs 1990:229). In the second category, the beads themselves, in combination with threads, form the ground so that no cloth or other supporting material is needed (Figs. 4-5, 9-11a-b, 13-17; see also Pls. IA-B, IIIA-B, IVB, cover, back cover). The second category is far more complex and systematizing it has evidently proven difficult for the one scholar who has made the admirable attempt (see Seiler-Baldinger

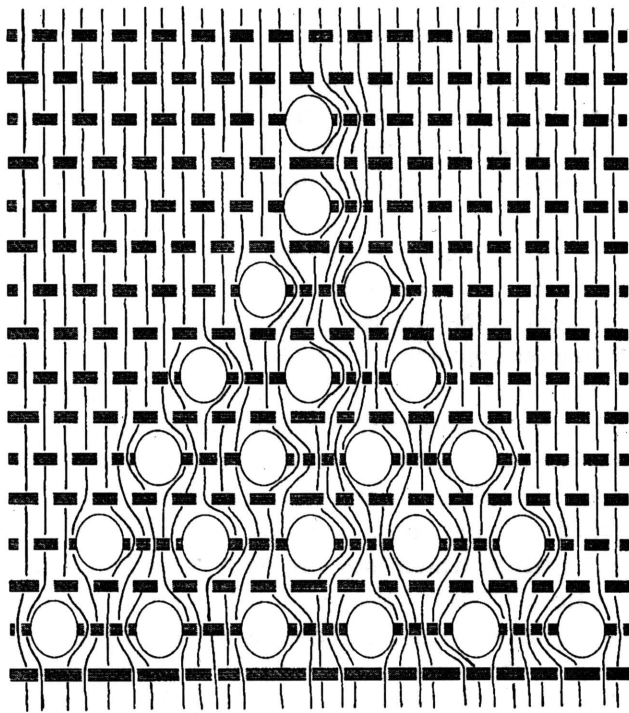


Figure 14. Diagram of beads strung on weft threads and secured between warp threads in the plainweave portion of a loincloth (see back cover).

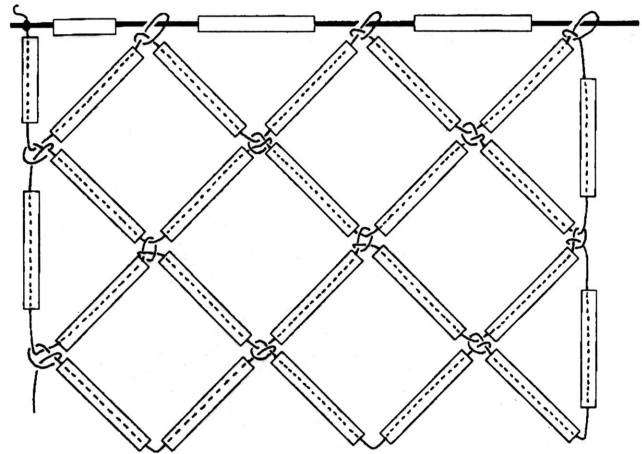


Figure 15. Horizontal-thread weave that yields a diamond-like pattern, with connections formed by knots (see Fig. 5).

1994:114-121). For the introductory purposes of this article, and with the cautionary note that this is a gross generalization, I will call all of the techniques in this second category "weaves." There are various kinds of weaves which can progress with or without looms or other supporting devices. Some weaves involve beads connected by a single, continuous, horizontally

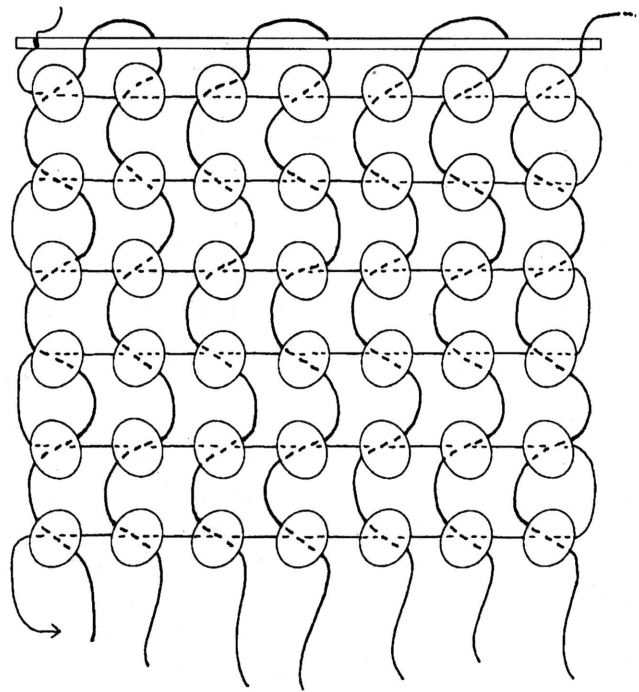


Figure 16. Weave that uses warp and weft threads, and inclines beads at 45° angles in a herringbone-like pattern, with connections formed through the beads (see Pl. IIIB).

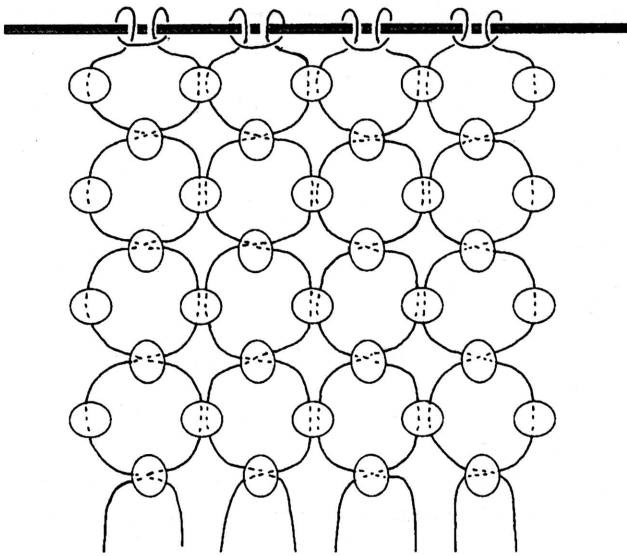


Figure 17. Multiple vertical-thread weave that inclines beads at 90° angles, with connections formed through the beads (see Pl. IA).

moving weft-like thread (Figs. 10, 15). Others entail multiple, discontinuous, vertically or diagonally moving warp-like threads (Figs. 9, 11a-b, 17). Still others require both warp or warp-like threads and weft or weft-like threads (Figs. 13-14, 16). I have intentionally avoided using colloquial names for these weaves because they are notoriously inconsistent (see Seiler-Baldinger 1994:114-121). Sometimes, the two categories outlined above overlap in a single piece. This occurs, for example, when areas of woven beadwork are attached to a ground material, whether for support or for decorative effect, or both (see Fig. 4; Pls. IIB, IIIB, IVB; also Holmgren and Spertus 1989:Pls. 1-3; Maxwell 1990:Pls. 200-203).

The diagrams that accompany this article are not exhaustive, but they do represent many of the techniques most frequently encountered in 19th- and 20th-century examples of South, Southeast and East Asian beadwork. Although several techniques are known and used in most cultures, a single technique usually takes precedence during a given period of time, but there are exceptions to this rule, as in the traditions of the Straits Chinese, for example. While most pieces are constructed using just one technique, there are pieces worked in two or even three

techniques. Each technique facilitates certain aesthetic effects and limits others. As suggested earlier, skilled beadworkers can manipulate such variables to their advantage, and develop subtle nuances of color and form by altering bead spacing and thread tension. For example, comparing the pieces shown in Pls. IIB and IVA, it becomes apparent that a single technique—appliqué—can yield very different aesthetic effects. In the former piece, beads are sewn to the ground material individually, tightly and densely, as if precision and perfection matter (Fig. 12a). In the latter piece, beads are attached more casually and loosely, in groups of three or more, almost as if the sheer physical presence of the beads, in a bold arrangement, signifies much (Fig. 12c). Moreover, bead grading also affects the appearance of a piece. During the grading process, the beadworker painstakingly sorts through the beads, selecting for use only those that meet specific size or shape requirements. While beads of uniform size and shape create one effect, irregular beads create another. Occasionally, function may dictate technique. For example, air circulates easily in the open spaces of the bamboo-bead vest in Fig. 5, a garment specifically designed to provide ventilation.

To gauge the relative degree of physical effort invested in the manufacture of various pieces of beadwork, and to understand their structure, we need two uniform measurements that are independent of the size of the piece being considered (see Ho 1987:47). These measurements are provided in Table 1. In the first place, we need to measure bead density, expressed as the average number of beads per square centimeter (b/cm^2). Two factors determine bead density: bead size and beadwork technique. Density varies greatly from one tradition to the next and within individual traditions, but some generalizations can be made. The Straits Chinese, for example, routinely worked near the upper limits of maximum potential bead density, which may run as high as $246 b/cm^2$ (see Ho 1987:54). Composed of beads 1.25-1.5 mm in diameter which are united in the weave diagrammed in Fig. 9, the wedding bed panel in Pl. IVB contains an average of $183 b/cm^2$, not including the tassels. In comparison, the peoples of Nagaland typically worked in the medium to lower ranges of bead density. Using beads 3-4 mm in diameter and the twined

Table 1.
Estimates of Average Bead Size, Density and Quantity for Selected Beadworked Objects.

Object Description	Geographical Origin of Object	Figure/Plate No.	Average Bead Diameter in Millimeters	Approximate Total Area of Beadwork in Square Centimeters*	Average No. of Beads per cm ²	Average No. of Connections per cm ²	Average No. of Beads per Connection	Total Beads United in Object
Door Panel	Gujarat State, India	Fig. 4	2	1,272	81	27	3	103,032
Belt	Nagaland (India)	Pl. IB	3 - 4	355	15	2	7.5	5,325
Blouse	N.W. Myanmar	Pl. IIA	2	358	42.5	17	2.5	15,215
Loincloth	S. Laos	Back Cover	2	437	24.5	24.5	1	10,707
Vest	China	Fig. 5	1.5 (x 5.5 l.)	1,460	17	8.5	2	24,820
Panel	China	Pl. IVA	1.5 - 1.7	305	179	179	1	54,595
Wedding Bed Panel	Penang, Malaysia	Pl. IVB	1.25 - 1.5	965**	183	61	3	176,595
Mat	Lampung, S. Sumatra	Pl. IIB	2 - 5	152***	29	7.25 - 9.6	3 - 4	4,408
Dance Apron	S.C. Sulawesi	Pl. IIIA	2.5 - 4	213**	38	12.6	3	8,094
Betel Bag	S.E. Sumba	Front Cover	2.5 - 3.5	619**	30	10	3	18,570
Vest	W. Kalimantan (Indon. Borneo)	Pl. IIIB	3.5 - 4	637	38	38	1	24,206
Dance Apron	Cenderawasih Bay, Irian Jaya	Pl. IA	3 - 4	459	24	24	1	11,016

* Measuring beaded portions only, and including both front and back sides when necessary.

** Not including tassels and/or straps.

*** Due to the presence of repairs/restorations, all figures provided for this specimen must be regarded with caution.

interconnection of single strands diagrammed in Fig. 13, the Naga assembled an average of only 15 b/cm² in the belt shown in Pl. IB. The Kathi peoples of Gujarat State worked in the medium ranges of potential bead density, typically in the neighborhood of 81 b/cm². In some cases, when beadwork covers only a small portion of a piece (Pls. IIA, back cover), b/cm² can be measured for the entire piece or for the beaded portions only. As indicated, Table 1 provides b/cm² for the beaded portions alone, and takes into account both front and back sides of a piece, when necessary (Fig. 5; Pls. IIA, IIIB, cover).

Another important measure of effort expended, which also varies with bead size and beadwork technique, lies in the number of connections per square centimeter (c/cm²). Connections occur when threads pass around other threads (Fig. 15) or through beads (Fig. 9), or both (Fig. 10). While some

techniques progress slowly, attaching only one bead per connection, others attach more, thereby allowing the work to progress more quickly. For example, it is instructive to contrast b/cm² and c/cm² for the panels in Pls. IVA-B. Similar bead sizes were used in both pieces and similar b/cm². Yet the panel in Pl. IVA arguably required greater labor per square centimeter because every bead is connected individually instead of in groups of three as in the other panel. As a general rule, leaving aside various subtle issues such as whether the thread was purchased ready-made or produced from scratch, pieces with the highest b/cm² and the highest c/cm² demanded the greatest effort and expertise. It is difficult to avoid the conclusion that preferences for extremely labor-intensive beadwork compositions sprang from fundamental aesthetic assumptions, according to which beauty or value emerged in part from painstaking effort.

SOUTH ASIAN BEADWORK

India: Gujarat State

One of the earliest extant pieces of west Indian beadwork manifests the same tendency to grand scale noted in Nam Dev's metaphor. Measuring more than five by eight feet (1.72 m x 2.62 m), the opulent "Pearl Carpet of Baroda" features cabochon diamonds, emeralds and rubies set against a ground of white seed pearls and colorful European glass beads, all densely embroidered onto a deerskin panel by court jewelers (Welch 1985:437-438). Commissioned by the Maharaja Gaekwar Kande Rao of the city of Baroda in Gujarat State about 1865, the pearl carpet was supposedly part of a set of four which were to have been sent in honor of Baroda's Muslim peoples to the tomb of Mohammed in Mecca. The carpet accordingly displays a classical Islamic-design format with floral and arabesque motifs laid out in gracious formal patterns, recalling the fabulous decorations of the Taj Mahal (Welch 1985:437-438). In adherence to Islamic law, no living creatures are depicted. For mysterious reasons, this carpet seems never to have made it to Mecca (Welch 1985:437-438).

The few glass beads that appear in the Pearl Carpet of Baroda herald the dawn of a new era in Indian beadwork. In the late 19th century, India began to import glass beads in earnest because the domestic glass-beadmaking industry was once again in decline. By 1880, 1.8 million pounds of glass beads had arrived, mostly from Venice (Francis 1982:6). Port cities on India's west coast received numerous shipments (Nanavati, Vora and Dhaky 1966:65) which apparently spurred the production of pieces worked solely in glass beads. Within a few decades, an extensive tradition had developed in Gujarat State, nourished in large part by traditional Hindu religious iconography. For centuries, this region had produced and exported to other parts of Asia some of India's most renowned woven and embroidered textiles which provided ample reservoirs of motif, composition and theme. Thus, Europe's vast quantities of uniform, colorful glass beads poured into skilled and talented hands.

Made around 1890, the *sakhia* fragment shown in Fig. 4 manifests the typical characteristics of many pieces produced in this tradition. To begin with, it

was made to decorate the home (*see* Nabholz-Kartaschoff 1986:171, Pl. 16; *also* Nanavati, Vora and Dhaky 1966:81-88). About 1.82 m long, such monumental architectural ornaments were customarily displayed in pairs, one on either side of the door, to welcome visitors to the home on festive occasions (Irwin and Hall 1973:83), and to prevent maleficent influences from crossing the threshold (Rivers 1996:87). Next, the *sakhia* is characteristically pictorial. The inspiration for such long, narrow, pictorial beadwork panels and their embroidered predecessors may derive from sculptural stonework friezes on Hindu and Jain temples in the Gujarat region (Irwin and Hall 1973:83). In a sense, the panels reproduce the atmosphere of the temple in the home. Like many pieces of Gujarati beadwork, the *sakhia* freely juxtaposes elements from sacred and secular worlds without binding them together into a coherent narrative. The universe that is thereby constructed seems benevolent: deities from the Hindu pantheon take their place alongside characters from well-known folk tales, vignettes drawn from everyday life, and nature's flora and fauna (Nanavati, Vora and Dhaky 1966:83, 89-98). Geometric designs also abound in this tradition as demonstrated by the pendant tab at the bottom of the *sakhia* and the carefully delineated borders (Nanavati, Vora and Dhaky 1966:98-100).

Such borders contribute to the formal division of space that also distinguishes many pieces of Gujarati beadwork (Nanavati, Vora and Dhaky 1966:Pls. 80-111). Within these borders or frames, individual motifs are themselves carefully placed, whether singly or in symmetrical groups. Larger structures emerge as the density of these motifs varies from frame to frame and open areas alternate with crowded ones. All motifs take shape against a stark white background which adds to the sense of formality. It is possible that the ubiquitous appearance of white backgrounds in Gujarati beadwork stems from a desire to emulate seed pearls. Such was the fame of the Pearl Carpet of Baroda in its day that, in this respect, it may have served as a model. It should be noted, however, that the cotton grounds of Gujarati embroideries are sometimes white, as are the walls of many Gujarati homes, and these may also have influenced the color preferences of local beadworkers. Still yet another, more practical, explanation can be imagined: if white

outnumbered the other available bead colors, it would have made sense to fill large spaces with white beads.

Considering the masterful presentation of its subject matter, the *sakhia* in Fig. 4 could have been the work of professional embroiderers, commissioned by Kathi peoples in the rural Saurashtra region of Gujarat State to produce items for a bride's dowry (see Nanavati, Vora and Dhaky 1966:19, 68; also Irwin and Hall 1973:73 ff., 83-84). It must have taken months to unite the *sakhia*'s 103,000 2-mm-diameter beads at the rate of 81 b/cm² in the continuous horizontal-thread weave that is so common in this tradition which typically attaches three beads per connection (Fig. 10; see Lemaire 1960:Figs. 12-13). As wealthy members of the land-owning nobility, the Kathi could afford such displays of prosperity. Kathi families eventually amassed many types of two- and three-dimensional beaded objects such as fans, gaming boards, pillows, rose-water bottles and inkwells (Nanavati, Vora and Dhaky 1966:81-88). Many of these were produced not by professional embroiderers, but by Kathi women and girls participating in the new craze for all things beaded which apparently continued until the 1930s. During the festival season from October to March, an entire room of a Kathi house would be devoted to the exhibition of beadwork and other luxury items (Nanavati, Vora and Dhaky 1966:81-87).

With its prominent depictions of animals normally associated with wealth and nobility (e.g., elephants, peacocks, lions and horses), the *sakhia* proclaims Kathi prosperity and social status. At the same time, the presence of the Hindu goddess Mahalakshmi in the seventh frame from the bottom, just below eye-level, registers Kathi respect for the divine forces that govern human affairs (Fig. 18). Mahalakshmi is the goddess of transcendent fortune or destiny (Danielou 1991:262), and a favorite deity in Gujarati textile art (Nanavati, Vora and Dhaky 1966:89). Seated on her lotus flower pedestal, accompanied by two attendants, she blesses her devotees with fertility, abundance and domestic happiness. Just below her, in a common domestic activity, two figures churn curd. Implicitly, the *sakhia* solicits the deity's continuing benevolence so that the family and home will always prosper. Perhaps only these two interrelated desires—to celebrate worldly success on the one hand and to venerate the forces that bestow it on the other—could

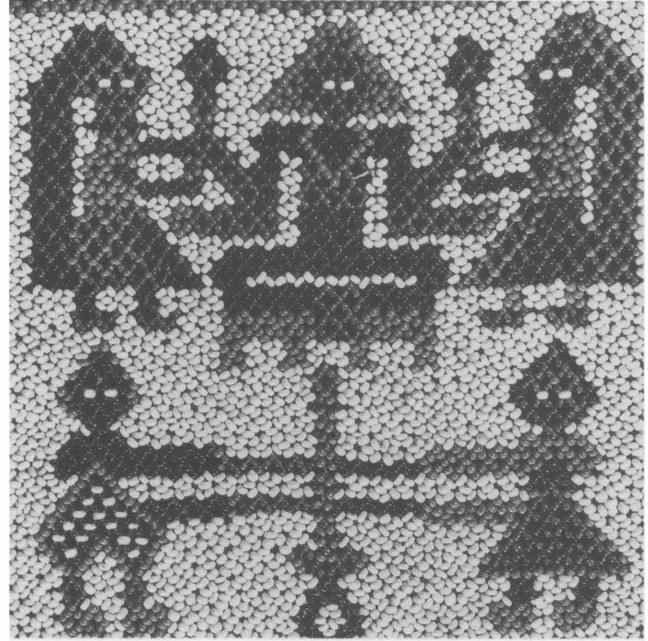


Figure 18. Detail of the *sakhia* fragment, showing the Hindu goddess Mahalakshmi with attendants. Area of detail: 12 cm² (photo: Eileen Ryan).

propel the undertaking of beadwork on such a grand scale.

Nagaland: The Konyak Naga

In its near-total absence of figuration and its usual appearance in items of bodily rather than architectural adornment, the beadwork of the Naga peoples, who inhabit the Nagaland tribal territory of northeastern India and neighboring parts of Myanmar, stands in sharp contrast to that of the Kathi peoples of Saurashtra. On some Naga multi-strand ornaments, the bead materials differ as well. While the Kathi worked almost exclusively with recently imported European drawn-glass beads, the Naga combined these with Asian glass beads and other elements, both local and imported. In this respect, the belt in Pl. IB typifies many Naga multi-strand adornments. Locally made elements may include the rectangular, incised mammal-bone spacers, such as the ones separating the strands at either end of the belt, as well as one of the three antler(?) buttons that serve to fasten the object (Peter Francis, Jr. 1996: pers. comm.). Elements traded into the Naga region include the belt's glass beads which can be divided into three groups. The

most numerous are the irregular, drawn, reddish-brown tubes 3-4 mm in diameter which may be a type of *deo mani* (God's beads) made in Papanaidupet, southern India, in the 13th century or earlier (Peter Francis, Jr. 1996: pers. comm.). Second, there are wound blue beads of the same size which appear in the belt's vertical stripes, and may have been made in China or northern India (Peter Francis, Jr. 1996: pers. comm.). Finally, there are European drawn-glass beads produced before the 1920s, such as the transparent-ruby-on-white coralline d'Aleppos in the belt's central stripe, and white specimens with green, blue, and pink stripes. Also present are translucent white beads cased in a thin layer of clear glass which were not produced after about the 1870s (Peter Francis, Jr. 1996: pers. comm.). Thus, the belt reflects the large-scale trading networks in which the Naga participated, as well as these peoples' long-standing appreciation of imported glass beads.

Also evident is the ability of the Naga to synthesize the old and the new, the indigenous and the foreign. While many of the belt's materials may be relatively recent and of foreign manufacture, the beadworking technique is probably ancient and indigenous: individual strands are connected by means of two-strand twining, with both s- and z-twists used at random (Fig. 13; *see also* Seiler-Baldinger 1994:Fig. 58a-b; Lemaire 1960:Fig. 5). Two types of unidentified vegetable fibers are used, one for the horizontal and another for the vertical threads (Peter Francis Jr. 1996: pers. comm.).

The geometric motifs on these multi-strand ornaments, usually limited to simple lines and rectangles, are difficult to interpret, but broadly resemble the designs on some Naga woven cloths (*see* Jacobs 1990:292). Groups of Konyak Naga women encase themselves in these beadwork ornaments during the Spring Festival (Jacobs 1990:87, 112, 131). This village-wide ritual seeks to ensure continuing agricultural and human fertility with dancing, drinking, symbolic feeding of captured enemy skulls and sacrifices to Gawang, the Konyak High God (Jacobs 1990:86). Fertility is a central concern for the rice-growing Naga, not just for subsistence, but for attaining the wealth necessary to increase status (Jacobs 1990:33, 117). Beads and beadwork ornaments attest to such increases in status, thereby

demonstrating the attainment of fertility. Not unlike grains of rice, beads are small, valuable and numerous. As obvious symbols of material and spiritual abundance, they appear in the fertility rituals of a number of Southeast Asian groups. The Maloh peoples of Borneo, for example, wear elaborate beaded textiles during harvest ceremonies in the belief that such a display will trigger a bountiful rice crop the following year and secure communal prosperity (Maxwell 1980:135; *see also* Maxwell 1990:142). As a matter of fact, in parts of Borneo, small, colorful glass beads are specifically "equated with rice grains" in certain agricultural rituals (Sellato 1989:26).

BEADWORK IN MAINLAND SOUTHEAST ASIA

Myanmar (Burma): The Chin

Like their neighbors, the Naga, the Chin peoples of Myanmar's remote northwestern regions have employed beadwork mostly in items of personal adornment, sometimes incorporating it into their handwoven garments. The woman's sleeveless blouse in Pl. IIA consists of a plainweave cotton ground embellished with scarlet-colored, continuous silk supplementary weft threads in the upper half, and cowrie shells and appliquéd, opaque reddish-brown European drawn-glass beads 2 mm in diameter in the lower half (Fig. 12b). Technically similar approaches, also involving glass beads appliquéd onto a handwoven cloth ground, have been used by many other mainland groups, notably the Pwo Karen and Lisu of northern Thailand (*see* Campbell 1978:151,158; *also* Lewis and Lewis 1984:81, 253). At present, the paucity of published information about these blouses precludes our knowing exactly which group made them or for what occasion. The few sources on Chin textiles do not mention them, although brief glimpses of Chin beadwork can be found in the literature (*see* Lehmann 1963:Fig. 1; *also* Parry 1932:37 ff.). Current scholarly opinion favors an origin among the Haka, Mara or Falam groups in the hilly northern Chin area (Dr. Michael C. Howard 1996:pers. comm.; *see also* Howard 1994:Pl. 99). The blouse's luxurious decoration certainly suggests ceremonial wear. Among the Lakher Chin who live on the Indian side of the border, beaded cloths formed part of the dowry of aristocratic women who

reportedly wore them at weddings and dances (Parry 1932:38).

Blouses of this type characteristically feature diamond motifs in various configurations; the small, repeating geometric motifs that characterize much of Chin art are especially evident here (*see* Lehmann 1963:195). Clearly, the large diamond trellises formed by the beads parallel the subtler, more complex shapes created by the silk supplementary weft threads; the beadwork, in other words, echoes the weaving in both form and color. Arranged in quatrefoils, even the sturdy cowries address the diamond theme. Diamond (or rhomb or lozenge) motifs recur time and again in the arts of many cultures. They have been used for millennia in Southeast Asia, appearing, for example, on bronze drums of the Dongson culture of northern Vietnam which flourished from about 600 B.C. to around A.D. 200 (*see* Taylor and Aragon 1991:64-67). Perhaps this prevalence can be attributed to the simplicity of the diamond shape which is easily rendered in textiles and other media (Heidi Munan 1996: pers. comm.). Then again, it is possible that, in some cultures at least, diamond motifs once possessed a symbolic significance that has been obscured with the passage of time.

The red, white and black color triad on the blouse may also have its roots in the ancient past. Many Southeast Asian textiles and other objects display this triad (Maxwell 1990:56, 66, 98), and it turns up frequently in beadwork as well (Loebèr 1913:26-27). Particularly in the case of beadwork, it is difficult to know to what extent the availability of certain bead colors influenced the appearance of this triad. In general, buyers of imported beads and other trade goods might have had to "tailor their cosmic schemes to what was available" or affordable (Heidi Munan 1996: pers. comm.; *see* Munan 1989:57). That said, whatever the medium, in some areas these colors may have carried particular symbolic associations which ostensibly related to ancient dualistic principles of social or cosmological organization common to many Southeast Asian cultures. These oppositions aligned the color red with men, the sacred upper world, the sun and the left, while black, or blue-black, aligned with women, the profane lower world, the moon and the right (Gittinger 1979:35; Maxwell 1990:58, 98). White seems to have been a mediating color, unifying

the other two (Maxwell 1990:98). Comparable conceptual dualisms also structured aspects of Chin social and cultural life, and, thus, may underlie the very refined use of color in the blouse in Pl. IIA (Lehmann 1963:173-174).

Southern Laos: The Alak (?)

Evidence of another, small, mainland Southeast Asian beadworking tradition has been preserved in the man's loincloth pictured on the back cover. This may be the work of the remote Alak peoples of Attapeu or nearby Xekong or Salavan provinces of southern Laos (Dr. Michael C. Howard 1996: pers. comm.). Like the Chin blouse, it seems to invoke the ancient red-white-black (or, in this case, indigo blue) color triad, and further incorporates several shades of yellow. Once again, diamond motifs figure prominently in the beaded areas, along with other repeating geometric motifs such as crosses and isosceles triangles. Relatively little fieldwork has been conducted among the Alak so it is difficult to interpret the symbolic significance, if any, of such designs. Beaded loincloths with figurative motifs, such as humans riding animals, have also been made in southern Laos (Dr. Michael C. Howard 1996: pers. comm.).

In technical respects, the loincloth is quite different from the Chin blouse where the beads were attached to the cloth after it was woven. While the long, narrow body of the Alak loincloth consists simply of warp-faced plain weave, the two ends alternate bands of this weave with bands of discontinuous, counter two-strand twining (Dr. Mattiebelle Gittinger 1996: pers. comm.; *see also* Emery 1966: Fig. 300). As we have seen, the Konyak Naga also favored two-strand twining. Weft threads in both plainwoven and twined areas of the loincloth carry European glass beads 2 mm in diameter which have been painstakingly secured between warp threads, making the beads an integral part of the ground fabric (Figs. 14, 19). This general technique of weaving beads into a cloth ground dates to at least the 13th century in Asia and could be much older (Fig. 3). Other, more recent examples of this sort of technique can be found in island Southeast Asia, in the handwoven textiles of the Batak peoples of northern Sumatra and the Maranao peoples of Mindanao in the

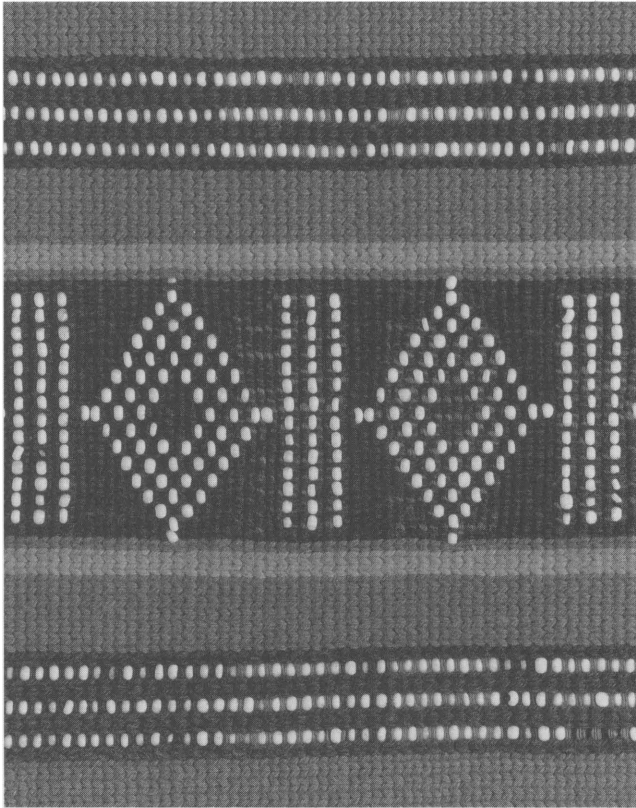


Figure 19. Detail of an Alak loincloth, showing the beads in twined areas (see back cover). Area of detail: 9.75 cm h. x 12.25 cm w. Private collection (photo: Don Tuttle).

Philippines (see Khan Majlis 1991:Pls. 40, 43; also Maxwell 1990:Pl. 490; Niessen 1993:Pls. 13, 64a). In one of the few discussions of beadwork technique in the Asian textile literature, Bolland (1980) has analyzed the methods by which the Angkola Batak work beads into the ground of their large *ulos godang* textiles.

Nor are the Alak alone in embellishing loincloths with beads: various beading techniques have been employed on the loincloths (or sashes) of the Ga'dang of Luzon in the Philippines (see Maxwell 1990:Pls. 89, 91; also Pastor-Roces 1991:Pls. 20, 118), the Jorai of south-central Vietnam (see Fraser-Lu 1989:Pl. 21) and the Batak of northern Sumatra (see Niessen 1993:Pl. 12). White seems to be the preferred bead color on many of these loincloths, followed by yellow; perhaps these were the colors most easily obtained in remote areas. Still, to the Western observer at least, in their diminutive size and paleness, these beads call to mind grains of rice. We do not know whether the rice-growing Alak made such an equation. Certainly,

the careful aligning of the beads suggests that they were quite precious to their owners, as was rice itself. The connection between beads, rice and fertility that holds for the Naga, Dayak and other Southeast Asian groups may, accordingly, extend to these loincloths as well. Implicitly, their basic purpose, to cover a man's genitals, corresponds to a fertility theme. Other oblique references to fertility may be encoded in the rows of isosceles-triangle motifs that appear in border areas of some Alak and Ga'dang loincloths (see Maxwell 1990:Pls. 89, 92). Similar arrangements of such *tumpal* motifs on Indonesian textiles have been linked to the Hindu rice goddess Dewi Sri (see Maxwell 1990:205) and to generalized, archaic Indonesian notions of fertility (see Taylor and Aragon 1991:39).

BEADWORK IN EAST ASIA

China

Beyond the pearl-embellished *thangka* mentioned above, few early examples of Chinese beadwork have been brought to light in the Western literature (see Blair 1973:Pl. 131; Francis 1990:122; National Palace Museum 1986:Pls. 111, 126, 146, etc.). Surely one of the most engaging is a three-dimensional miniature pagoda acquired by Queen Hedvig Eleanora of Sweden in the early 18th century (Fig. 20; see Setterwall, Fogermarck and Gyllensvärd 1974:28, 187, 309). Blue, green and pearly white glass beads of unknown origin conceal the bamboo framework of this octagonal, nine-story pagoda from the K'ang Hsi period (1661-1722). While it is difficult to gauge the extent of recent beadworking traditions in China, one or more traditions seem to have existed, encompassing both functional and decorative items. Although the bamboo-bead vest in Fig. 5 is utilitarian in nature, its elegant simplicity invites contemplation. Worn next to the skin, or between layers of clothing, such *chu i* or *han san* (Field Museum: catalogue information for no. 127920) provided ventilation for the wearer and protected outer garments from perspiration. Examples with sleeves have also been documented (see Chee 1987:111; also Tseng 1976:27). As they are lightweight and have large perforations, tubular bamboo beads serve the ventilating purpose quite well, especially when conjoined in such an open

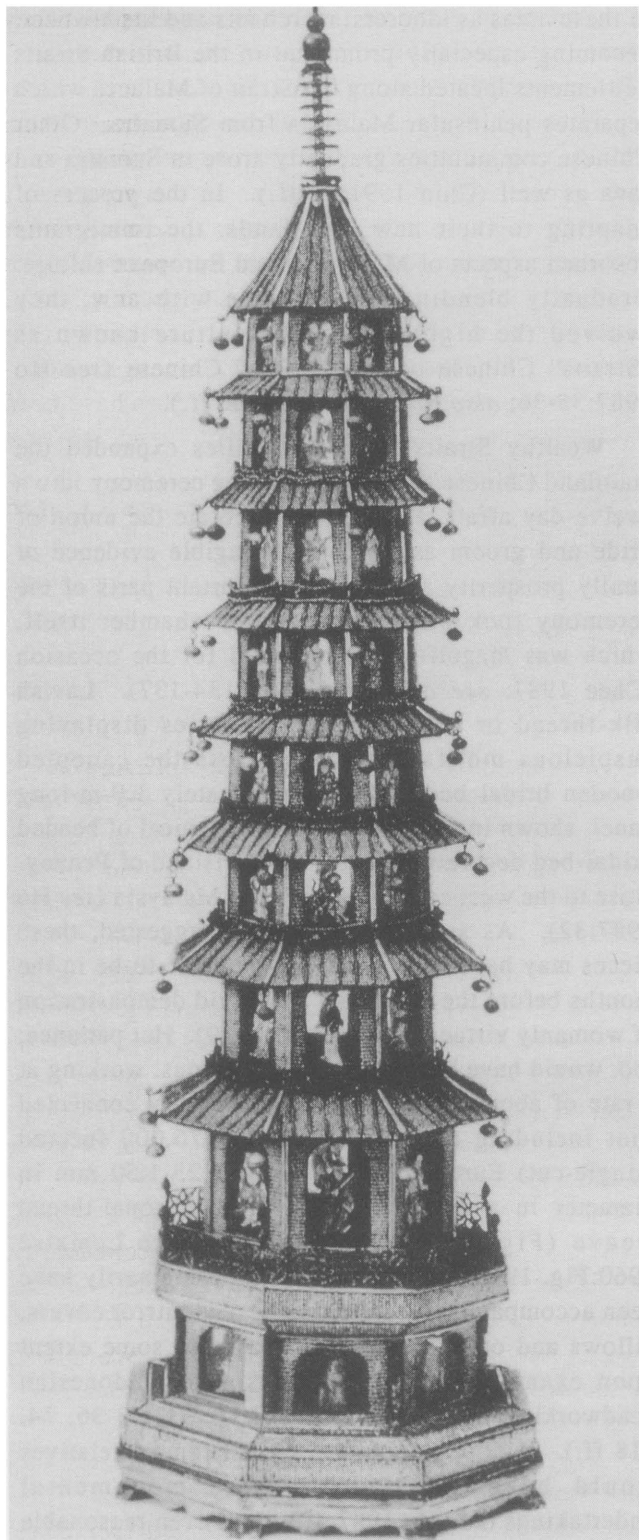


Figure 20. Miniature Pagoda, China, ca. early 18th century. Bamboo, glass beads, kingfisher feathers; 86 cm h. x 30 cm w. Courtesy, The Royal Collections, Stockholm (photo: Erik Liljeroth).

manner, which allows plenty of room for air to circulate between beads. The technique proceeds horizontally, as two beads at a time are threaded onto a single, handspun, three-ply cotton thread and secured with an overhand knot (Fig. 15; *see* Seiler-Baldinger 1994:Fig. 25). According to one observer, the very craft of beadwork could have begun in just this way thousands of years ago, as beads were added to the kinds of knotted meshes long used to create fishnets (*see* Loebèr 1913:12-13).

These garments of bamboo beads seem to have functioned in both ritual and secular contexts. Bridal couples may have worn them during wedding ceremonies beneath beautifully embroidered robes (Chee 1987:111). Chinese farmers and actors apparently wore them as well during their various labors (Field Museum: catalogue information for no. 127920). Bead sizes certainly varied, perhaps according to the ultimate use of the garment. While the vest in Fig. 5 consists of very fine beads averaging a delicate 5.5 mm x 1.5 mm (pers. obs.), garments destined for mundane activities called for cruder beads measuring 9.5 x 2.5 mm (pers. obs.). Whatever the ultimate use of these decidedly practical garments, the beads themselves might have afforded a modicum of symbolic spiritual fortification. In Chinese thought, the bamboo plant represents strength and endurance (Williams 1976:33-34), just the qualities that might benefit those who donned such garments.

The spiritual significance of the panel in Pl. IVA, on the other hand, is open to some interpretation. According to unpublished Field Museum catalogue information (no. 232529), the panel was probably made in southern China,¹ where it may have served as a wedding gift. This small piece from the late 19th century tenders a moralistic inscription, likely drawn from a poetic text (Dr. Bennet Bronson 1996: pers. comm.). In bold black characters located in parallel vertical panels, the rhyming couplet reads: "This intoxication has no relation to wine; to smell perfume does not indicate (real) flowers." "Intoxication" may refer to marital bliss; "perfume" may hint at the temptations of infidelity (Field Museum: catalogue information for no. 232529). Curiously, the vertical orientation of the inscription conflicts with the horizontal orientation of the central vignette (Dr. Bennet Bronson 1996: pers. comm.). Nevertheless, as if all of nature affirms the union, the motifs in the

vignettes surrounding the inscription reinforce its message by drawing upon ancient symbolic associations. As a prominent image in Buddhist and Taoist religious iconography, and the central motif of the panel, the lotus flower signals purity because it rises from the mud unstained; it also represents fertility because it harbors many seeds (Field Museum: catalogue information for no. 232529; *see* Williams 1976:255-258). In Chinese thought, paired mandarin ducks symbolize conjugal fidelity because, once mated, they never part (Williams 1976:146-147). Butterflies stand for joy and summer (Williams 1976:51-52, 146-147). Thus, in their more beguiling fashion, these attractive creatures of the natural world seem to advance the inscription's supposed encomium to marital happiness and fidelity. Yet, if we pursue another theory of the panel's function, the symbolism takes an ironic twist. In size and general format, the panel resembles a type of advertisement once favored by Chinese prostitutes: a rectangular section of embroidery affixed to the front of a dress or blouse (Dr. Marshall Wu and Judy Wu 1997: pers. comm.). Such a function could account for the vertical orientation of the inscription, but more research is called for.

The panel in Pl. IVA consists of about 55,000 faceted (single-cut) European glass beads 1.5-1.7 mm in diameter, individually sewn to a beige silk ground at the rate of about 179 b/cm² (Fig. 12a; *see* Field Museum: catalogue information for no. 232529). Great clarity of detail can be achieved in this way; the characters in the inscription could hardly have been rendered as precisely, or as elegantly, using another technique. Chinese beadworkers also used this technique to produce other items, such as slippers, purses and belts (*see* Sherrill 1930:309).

BEADWORK IN ISLAND SOUTHEAST ASIA

Malaysia: The Straits Chinese of Penang

During the later 19th and early 20th centuries, Chinese settlers in peninsular Malaysia and Indonesia developed an elaborate beadworking tradition renowned for its carefully coordinated sets of wedding decorations executed in European glass beads. Chinese people had been emigrating from southern China to towns in Southeast Asia for several centuries. By the 19th century, they had established themselves

in these areas as laborers, merchants and landowners, becoming especially prominent in the British Straits Settlements located along the Strait of Malacca which separates peninsular Malaysia from Sumatra. Other Chinese communities gradually arose in Sumatra and Java as well (Chin 1991:15 ff.). In the process of adapting to their new homelands, the immigrants absorbed aspects of Malaysian and European culture. Gradually blending old customs with new, they evolved the highly syncretic culture known as "Straits" Chinese or "Peranakan" Chinese (*see* Ho 1987:35-36; *also* Maxwell 1990:260 ff.).

Wealthy Straits Chinese families expanded the mainland Chinese three-day wedding ceremony into a twelve-day affair, as much to celebrate the union of bride and groom as to display tangible evidence of family prosperity and honor. Important parts of the ceremony took place in the bridal chamber itself, which was magnificently outfitted for the occasion (Chee 1987; *see also* Chin 1991:134-137). Lavish silk-thread or beadwork embroideries displaying auspicious motifs stretched across the canopied wooden bridal bed. The approximately 1.9-m-long panel, shown in detail in Pl. IVB, is typical of beaded bridal-bed decorations made on the island of Penang, close to the west coast of peninsular Malaysia (*see* Ho 1987:32). As some scholars have suggested, these pieces may have been made by the bride-to-be in the months before the ceremony as a vivid demonstration of womanly virtues (Chee 1989:16-19). Her patience, too, would have been abundantly obvious: working at a rate of about 183 b/cm², she eventually connected (not including the tassels) about 176,000 faceted (single-cut) European glass beads 1.25-1.50 mm in diameter in a demanding, multiple diagonal-thread weave (Fig. 9; *see* Ho 1987:47; *also* Lemaire 1960:Fig. 19). Such a panel would customarily have been accompanied by matching beaded mirror covers, pillows and other decorations, based to some extent upon examples in local Malaysian or Indonesian beadworking traditions (Ho 1987:16, 31, 33-36, 74, 118 ff.). Undoubtedly, servants or female relatives would have assisted in these monumental undertakings (*see* Ho 1987:49). It is even reasonable to speculate that Chinese embroidery workshops in Malaysia, Indonesia or China filled some of the demand for these labor-intensive ornaments (*see* Chee 1989:78) which may have been produced on

commission (*see* Chin 1991:29-35). These intriguing possibilities notwithstanding, Straits Chinese women certainly made some, if not all, of their own beadwork (*see* Ho 1987:13, 17, 31-34, 49; Figs. 14-16).

Like its smaller, mainland Chinese counterpart, the bed panel in Pl. IVB adopts traditional Chinese iconography in pairing a particular flower with a particular bird (*see* Williams 1976:192). Peonies alternate with phoenix birds against a ground of verdant foliage. Both motifs have auspicious symbolic associations: peonies with springtime, affection and prosperity; phoenixes with summertime, the bride and the bridal couple (Ho 1987:36; *see also* Williams 1976:320-326). Saturated colors, carefully shaded, impart vitality and a sense of visual depth to the dense Straits Chinese composition which contains many reds and greens, colors "regarded... as the most propitious... for weddings and marital bliss" (Ho 1987:113).

INDONESIA

Sumatra: The Lampung Region

Like the Straits Chinese, the peoples of the Lampung region of southern Sumatra expended great effort in the production of beadwork for marriage celebrations and other important occasions. Exposed to many foreign influences as a result of contact with seafaring traders seeking Sumatran pepper and other products, the coastal-dwelling peoples of the area also developed a syncretic culture which merged animist, Hindu-Buddhist and Islamic elements (van Dijk and de Jonge 1980:13-30). Many Lampung woven, plaited, embroidered and beaded textiles betray this cultural complexity with a sophisticated iconography best interpreted by the specialist (*see* van Dijk and de Jonge 1980; Gittinger 1979:79 ff.; *also* Holmgren and Spertus 1989:71 ff.; van Hout 1995).

Technically, the mat in Pl. IIB consists of lengths of strung beads couched through a coarse plainweave cloth (Fig. 12c) onto a ground of rattan plaitwork backed with a late 19th- or early 20th-century Javanese cotton batik. Pieces of mica nestle in two of the open areas between beads near the lower edge of the mat, a typical treatment of this reflective mineral on other examples of beadwork from southern

Sumatra (*see* Holmgren and Spertus 1989:Pl. 39). It is possible that mica once filled other open areas on the mat as well, but we cannot know for sure.

Approximately 50% of the beads on the mat appear to be opaque, single-twist, Chinese coil beads, colored lemon yellow, turquoise blue, reddish brown, bright orange, black, and white. Coil beads can be observed on at least one other Lampung beadwork mat collected earlier this century, now in the Tropenmuseum (pers. obs. of cat. no. 1771-497; *see* van Hout 1996:Pl. 1).

The reddish brown and bright orange varieties of the coil beads have particular significance in the Lampung area, and in other parts of the Indonesian archipelago. Peter Francis (1992b) has identified them as *mutiraja* (literally "pearls of the king"), beads which are highly valued and owned only by aristocrats in certain parts of Indonesia (*see also* Adhyatman and Arifin 1993:76; Francis 1992a:11-12, Pl. 4a). *Mutiraja* may have been in production since the 10th century if not before (Francis 1992b).

Very little has been published on glass bead nomenclature in the Lampung region, but it seems that the coil beads (as well as other beads of similar color) may have been referred to there by the more common, generic term *mutisalah* (literally "false pearls"). Francis (1992a:11-12) defines *mutisalah* as a "class of small, opaque reddish or orange glass beads essential for marriages and other ceremonies" in certain parts of Indonesia; a class which includes beads of various manufacturing categories, including Indo-Pacific drawn-glass beads. According to Francis (1992b), *mutiraja* constitute but a single group of *mutisalah*. Although the mat in Pl. IIB bears only a few *mutiraja*, perhaps a short strand's worth, their presence implicitly affirms the aristocratic origins of the owner, and the importance of the ceremony or ceremonies for which the mat was produced. By contrast, other beaded objects from the Lampung region contain many hundreds, even thousands, of *mutiraja* (*see* Gittinger 1979:Pl. 60; *also* Maxwell 1990:Pl. 131).

Because the mat contains such an unusual assortment of beads, no doubt collected over many decades from a series of native and foreign merchants, it is worthwhile to discuss these beads further. Besides Chinese coil beads, the mat may contain Indo-Pacific

glass beads of a greenish-blue color. Francis (1996: pers. comm.) believes that these beads could have originated in the Srivijayan Indo-Pacific bead industry, from roughly the 7th to the 12th century. In addition, there are European drawn-glass beads, such as green-cored Cornaline d'Aleppos which were made in Venice between ca. 1650 and 1830, and in Holland between ca. 1597 and 1697 (Francis 1996: pers. comm.). These have a layer of opaque reddish-brown glass overlying a translucent green core, and are easily confused with opaque reddish-brown *mutiraja*. Francis (1996: pers. comm.) also identifies two 3-mm-diameter, hollow, faceted, mold-blown beads of silver-lined amber glass which appeared in Europe around 1810, and in Asia thereafter. Thus, most of the mat's beads date to the 19th century or before, though some are probably later additions (Francis 1996: pers. comm.). Judging by visual examination alone, one might estimate that perhaps 75-90% of the beads on the mat are original.

The mat's precise function is unknown. Its rather small size leaves us wondering whether it could be a fragment of a larger piece, such as a beaded *palepai* (or *selesil*), a long rectangular mat with multiple vignettes (see Solyom and Solyom 1984:Fig. 24; also Maxwell 1990:Fig. 57). Much larger, rectangular beaded mats have tentatively been identified as *tampan maju*, or ritual gifts from the groom to the bride, which acknowledged and consolidated the myriad of new relationships formed as a result of the marriage (Gittinger 1979:22-25, 97, Pl. 60; see also Chase Manhattan Bank 1997:Juli; Holmgren and Spertus 1989:87; van Hout 1995:3-4). Importantly, the very materials used on such *tampan maju* may be understood to enact a metaphorical marriage of their own. In many Indonesian societies beads are classified along with metal as "hard" objects that are masculine in nature and made or obtained by men. Textiles, on the other hand, are "soft" goods, feminine by nature, because women make them (Gittinger 1979:35; Maxwell 1990:58-63; van Hout 1995:28). The combination of two such opposing—but complementary—materials theoretically augments the mat's spiritual potency, enabling it to repel negative and attract positive influences to a marriage (see Rodgers 1985:42, 51; see also Taylor and Aragon 1991:37-38).

The iconography of the mat in Pl. IIB is somewhat difficult to evaluate. Certain aspects of the iconography, such as the scrolling horizontal lines at the top and bottom of the central motif, call to mind a *tampan maju* from the Lampung region whose imagery has been interpreted as representing a "tree of life" (Chase Manhattan Bank 1997:Juli). Whether symbolizing fertility in general or the carefully ordered universe, tree motifs have appeared on textiles in many parts of Indonesia (see Maxwell 1990:341ff.). However, in addition to these floral motifs, when observed from a certain point of view, the mat in Pl. IIB seems to delineate stylized figurative elements, such as a pair of eyes, a nose, a grimacing mouth and a well-defined penis (Thomas Murray 1996: pers. comm.). More research is needed to elucidate the implications of this complex floral/figurative motif.

Perhaps only in the Lampung region could such sophisticated motifs be rendered so deftly, in such a relatively coarse, even hasty, beadworking technique where lengths of strung beads 2.0-5.0 mm in diameter are couched to the ground fabric at 3-4 bead intervals. Areas left unbeaded, to accommodate sparkling, irregular bits of mica or other filler material, also lessen the beadworker's burden. Clearly the antithesis of the meticulous aesthetic of the Straits Chinese, this ancient beadworking technique adapts easily to the expansive curvilinear designs, undulating fields of color and loose structure favored in many Lampung beadwork compositions (see Holmgren and Spertus 1989:87). Undoubtedly, such a relatively undemanding technique facilitated the production of the monumental pieces that were once made in this tradition (see Holmgren and Spertus 1989:86-93).

Sulawesi: The Sa'dan Toraja

According to ritual speech of the Sa'dan Toraja peoples of south-central Sulawesi, ancestors descend to earth on stairs of beadwork (Nooy-Palm 1979:271), and beadwork covers the door to the dwelling-place of the supreme God, Puang Matua (Nooy-Palm 1986:161). Puang Matua himself is likened to a *kanduare*, a cone-shaped beadwork ornament which symbolizes abundance (Nooy-Palm 1986:189). Appropriately, beads and beaded ornaments figure

prominently in religious rituals of the Sa'dan Toraja which seek to renew the ancient ties between deities, ancestors and mortals.

The dance apron or *sassang* in Pl. IIIA exemplifies much Sa'dan Toraja beadwork. Worn by women during *ma'gellu* dances that conclude the funeral ceremonies of deceased noblemen, some *sassang* depict a series of sturdy hooked motifs across an upper horizontal panel, with numerous fringe elements suspended from it (*see* Barbier and Newton 1988:266-267; *also* Nooy-Palm 1969:Pl. VIII). These *sekong* motifs ostensibly represent squatting ancestor figures with four hooked "limbs" extending outward from a central "torso" (Holmgren and Spertus 1989:64). They appear on Toraja woven textiles as well, and in the textiles of other Indonesian cultures. So closely are these motifs associated with ancestors that during parts of the funeral ceremony, bamboo effigies of the newly deceased may carry rectangular beaded bags with *sekong* motifs on them (*see* Crystal 1985:Pls. 172-173). Displaying *sekong* motifs during funeral rituals activates the benevolence of these ancestors whose favor the Toraja habitually seek so that their rice crops may flourish, and their family groups prosper and multiply.

The purposeful application of color underscores the symbolic significance of the apron's *sekong* motifs. The four most prominent colors on the apron—yellow, red, black and white—frequently co-occur in Toraja beadwork, textiles and other arts. Each of the colors has particular associations: yellow, with the sun and the realm of the ancestors; red, with the blood of sacrificial animals; black, with ashes and death; white, with the supreme god Puang Matua (Wassing-Visser 1982:76-77). The natural color of the tablet-woven band at the top of the apron may also be significant (*see* Nooy-Palm and Schefold 1986). Without entering further into the complexities of Toraja color symbolism, it will simply be noted that, like the *sekong* motifs themselves, these colors metaphorically function together to "keep the cosmic balance in equilibrium" (*see* Wassing-Visser 1982:76-77). Glass beads form an especially effective medium for the expression of this message as they project a vibrancy unmatched by the gentler, more muted colors of Toraja woven-cotton textiles. Not surprisingly, the "dark red" and "dark yellow" beads used to work the *sekong* motifs appear to have

been somewhat more highly regarded than the other varieties; in Toraja ritual speech, these beads are implicitly equated with gold, a color sacred to the ancestors (van der Veen 1965:87, verse 423). In one of the few documented reversals of typical Indonesian custom, male specialists made these dance aprons, as well as other glass-beadwork articles (Nooy-Palm 1975:35). Since men make metal jewelry in many parts of Southeast Asia, beadwork made by men can be interpreted as another form of jewelry (Maxwell 1990:63). Toraja beadworkers used a multiple vertical-thread weave common to many Indonesian groups (Fig. 11a; *see also* Lemaire 1960:Fig. 16; Nooy-Palm 1975:35) and heirloom beads of Asian and European origin. Specifically, about 80% of the beads on the apron in Pl. IIIA are single-twist, Chinese coil beads 2.5-4.0 mm in diameter; the rest are predominantly European. It is worth emphasizing, however, that women made the cotton card-woven bands at the top of the aprons, which formed the stabilizing base of the beadwork (*see* Bolland 1972:179-180). Thus, production of these aprons seems to have entailed the cooperation of both sexes, and engendered a harmonious balance of dualistic forces. So this attractive beadwork dance apron recapitulates dualities of great concern to the Toraja, and many other Southeast Asian peoples, such as male/female, heaven/earth, and ancestors/mortals (*see* Nooy-Palm and Schefold 1986:40).

Sumba: The Rindi Region

Beadwork also played a pivotal role in funeral ceremonies for wealthy nobles in the Rindi domain of southeastern Sumba. Such funerals occasioned the display of many beadwork articles such as betel bags (Khan Majlis 1991:Pl. 219), breast ornaments (Khan Majlis 1991:Pl. 220; *see also* Alpert 1977:Pl. 48), baskets (Forth 1981:174-175) and spindles (Adams 1969:158). In addition, royal female mourners might wear handwoven skirts with beadwork embellishment (*see* Adams 1969:84, and Figs. 19, 21-23, 51; *see also* Alpert 1977:Pl. 47). Like the Sa'dan Toraja, Sumbanese viewed certain beads as precious talismans from the ancestors (Adams 1969:154), spiritually well suited to making articles that help speed the newly deceased on his journey to the ancestral abode. The beadwork betel bag shown on

the cover probably stored ingredients for preparing the mildly stimulating betel quids (composed of areca nut, lime and gambier) that were offered to the newly deceased and the ancestors during segments of funeral ceremonies (*see* Forth 1981:71 ff.). At the same time, the bag and its contents symbolically equipped the deceased with essential implements for life in the hereafter (Khan Majlis 1991:Pl. 204). In a sense, at least temporarily, such betel bags formed part of the "costume of the dead" (*see* Adams 1969:156).

Not unlike Kathi beadwork of Gujarat State in India, southeastern Sumbanese beadwork of the early 20th century tends to pictorialism without attempting narrative structure (*see* Holmgren and Spertus 1989:Pls. 1-3, 14). Beadwork betel bags, for example, prominently display large motifs associated with the upper classes, such as skull trees (*see* Volkenkundig Museum Nusantara cat. no. S-1780), deer (*see* RVV cat. no. 03/22), horses (*see* Khan Majlis 1991:Pl. 219), birds (*see* Rodgers 1985:Pl. 50) or stylized anthropomorphic figures (*see* Lemaire 1953:Fig. facing p. 8). Smaller vegetal and zoomorphic forms frequently surround this central motif against a background of white or, more commonly, black beads (*see* Adams 1969:84). Purely geometric designs are also known, and may have been more common in the 19th century. Inside some of the bags is a sturdy palm-leaf plaitwork lining which supports the heavy weight of the beads. Tassels, straps and other accoutrements (such as metal bells and large glass beads) occasionally remain intact into the late 20th century, as the nearly complete example on the cover reveals. Technically, as it features the multiple vertical thread weave common to many parts of Indonesia, this bag is typical of most Sumba beadwork. Less typical is the appearance of both open (on the body of the bag) and closed (on the strap) variations of this weave in a single piece (Fig. 11a-b; some scholars have erroneously identified these variations as two separate techniques: *see* Adams 1969:85). Like many early 20th-century examples, the bag displays large numbers of European drawn-glass beads 2.5-3.5 mm in diameter, as well as a few beads of Asian origin.

The crowned rampant lion gazing outward that dominates the body of the betel bag (*see* cover) also

appears on a number of other beadwork bags, and on many Sumbanese woven textiles as well. Its central, commanding position and active stance assert its prowess. As lions are not native to Sumba, the source of this motif lies largely in the flags and coins awarded to Sumbanese nobles for several centuries by Dutch traders and colonizers as tokens of favor (Adams 1969:137-138). Perceiving the rampant lion as a symbol of rank and authority, Sumbanese nobles adapted it to their own ends. So desirable was this prestigious foreign motif that eventually rulers of the aristocratic Rindi domain in southeastern Sumba exercised a virtual monopoly on its use. Thus, this bag probably originated in Rindi, as did many pieces of Sumbanese beadwork (*see* Rodgers 1985:54, 171; *also* Adhyatman and Arifin 1993:Pl. 4). Flanking the rampant lion, four horses rear up as if in readiness to convey the soul of the deceased to the spirit realm (*see* Alpert 1977:Pl. 48). Like rampant lions, horses also signify wealth, nobility and prowess to the Sumbanese (Adams 1969:136).

Yet, for all of its size and foreign prestige, the rampant lion on the bag is situated in a decidedly Sumbanese context and surrounded with indigenous motifs. Smaller in scale but greater in number, multicolored snakes writhe across the background of the bag and offset the lion's rigidity with their own sinuous movements. In many parts of Indonesia, snakes evoke the watery underworld which is associated with femininity. A single snake also marks the lion's torso, perhaps providing an "X-ray view" of its intestines (Thomas Murray 1996: pers. comm.), or foreshadowing the metamorphosis that the corpse must undergo as the soul sheds the body and ventures from one realm to the next (*see* Forth 1981:188). As creatures that adapt to multiple environments, snakes may serve as ideal metaphorical vehicles to transport human souls (*see* Adams 1969:167). Moreover, given their latently feminine symbolic nature, snakes may be emblematic of death itself which the southeastern Sumbanese classify as a feminine process (Forth 1981:205-206). A more lengthy analysis of the bag might further illuminate the presence of gender, color and number symbolism, and delve more deeply into Sumbanese notions of life and death.

Kalimantan (Indonesian Borneo): The Iban or Maloh

One of the world's most fascinating and prolific beadworking traditions developed on the island of Borneo among the Dayak peoples of the interior rainforest. Commentators have marvelled at Dayak beadwork for decades and the protective, mythological beings it so frequently portrays (Fig. 8; *see also* Loebèr 1913:7, 35). Although the vest in Pl. IIIB lacks such beneficent beings, its central function may still have been the spiritual protection of the wearer, possibly a shaman of the Iban (Robert J. Holmgren 1986: pers.comm.), Maloh, or Ibanic Kantu' or Mualang (Heidi Munan 1996: pers. comm.) peoples living in the Kapuas River region of western Kalimantan. We will soon have more to say about the possible origin of the vest. Since they are hard and long-lasting, glass beads symbolize strength and longevity to some Dayak groups (Maxwell 1980:135-136). Thus, they are ideal for the fabrication of symbolic "armor" to deflect malevolent spirits (Maxwell 1990:137). The close weave that unites the beads certainly creates the appearance of an impenetrable surface. Although they obtained glass beads through long-established trading networks, the Dayak believed that some varieties possessed magical qualities stemming from their supernatural origin. In addition to offering protection, then, such a vest of glass beads might facilitate communication with the unpredictable supernatural world (*see* Gittinger 1979:218).

While long, narrow, stone- or shell-decorated vests may have been fairly common in some parts of Borneo in the late 19th century (*see* Schärer 1963:56, Fig. XVIII, ill. 21; *also* Indonesisch Ethnografisch Museum 1973:Fig. 94; Khan Majlis 1984:Fig. 696; Sellato 1989:171; Taylor and Aragon 1991:159-163), their counterparts in glass beads were evidently rare (P.T. Boskma 1987: pers. comm.). Various proscriptions supposedly governed the manufacture of vests in some areas. In the Embaloh tributary region of the Kapuas River, for example, women could reportedly work on such items only during specific "solemn" occasions (Juynboll 1910:329-330; *see* RVV cat. no. 959/128). The beadworking endeavor itself, in other words, appears to have been a crucial, ritualized process designed to ensure the spiritual efficacy of the garment being made. It is difficult to

say whether this tendency to ritualize the beadworking process extended to other types of items or other areas of Borneo. Although there is little evidence, the precise beads selected for use might also have heightened a vest's defensive capacities. A sizeable number of the glass beads (3.5-4.0 mm diameters) assembled in the vest in Pl. IIIB are the opaque reddish-brown *mutiraja*, so valuable in many parts of Indonesia. In addition, there are other Chinese coil beads of uncertain age and European beads.

The vest manifests vestiges of an archaic design repertoire. Both front and back display numerous concentric diamond motifs arranged in a grid-like format of ancient origin, one that recurs repeatedly in Southeast Asian material culture (*see* Bellwood 1979:Fig. 7.19; *also* Spertus and Holmgren 1977:Pl. 18). In addition, the back side ends in a border of scroll motifs, strikingly similar to those painted on a neolithic pottery vessel dating between 1600 and 400 B.C., which was found in Niah Cave, Sarawak, in Malaysian Borneo (*see* Bellwood:1979:216-217). Interestingly, 20th-century beaded jackets made in southern Thailand also display concentric diamond motifs in a grid format (*see* Ginsburg 1975:69). Nowadays such *thap suang* are worn by performers in *manora* dance dramas, but it has been suggested that at one time they may have been worn by shamans in ritual contexts (Maxwell 1990:127). In other words, although proof is lacking, analogous beadwork shaman's garments may once have existed in mainland and island Southeast Asia.

Most pieces of Asian beadwork are constructed using a single technique. The vest in Pl. IIIB poses an intriguing exception to this rule. Like the dance apron in Pl. IIIA and the betel bag on the cover, the lower border of the back of the vest is worked in the multiple vertical-thread weave which produces an open diamond pattern and is preferred by many Indonesian beadworkers (Fig. 11a). However, the body of the vest is worked in a more complex technique, one which requires both warp and weft threads and inclines beads in alternating rows at 45° angles, thereby producing a herringbone pattern (Fig. 16; *see* Khan Majlis 1984:Pl. 640; Lemaire 1960:Figs. 6-8; Nieuwenhuis 1907,I:Pl. 25, no. 12; II:Pl. 70a-b; Sellato 1989:Pls. 239, 246). Several Dayak groups apparently favored this herringbone technique in the late 19th century, including the Kayan of the

Mendalam and Mahakam River regions (pers. obs.: RVV cat. nos. 1219/165, 1308/36, 1306/432, 1306/59-60), and the Taman, a Maloh subgroup in the Kapuas River region. More to the point, the Taman in particular are known to have juxtaposed in a single piece both of the techniques used in the vest in Pl. IIIB (pers. obs.: RVV cat. no. 1219/136). Bearing in mind these technical factors, a Taman Maloh origin for the vest looks like a distinct possibility. Apart from Borneo, herringbone weave occurs infrequently in Southeast Asia. It does surface thousands of miles away in Pacific Asia, in the Solomon and Admiralty islands (see Heermann and Menter 1990:Pl. 40, nos. 1-2; also Borel 1994:206, 222).

***Irian Jaya (Indonesian New Guinea):
The Cenderawasih Bay Region***

While Sa'dan Toraja beaded aprons follow predictable formulas with respect to both color and motif, the beaded aprons of the Cenderawasih Bay region of Irian Jaya demonstrate an intriguing stylistic diversity which has never been systematically analyzed. Indeed, relatively little is known about these triangular or, more precisely, pentagonal aprons which are no longer made in the region (Dr. Michael C. Howard 1996: pers. comm.). The aprons appear in both symmetrical and asymmetrical formats, as shown in van Baaren (1992:Pl. 40); Barbier and Newton (1988:Pl. 32); Hoogerbrugge (1995:Fig. 46); Loebèr (1913:Pl. IX); Maxwell (1990:Pl. 87); Taylor and Aragon (1991:Figs. IX.39-40). During recent fieldwork in the area, Dr. Michael C. Howard (1996: pers. comm.) was informed that all of these aprons were made in the village of Ambai on Yapen, an island in Cenderwasih Bay, and then traded to surrounding areas. Howard's findings confirm statements made by earlier scholars (see Maxwell 1990:Pl. 87; also Taylor and Aragon 1991:277) and indicate that the aprons were greatly esteemed and widely circulated trade goods. Not much is known about the contexts in which the aprons were used, except that they may have been exchanged during bridewealth rituals (see Held 1957:96; also Taylor and Aragon 1991:277), or worn by brides during weddings (see Held 1957:37). Men may have worn the aprons at times; during agricultural ceremonies, for example (Taylor and Aragon 1991:277). We cannot tell exactly when this

glass-beadworking tradition got underway, but it was already well established by 1893, as an outgrowth of the region's ancient shell-beadworking traditions (see de Clercq and Schmeltz 1893:Pls. III, X-XXII). Women continued making these beadwork aprons (Fig. 21) until sometime in the mid-20th century.

Most if not all of the aprons are worked in a multiple vertical-thread weave which inclines beads at right angles to one another (Fig. 17; see also Lemaire 1960:Figs. 9-11). This weave, which imparts a rectilinear outline to all motifs, was already in use by the 7th century in Japan (see Blair 1973:Fig. 68). In most Cenderawasih Bay aprons, European glass beads 3-4 mm in diameter predominate. They are connected at an average rate of 18-30 b/cm². Glass beads were brought to this remote area by traders from Indonesia and elsewhere, plying ancient trading routes (Taylor and Aragon 1991:276). Like other island Southeast Asian peoples, the inhabitants of northwestern Irian Jaya once ascribed a supernatural origin to such beads, believing that they were the precious fruit of mythical bead trees supplied by the ancestors (Taylor and Aragon 1991:276-277). Currently, some natives of Yapen Island believe that the beads are seeds of a tree, imported from nearby coastal areas (Dr. Michael C. Howard 1996: pers. comm.). Cotton trade-cloth fringe usually hangs from the bottom of these aprons, but a grass-like natural fiber is used in this capacity on some examples (pers. obs.). The thick, twined threads employed in many aprons were harvested from local sago palms (Dr. Michael C. Howard 1996: pers. comm.).

Although they can cite received wisdom concerning the origin of the beads, current inhabitants of Yapen have trouble explaining the motifs on these aprons (Michael Howard 1996: pers. comm.), and scholars are similarly perplexed. According to one Western ethnographer, some of these motifs resemble women's tattoos. In fact, among the Waropen peoples of coastal Cenderawasih Bay, the word for tattoo marks is *raiwonda* which can be translated as "bead design" (Held 1957:28). The apron in Pl. IA lends tenuous credence to this association. With its elongated vertical torso, concentric diamond head, four scroll-shaped limbs, and base or root consisting of a single, pronounced scroll, the central figure on this apron approximates an anthropomorphic lizard or crocodile. Other beadwork and barkcloth aprons display similar reptilian motifs, whether singly



Figure 21. Woman making a beadwork apron, northwestern Irian Jaya, ca. 1950. Courtesy of Koninklijk Instituut voor de Tropen, Photodepartment (951):677.77: 666.27 N15.

(Maxwell 1990:Pl. 87) or in pairs (*see* Barbier and Newton 1988:Pl. 32; *also* Kooijman 1963:Pl. XXXII, Fig. 3). In some parts of Indonesia, such creatures may have been associated with ancestors (*see* Solyom and Solyom 1984:Fig. 14). Comparable elongated figurative motifs also materialized in Waropen women's tattoos extending up the nose to the forehead (*see* Held 1957:27; *also* Galis 1961:115) and down the center of the chest (*see* Photodepartment, Koninklijk Instituut voor de Tropen [951]:391.92 N 27-8). In addition, scroll motifs similarly appear both in chest tattoos and beadwork aprons, flanking these central figurative shapes. Importantly, as these tattoos tend to be rectilinear, they can be rendered quite accurately by the beadwork technique described above. Despite such analogies, much remains to be learned before this beadworking tradition can be documented adequately.

CONCLUSION

Over the last millennium, the beadwork of Asia has assumed many forms, functioned in many contexts and conveyed many messages, both overt and implicit. As we have seen, beadwork has encoded esoteric notions about social rank and material wealth, gender roles, virtuous behavior, fecundity, death and the relations of the human, natural and supernatural realms. Whether fashioned from locally made or imported beads, worked in complex or simple techniques, redolent with symbolic significance or essentially decorative, the pieces explored in this article attest to the high regard in which this medium was held in numerous parts of Asia. That Asian beadworkers drew heavily on other textile arts cannot be denied; that they developed an art of their own should not be forgotten.

Only a tiny fraction of the Asian beadwork repertoire is represented in this article; little has been said about traditions in Central or Pacific Asia. Fieldwork in the few traditions that have survived into the late 20th century—among the Dayak and Toraja, for example—would teach us much; not only about specific types of beadwork, but about human nature and our ancient fascination for creating structure and meaning from tiny, precious bits of matter.

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ENDNOTE

1. Although information on file at the Field Museum of Natural History suggests that this and other related pieces of beadwork in its collections were made in mainland China, there is some reason to question the accuracy of this attribution (Dr. Bennet Bronson 1996: pers. comm.). Until further research is completed, we must acknowledge the possibility that panels such as the one in Pl. IVA could have been made in island Southeast Asia, by or for the Straits Chinese.

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