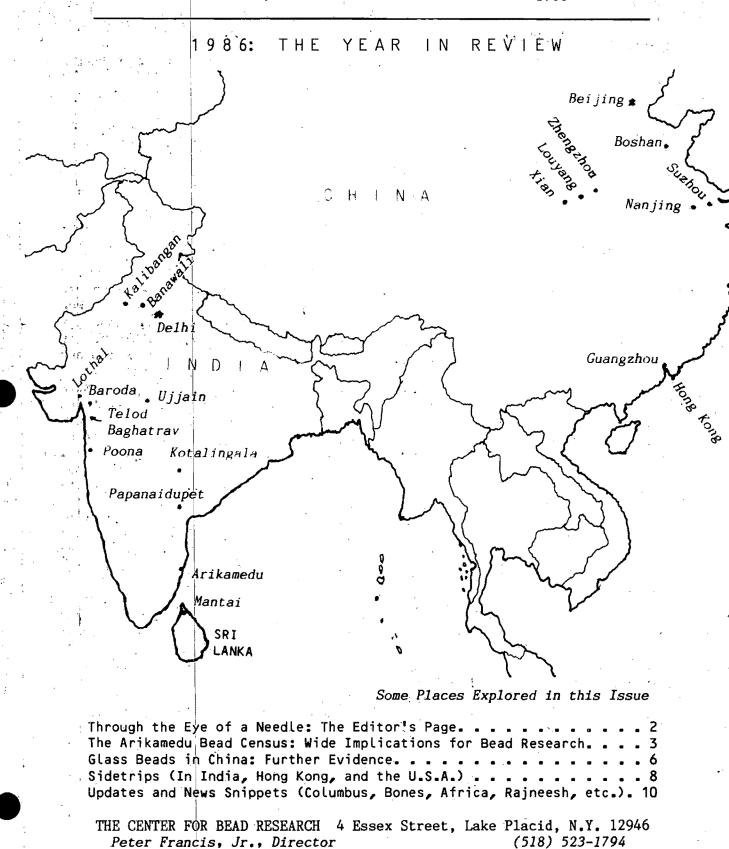
The Margaretologist

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Through the Eye of a Needle: The Editor's Page

The activities outlined in this issue should explain why it is a bit late in coming out. I knew this would happen, which is why your membership actually lasts for four issues rather than two calendar years. I expect the next issue will be published on time. Incidentally, subscribers should let us know if they want their subscription to begin with the first issue or the current one; as long as we have back copies we can run your membership either way, but we must know what you want.

This new year (1987) is shaping up as another busy and productive one. In the first week in January I went to New York City to spend some time with We examined stone (and some glass) Leonard Gorelick and John Gwinnett. beads from Mantai, Sri Lanka, and they showed me a cast of a multipleperforated "trial piece" from Arikamedu which I had furnished them. It was a thrill to see this on the screen of the scanning electron microscope and to watch this incredible machine in action. The picture shows beyond a doubt that the piece had been drilled with a double diamond point, the earliest one thus far documented, and we are now working together to try to trace the development of this important technological step. furnished me with my own kit for making impressions of perforations so that I can send more data to them. I was also pleased to meet with Ralph and Rose Solecki at Columbia U. They showed me beads they excavated at Shanidar Cave and Zawi Chemi in Iraq which are about 10,500 years old, and have asked me to study them in the future. Several other projects involving important archaeological materials are underway and will be duly reported on in future issues. I am planning on a preliminary research tour into Mexico and Central America in the spring, and expect that this will prove fruitful. ,

As for some of our other activities, the Center has initiated a small newsletter, the SEEDBEAD, with a circulation limited to the leaders of the Bead Societies, professional societies, and other bead institutions. There are now 17 such groups, and there has been little interaction between them; it is hoped that the SEEDBEAD will serve as a channel of communication. I am also moving ahead on the Southeast Asian glass bead project. A somewhat lengthy introduction to the problems and some proposed solutions to the complexity of beads in this region is near completion.

We are also planning another Bead Tour of India, most likely in October of this year. Last year's tour went very well, except that members felt that there was not quite enough time in each place we visited. We are rectifying that by extending the tour one week to three, which adds a day to each major stop. Anyone interested in the tour should contact us.

This issue is so crowded that there is no room for our "New at the Center" feature. Actually so much is new, especially in the way of literature, that it would be little more than a bibliography. The library has been greatly enhanced, with many new books and several hundred articles, gathered in Poona, Hong Kong, and Los Angeles, with Robert Liu, Elizabeth Harris, and C. Margabandhu being particularly helpful.

The saddest recent news has been the death of Gerald B. Fenstermaker shortly after his 90th birthday. As a pioneer in bead studies and an always enthusiatic and helpful friend, he will be greatly missed.

Finally, I want to personally express my thanks for your support of the work we are doing here. I trust that we have not disappointed you, and you are enjoying the results of the most intensive bead research program going. We need to expand our support, and you could further help by urging friends and organizations to become members or patrons of the Center or with supplemental donations, including those earmarked for specific projects.

THE ARIKAMEDU BEAD CENSUS: WIDE IMPLICATIONS FOR BEAD STUDIES

Arikamedu, an ar chaeological site in Pondicherry, the former French enclave on the southeast coast of India, is important to bead history. In its time (250 BC to AD 200) it was a major bead producer, and its role in ancient trade is underscored by its having been a Roman emporium, a city outside the Empire where Citizens lived to conduct trade with a foreign nation.

The French first noticed the site; surface collections were made and some trenches dug. R.E.M. Wheeler, the last British director of the Archaeological Survey of India, conducted a summer's campaign there, notable for the Indian archaeologists he trained, and for his influential report. Less well known, although just as scientific and more extensive, were the excavations by J.-M. Casal a few years later. Arikamedu has not been dug since, although the need to re-excavate is appreciated, and recent interest by several scholars has caused a major reassessment of the site.

The excavated beads have been somewhat scattered. Wheeler's finds were deposited in Delhi, although no one seems to know where are now. A few Indian museums have small collections, and there are some private surface collections. However, most of the material is at the Pondicherry Museum, where it has long lain in obscurity. My preliminary survey of the beads was made in 1981. In 1984 I was asked to display them in a form accessible to the public. I designed cases for the Museum, explaining the importance of Arikamedu in bead history, how glass and stone beads were made, and how archaeologists study beads. A guide book to the displays is now in press.

In 1986 I spent a month cataloguing, counting, weighing, classifying, bagging, and labeling some 50,000 beads and wasters in both glass and stone. This Arikamedu Bead Census (ABC) is the largest examination of an ancient beadmaking site ever conducted. The results are now tabulated and a detailed report will be published in the near future. What follows are highlights of the project and some of findings with wide application to bead studies.

Glass Beads: The Indo-Pacific Beads

The majority of Arikamedu beads are small monochromes (under 6 mm diameter), made from glass tubes, cut into short sections, and rounded by being stirred over heat. They are similar to drawn beads found in countries all around the Indian and western Pacific Oceans from South Africa to Korea, dating from the second century BC to about 1500, when European beads flooded the region. I call them "Indo-Pacific Beads."

Indo-Pacific beads were apparently produced elsewhere in Asia: Thailand, Malaysia, Indonesia, and Sri Lanka (the latter was a major producer in the Middle Ages; a report is being prepared), but India was the earliest maker. The Arikamedu refuse provides evidence for the way they were made. It is a process similar to that used today in Papanaidupet, Andhra Pradesh.

The technique for drawing tubes is unique to southern India. As it is complex, and has been described in several other publications, I shall not detail it here. It does not use a blowpipe to stretch out a hollow gather of glass. Rather, it requires two furnaces: one to make glass and another to draw tubes. A dozen men work through the night with specialized tools to draw out continuous tubing from a gather weighing up to 50 kgs.

The complexity of the technique makes it unlikely to have been invented twice, hence: 1. The Papanaidupet beadmakers are the descendants, at least technically of those of Arikamedu; this industry is more than 2200 years old

in southern India. 2. Wherever else these beads were made, the beadmakers must have been Indians; the system is too complex to have been introduced without engaging the whole complement of workers.

Glass Beads of Other Types

Other glass beads were made at Arikamedu using the same drawn tubes (or canes) used for Indo-Pacific beads. Translucent blue-green and blue beads were made from tubes cut into longish segments, reheated, and shaped into faceted cylinders, oblates, and bicones. Collared beads, with a bit of extra material around the apertures, were made in the same way, mostly from opaque red tubes. They were sectioned and grooves made into the ends. Some were left as is and others were flattened to make more prominent collars.

Black spherical beads were made by joining together two segments of black glass rods. These have a joint on one side and a patch of glass opposite, apparently from the ends of the rods. Precisely how this was done has not yet been determined. Unperforated black canes were the raw materials, and a small square clay object (ca. 6 x 7 x 1 cm) with 9 round depressions may have served as half a mold for such beads.

Thus, there were three minor glass bead industries using drawn glass as raw material and producing products different from the common Indo-Pacific beads. These subsidiary industries would have required specialized workers of their own. The limited chronological data we have indicate that the collar beads are older types, while the pressed blue-green and blue beads were not made before the second century AD, toward the end of the site's occupation.

Stone Beadmaking: An Unreported Technique

Semiprecious stone beads were as important to Arikamedu as glass ones. The ABC found distinct methods were used for making stone beads. One is similar to the process known elsewhere in which crude roughouts were chipped and then ground into final shape, perforated, and finally polished.

However, over half of the crystalline quartz (rock crystal, amethyst, and citrine) was treated quite differently. Instead of being ground, roughouts were battered or pecked on the surface to make a bead blank. Next the pecked blanks were polished, and only afterwards were they perforated. A few beads of carnelian, agate, or prase were treated this way, but the method was used principally on the crystalline material (rock crystal accounted for half of all the stone material on the site).

These two parallel but contrasting methods of beadmaking suggest more than one beadmaking tradition and more than one group of beadmakers. Both methods were in use by 25 AD. Stone beadmaking began as early as 250 BC, but there is yet no evidence for which technique was the earlier.

Stone Beadmaking, Beadmaking Tools, and Techniques

Arikamedu was an innovator of stone beadmaking techniques. Earlier beadmaking centers such as Kotalingala (Andhra Pradesh, 5th to 1st century BC) soaked banded agate beads in honey or sugar water and heated them to make brown and white onyx. The banded agate at Arikamedu was also transformed into onyx, but here it is black and white, suggesting the use of sulphuric acid, and not merely heat, after the sugar soaking.







Arikamedu is also the first site known to have produced citrine (golden quartz) in quantity. Citrine is artificially induced by nearing amethyst in a complex two-step process. Earlier sites abound in amethyst, but Arikamedu mastered (or invented?) the method of turning amethyst into citrine.

Diamond drills were certainly used at Arikamedu. India must have been the inventor of this drilling process, as it was the source for all diamonds in antiquity, and had the most active stone beadmaking industry (a report on diamond dills is being prepared). The ABC identified quartz, citrine, and amethyst scrap pieces drilled partly through in up to nine places. These were apparently testing pieces, either for a newly fixed drill bit or for apprentices to practice upon. With the permission of the Pondicherry Museum I took one of these pieces to Drs. John Gwinnett and Leonard Gorelick, well known for their work on drilling processes [1981]. We examined it with a scanning electron microscope, and confirmed that it had been drilled with a double diamond bit, the oldest one thus far known. They also suspect that the pecking of the roughouts might have been done with a diamond point.

Quartz (and amethyst) crystals flaked to make them thin and pointed, and badly battered at their points, may have been tools for chipping beads. One such point was found earlier at Kotalingala, and three points at Arikamedu. It is not yet clear whether the points were fixed (as iron stakes are today) or (it seems more likely) mounted like a hammer head, but our understanding of how the ancients chipped stone is now a bit clearer.

Summary

The immense amount of bead material from Arikamedu alone is enough to insure its position as a great beadmaking center of the past. However, the ABC has revealed complexities in the industry not hitherto apparent. In addition to the Indo-Pacific beads, glass beadmakers produced collar beads, folded beads, and a variety of pressed beads. Among the stone beadmakers, there were two different methods used to produce beads.

Arikamedu was also a center of innovations in beadmaking. It appears to have been the first place where glass tubes were made in quantity and may have been the earliest producer of black onyx and citrine. We have also learned more about the tools used in the stone beadmaking process, including double diamond drill bits and chipping points of crystalline quartz.

More investigations, including more scientific testing of material on loan from Museum for study, are currently underway. The full publication of the results of the ABC can be expected within the year.

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GLASS BEADS IN CHINA: FURTHER EVIDENCE

Chinese Glass Beads: A Review of the Evidence (hereafter called CGB:RE), was published in early 1986. It collated the data in Western languages on the subject, but at the time I remarked that two things were still needed: more work in Chinese archives, and a visit to China by a bead researcher. I had no idea then that soon I would be visiting China myself in the fall.

More work still needs to be done in order to fully understand the history of Chinese glass beads, and this should include another research tour. However, work in several major libraries (Hong Kong U., Chinese U. of Hong Kong, and U.C.L.A.) has revealed that the CGB:RE survey was fairly complete. Nonetheless, some new material has emerged from the research tour, and some of our earlier conclusions can be refined. Here we shall group the new data according to the questions posed in CGB:RE. Readers of CGB:RE will note that the Pinyin transliteration system has replaced the Wade-Giles system.

1. What are the origins of Chinese glass? As CGB:RE discussed, glass in China dates back some 3000 years, and Chinese researchers believe it was a local development. Two white beads found near Louyang (Loyang) from the 11th century B.C. are the earliest glass now known in China, followed by over 1000 glass beads from nearby Baoji; analyses show these beads to be of lead glass with barium, confirming Chinese manufacture, and strengthening the idea that metalworkers made the first Chinese glass [Yang 1985:26].

The earliest glass I saw was a shallow jade-green bowl or ink stone in the Nanjing (Nanking) Museum, from Dan Tou, Great Harbor, Yantun. It was Eastern Zhou in date, 1100 to 770 BC, and clearly a Chinese, not a Western artifact.

2. Was glass continually produced in China? The evidence presented in CGB:RE answered in the affirmative. However, data remains scanty from the end of the Han to the beginning of the Sui dynasties (200 to 586 AD).

The complex eye beads variously dated to the late Zhou (Chou) and early Han Periods [CGB:RE:9-10] should be considered late Zhou, as all excavated examples date to that dynasty. I was surprised to find in the Louyang, Zhengzhou (capital of Hebei province), and Beijing (Peking) Museums a total of only four of these beads displayed.

3. What were the techniques used to produce glass beads? CGB:RE discussed that glass beads may have been pinched from tubes in Tang times [p. 21], if the Chinese could make glass tubes then. The tomb near Xian (Sian) of Li Jingxun (died 608), daughter of the Sui Emperor Xuan, contained several bright green glass objects, including a tube about 12 to 15 cm in length; it is housed in the Museum of Chinese History in Beijing. Ornamental tubes were called guan, and are known from the Warring States period. The ability to produce glass tubes certainly existed before the Tang dynasty.

Ming period beads in the same museum have different perforation deposits; some have a white powder used to separate the bead from the mandrel, a technique used in Han times [CGB:RE:20, 22, 24], others have black iron oxide traces from the mandrel. Not all beads were wound in the same way.

4. Where were the centers of beadmaking? Exciting news confirms Suzhou (Soochow) as a beadmaker in the Song (Sung) period (960-1279). Translucent blue, bright green, and opaque red beads dangle from an elaborately carved wooden pillar housed in the Suzhou Museum. The beads are quite similar to those well known in the later bead trade: they are wound, of bubbly glass, with white perforation deposits. The pillar was encased in two wooden boxes in the third story cellar of the pagoda at Ruiguangsi, Suzhou. Inside the outer case is an inscription dated 1013. It has been described [Yue and Liao 1985:1813], but its importance to the history of glass beadmaking had not been recognized.

The very existence of the Imperial Glass Workshop founded by Qianlong (K'ang-shi), had been questioned [see CGB:RE:16-17]. However, Memoires Concernant...des Chinois [1777 2:477-9] discusses it, saying that an unnamed Jesuit was in charge. Yang said missionaries began a small palace workshop which had only a small furnace before the mid-1700s, when a larger one was built; beads were not listed among its products [1985:27-8].

Boshan (Poshan), in Shantung (Shandong) Province, is the modern center of beadmaking, but other cities made glass beads, too. Beadmaking in the province can be dated as early as 1637 [Sung 1966:308]. In Yenshing, Shantung, beads, ornaments, and glass rods and bricks were made and shipped all over the country [Markham 1870:10-11]. Bangles, often allied to beads, were made at Chi-nan Fu (Shantung) and Ta-tung Fu (Guizhou) [Mesney 1899: 51-2]. The China Yearbook listed glass factories from 1922 to 1927, but not at Boshan; glass ornaments were said to be made at Chefoo, modern Yantai [Woodhead 1922:773-4; 1927:187-9]. Clearly, Boshan was not the only glass beadmaking city in China in the last century.

Chu and Chu [1973:138] reported on glass beadmaking in the hills around Guangzhou (Canton). Gray's walking tours of Canton took his readers to glass factories (including those for mirrors and bangles), but to no beadmakers [1875]; perhaps these factories were simply not on his intinerary.

5. What is the evidence for the export of Chinese glass beads? De Morga (ca. 1605) said 30 to 40 Chinese junks went to Manila annually with "Ecloth goods] decorated with glass beads or pearl trimmings...beads of all kinds, strings of cornelians, and other beads and stones of all colours." [1971: 306]. This is another of several cases of exportation we have noted.

We might also look at some imported glass beads into China. Especially in the Later Han Period (25 to 200 AD) many beads, mostly Indo-Pacific beads (see story in this issue on Arikamedu), were imported into southern China. Necklaces in the Guangzhou (Canton) Municipal and Guangdong (Kwangtung) Provincial Museums display them with other glass and stone beads.

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SIDETRIPS

In addition to the major study projects of Arikamedu and China, several shorter trips this year were also profitable for bead research:

Baroda, Ujjain, and Delhi, India.

Calculated to discourage anyone from traveling, with busses and trains that broke down or never arrived, and a storm that guaranteed a lingering cold, this excursion proved most productive. At Baroda, I examined the Harappan (Indus Valley) beads from Banawali, Haryana, thanks to R.S. Bisht, in charge of the Excavation Branch of the Archaeological Survey. This and material of similar age from Kalibangan examined in Delhi, has two outstanding features:

- 1.) The Harappans artificially darkened banded agate to make onyx. This process involves soaking a bead in sugar water and heating it; the agates porous bands absorb the sugar, which caramelizes upon heating. Beck noted a single treated bead from Harappa [1941:400], but the wide use of this treatment in Harappan times had otherwise gone unnoticed.
- 2.) Many faience beads are decorated with zones, circles, and even some patterns resembling combed glass. Others are glazed; some closely resemble glass. The Harappans did not make glass, but it appeared shortly after them. At present we can only speculate on the role of faience beadmakers in the invention of Indian glass; a project to study this problem is underway.

With some staff members of M.S. University, Baroda we explored two sites said to be of Harappan age and suspected to have been involved in supplying the Lothal lapidaries with agates [Francis 1982:8]. Field work south of the Narmada River in Hansot district revealed only Early Historic, not Harappan affinities at Telod. Bhagatrav was more promising, with Harappan ceramics, but no sign of the bead trade. Negative evidence has its value, too.

In Ujjain, I met with V.S. Wakankar, the discoverer of hundreds of Stone Age rock paintings in central India. He is presently razing his family home to replace it with a museum of local history. Plans were laid to help him catalogue his immense bead collection from ancient Ujjain. Ujjain and the Malwa region require more attention; the city is known to have been an agate beadmaker in Early Historic times [Francis 1982:11], but many neighboring villages also made beads and must have played a role in this industry.

In Delhi, I spent several days with C. Margabandhu, of the Archaeological Survey, who has long been deeply interested in beads. Just before this trip I had lectured to a seminar at Deccan College, Poona, attended by "the best and the brightest" archaeologists from around the country. The overwhelming response, coupled with the enthusiasm I met on this trip, convinced me of the need for a professional society of Indian bead researchers. The foundations have been laid: a constitutional amendment proposed to the Society of Bead Researchers to allow affiliated chapters, and people who have agreed to serve as the first officers: S.B. Deo of Deccan College as President, C. Margabandhu as editor, and T. Gautam of M.S.U., Baroda as secretary.

Hong Kong

Hong Kong is not only the entry point for China; it has its own charms and bead interests as well. Bill Meacham was most helpful in introducing me to the Archaeological Society, an amateur (in the best sense of the word) and vigorous group, which is the center of activity there. Field trips to Lamma and Cheung Chau islands were valuable in understanding regional prehistory. After returning from China, I lectured to the Society on the developing Southeast Asian bead project.

Few beads have been excavated in Hong Kong. Early in the century Finn found some on Tam Kon Shan island [Schofield 1975]; they have been scattered with the rest of his collection. Recently, a shipwreck at Sha Tsui (High Island) yielded a few beads, and I examined them in the Hong Kong History Museum. There was a square biconical carnelian about 1.2 cm long and eight Indo-Pacific beads in red, dark and light blue, green, and yellow. A coin (1078-1085) helps to date the wreck. As in nearby Guangdong Province, the Indo-Pacific beads were popular in southern China for a long time.

A fascinating spot is the daily open-air jade market, a lively scene with tourists buying what they hope is jade for a pittance (the range of imitations is astounding), and Chinese, who deeply love the stone, bargaining or arguing the merits of a particular piece. It is one of the great bead markets of the world. China forbids exporting artifacts over 120 years old, and Hong Kong has the true antiques, but it is caveat emptor all the way.

New York

Soon after returning to the U.S. I went to N.Y.C. to meet John Carswell and receive 2000+ beads excavated from Mantai, northern Sri Lanka, The site was a major link in the Medieval trade between Muslim lands and China, and the beads reflect this role. Imports include an early Medieval mosaic eye bead, beads of lapis, and beads known from Southeast Asia. More important is the evidence of beadmaking: pearls, shell, semiprecious stones, Indo-Pacific and segmented drawn glass beads. The assemblage will shed considerable light on beads of this period and area, both of which are imperfectly understood, and will be reported in greater detail when the cataloguing is completed.

While in New York I also met Leonard Gorelick to give him some Arikamedu samples to examine and to discuss our mutual interest in the history of the diamond drill [see Arikamedu story]. At the Metropolitan Museum of Art I interviewed Oscar White Muscarella, who is active in the fight against site looting, which has become a serious problem for beads in many areas of the world. He spoke of the terrible loss of scientific knowledge whenever art objects, whether ceramics, bronzes, or "even little beads," are plundered. I examined some beads excavated from Nishapur, Iran. The staff of the Islamic Department wanted me to help catalogue them, a project of only about two weeks, but Museum fellowships do not provide for such short-term projects.

Rochester, New York

On November 15 and 16, the Rochester Museum and Science Center held a Shell Bead Conference, the second bead conference they have sponsored. The conference brought together people from around the world who had been working in virtual isolation on these understudied beads, although shell might well be the oldest and most universal of bead materials. There is no room here to even mention the many fine papers presented; Bead Report 21 [Ornament] will have a more lengthy review, and interested readers are urged to buy the proceedings of the Conference (RMSC, 657 East Avenue, Rochester NY 14603.)

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UPDATES AND NEWS SNIPPETS

Beads and Columbus Landfall: A Continuation

"I don't think we can do any better than the beads," said Charles Hoffman when defending San Salvador (Watling Island) as the original landing place of Columbus. This is in reaction to the National Geographic Society's pronouncement that the more southeasterly Samana Cay was the landfall site. The Society's evidence has not convinced everyone of Samana Cay's primacy. Hoffman, who found native made shell disc beads on Samana Cay LJudge:5801, believes the glass beads he found on San Salvador [see our discussion in 1(1):10-11] to be better proof of Columbus' presence. These beads have been analyzed by Robert Brill, who concluded that their lead content indicated a Spanish origin for them, although not proving that Columbus actually brought them. The academic debate continues, and little beads of glass play an important role in it.

Judge, Joseph. 1986 "Our Search for the True Columbus Landfall,"

National Geographic 170(5):566-99 and associated stories; November issue.

Wilford, John N. 1986 "Experts Debate Theory on Columbus," New York Times

3 November, A18.

More on the Drawn "Chinese" Curtain Beads

When acknowledging E. Harris' gift of a sealed package of long tubular glass beads [1(2):10 "Packaged Beads"], we discussed the controversy over their origin. Fenstermaker and Williams [1979:pl. XXIV.1], claimed such beads were found on Chinese curtains imported to the U.S.A. early in the century. Others doubted that the Chinese could draw or silver the insides of beads. Chinese drawn beads, perhaps of some age [see the article in this issue] are no longer in question, and the silvering process (used for mirrors) has also been documented in China [Gray 1875:265-6].

Although the Chinese were able to make such beads, it is still not certain they did. Our package is marked "Made in Japan." However, the Japanese are known to have packaged other countries' beads (e.g. Korea's), and marked them "Japan." Another piece of evidence strengthening the Japanese case is by Klamkin, who shows a "Christmas tree decoration made of segments of glass rods and metallic coated glass beads" made in Occupied (post World War II) Japan [1976:fig. 451]. Visually, they resemble our beads, both the opaque and the translucent-silvered types. Occupied Japan certainly did not import beads from war-ravaged China. Conversely, it is not impossible that China also made these beads earlier in the century.

Fenstermaker, G.B. & Alice Williams. 1979 The Chinese Bead, Fenstermaker, Lancaster, PA.

Gray, John Henry. 1875 Walks in the City of Canton, De Souza, Hong Kong. Klamkin, Marian. 1976 Made in Occupied Japan: A Collector's Guide, Crown, New York.

More Beads from the Bones of the Dead

Our last issue discussed the use of human bones and teeth as ornament, an ancient and widespread custom often practiced to honor the dead. Other examples of the practice confirming our earlier observations have been located while reading through the back issues of the Journal of the (Royal) Anthropological Institute of Great Britain and Ireland (J(R)AIGBI).

More uses of human jaw bones are on record; jaw bone bracelets were used in New Guinea [Comrie 1877:113]. At Pushila, British Hondoras (Belize) was found, "A remarkable bone pendant formed from the ascending rames of the right mandible of a human lower jaw. The condyles have been filed off and just below the notch a hole has been pierced for suspension. The exterior surface is covered with relief-carvings, the main feature of which is four glyphs arranged in a square." [Joyce 1929:446-7]

The Ba-Mbala (Zaire) allow only men to wear human teeth, with leopard and ape teeth, the latter usually imitations [Torday and Joyce 1905:402]. Shell imitations of human teeth for necklaces and bracelets from New Zealand were said to be a Melanesian practice [Skinner 1916]. On Mallicollo Island, Fiji, Goodenough saw a man with "a small bone of a man's leg [sic] hanging in his right ear as an ornament"; he traded it for a hatchet [1887:335-6]. As to social significance, wizards of the Nyasa Region (Malawi) made necklaces for their apprentices of human teeth, thumbs, eyes, nose, and privates, from the still-born of a relative of the pupil, who could not be instructed until a relative of his was pregnant [Garbutt 1911:301]. The tooth necklaces from the Gilbert Islands were not from enemies; they were gathered from relatives' graves beneath the floor of the house. The necklaces, used for dancing, were made only of canines. Some High Chiefs had necklaces said to contain teeth of Tem Mwea, the founder of the dynasty nine generations before, indicating the age of this practice [Grimble 1921:47-8].

This new data extends the range of the practice with our first example in the New World, and the Melanesian origin of the custom in the Pacific. It also confirms that it was mostly done in respect for the dead, and brings a new element of magic into it.

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Fair Prices for Southern African Beads

In a twist to the old story, tribal people now sell their beads to traders, who resell them at huge markups. The !Kung San once received but \$.15 for a necklace of their ostrich eggshell beads, which sold in the cities for \$15. In 1969, Botswana formed Botswanacraft, which pays two-thirds of the retail price to the native makers [Lee 1979:425].

More recently Operation Hunger has driven out the exploitive traders from the commerce in the world-famous beadwork of the Ndebele of KwaNdebele, a South African "homeland." The women now sell their beadwork, some of it heirloom, only to Dinah Mabudafhasi, who visits the weekly Kwa-Dlawulale market. This not only gives the desperately poor families ready cash, (more than US\$50,000 in the preceding six months), but the profits help feed some 10,000 malnourished children in the region [Jeffrey 1986:269-70].

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The Beads of Rajneeshdom

As my Indian research is based in Poona, I am often asked about Bhagwan Sri Rajneesh, who has a large ashram there. Knowing this, Elizabeth Harris sent me an article about him. I have long been curious about their malas, wooden bead necklaces with a pendant picture of the guru. The devotees make them, and they are given by Rajneesh to each new convert. I could never obtain one, but the article often notes their use.

Rajneesh's first devotee, Ma Yoga Laxmi, initiated the malas, as well as the red/orange clothes for the sect; they were given out by the guru from the beginning [part I:78]. They evolved into social markers: when things got tough in the Oregon commune (Rajneeshpuram), visiting disciples had to add a special bead on their malas to denote their exterior status [I:90]. On the other hand, Ma Prem Sheela, who ran the commune, took to wearing malas with pearl or diamond [?] beads [II:106].

The malas symbolized the faith, but for expediency, disciples teaching in the public school tucked them inside their shirts to conform to church-state separation [II:87]. After Sheela and her cohorts had fled to Germany, the guru told the remnant of his following that it was no longer necessary to wear malas or orange clothes. They were burned in a bonfire, "but when sannyasins appeared without their malas and in green or blue, he [Rajneesh] chided them for so easily giving up the symbols of attachment to him. The malas and the red clothes went back on." [III:110]

Rajneesh will end up a footnote in history, and the malas won't even rate that, but their ups and downs are one more example of the roles beads play, even in the modern world.

FitzGerald, Frances (1986) "Rajneeshpuram," (2 parts) *The New Yorker*, 22 September (Part I) pp.46-96; 29 September (Part II) pp. 83-125.

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