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The World of Beads Monograph Series: 3

THIRD WORLD BEADMAKERS

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PLATE I

Beads From Gorece, Turkey

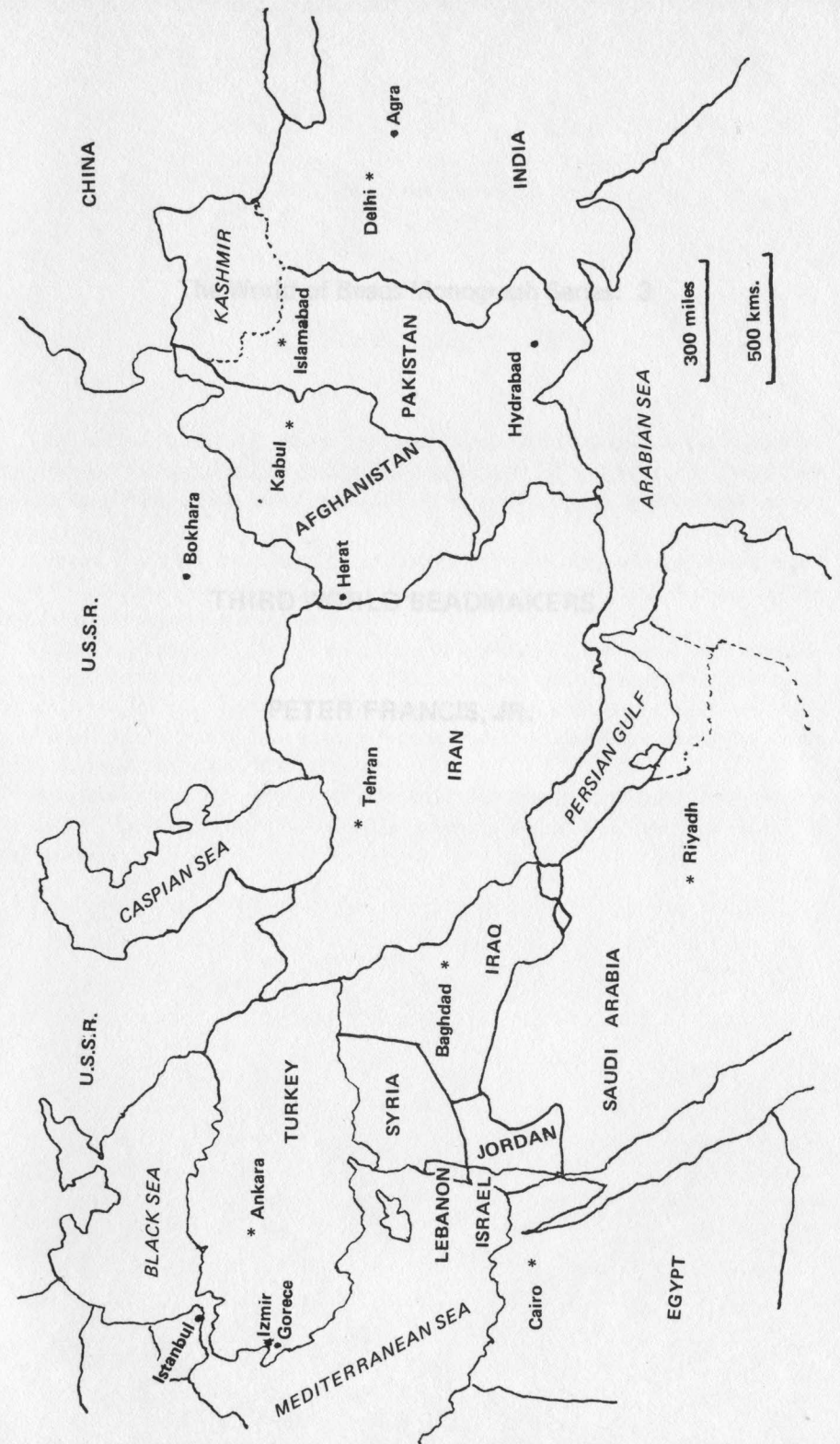
- Row 1: Eye beads in a variety of sizes.
- Row 2: Short square tubes with eyes, showing color ranges.
- Row 3: Eye beads of various shapes.
- Row 4: Solid colored beads and rings. Last ring has eye.
- Row 5: Impressed bicones, plain bicone and melon beads.
- Row 6: Plain tube, trailed tube and combed tubes.
- Row 7: Rosette tabulars and fish.
- Row 8: Various novelty shapes.

Beads from Bokhara, Russia

- Row 9: Wound tubes in varigated colors.

Photo Credits: Hal Scott & Elizabeth Hiser

Color Plate 1



The World of Beads Monograph Series: 3

ACKNOWLEDGEMENTS

The author wishes to express the great appreciation to the people who have been so kind in helping him gather the information for this work. If there were to be a it would have been quite impossible to undertake these bead-making projects without their assistance.

George, Turkey: Mr. Zeki Erdel was of immense help and extended much time in getting the information for this work and in explaining details of the process of bead-making.

Yemen, Afghanistan: Due to the official censorship, the author was unable to obtain the data of April, 1972. The author did not have the opportunity to actually visit the country, but he was able to obtain the data from a number of the country's people who were in the country at the time of the author's visit.

Yemen, Pakistan: Mr. Amir Ahmad Saleh was most helpful and generous in his role as host, interpreter and tour guide, as well as a source for a wealth of information.

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The author wishes to express his great appreciation to the people who have been so kind in helping him gather the information for this work. Without their help it would have been quite impossible to investigate these bead making centers adequately.

Gorece, Turkey: Mr. Zekai Erdal was of immense help and expended much time in putting together both the history of the bead works and in explaining details of the process of manufacture.

Herat, Afghanistan: Due to the officially mandated abbreviated time schedule even before the *coup d'etat* of April, 1978, the author did not have the opportunity to actually visit the factory site. However, he spent a delightful time with Jalil, a member of the family, interviewing him and gaining information about the works from someone who knew it intimately.

Hydrabad, Pakistan: Mr. Amar Ahmad Shiekh was most helpful and generous in his role of host, interpreter and tour guide, as well as a source for a wealth of information.

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Third World Bead Makers

Glass making is a traditional craft usually handed down from father to son. The rudiments of glass production are relatively simple, since the raw materials are widely available and the techniques can be learned without undue problems. When we consider the usefulness of glass, then, it is not surprising to discover that there are a large number of glass houses of various sizes in many of the world's countries, including the developing nations. Most of these factories produce simple glass for practical purposes such as window panes, bottles or tableware. The products are generally consumed locally, and there is usually sufficient demand to sustain production.

In the case of glass ornaments, however, a slightly different picture occurs. Due to the dominance of a few great glass bead making centers — Egypt and Syria in Roman times and Italy and Czechoslovakia in our own day, for example — and because of the much smaller markets for glass beads than for utilitarian glass, it has been a widely-held unwritten assumption that bead manufacture has been confined to a very few centers.

As an example of this assumption, we might cite van der Sleen's *Handbook* in which he lists only a very few modern glass bead makers. (17: 113—116) Of those he names, four are European and only a few are in developing countries. The powder-glass bead makers of West Africa (Ghana, the Ivory Coast and Nigeria) are cited by van der Sleen and have been adequately covered by other writers. (e.g., 6; 12; 14; 16) Outside of West Africa van der Sleen notes only Hebron, in the West Bank.

However, this assumption is now under serious challenge. Recent archaeological evidence has begun to point to a number of bead-making sites, or the possibilities of such sites far from the known centers of bead production. (e.g., 1; 3; 4; 5; 8; 9; 10; 11) These minor sites show that bead manufacturing was not as confined to a few places in the past as had been previously thought.

A similar pattern of many small bead makers in our own day can now also be confirmed. In addition to the Western African locations and Hebron, glass beads are currently being produced in Egypt, Syria, Turkey, Afghanistan, Pakistan and India. It seems likely that there are other centers as well yet to be uncovered.

Since the literature is almost completely silent about these bead producers of the third world countries, the only source of knowledge about them is to visit the factories first hand. The author has done just that in several locations and hopes to expand this work in the future. Nearly all of the following information has been gathered by personal visits to the glass bead makers in 1978 and 1979.

General Considerations

This study is concerned with glass bead makers in three developing countries: Turkey, Afghanistan and Pakistan. Each of these centers manufacture unique products and each of the three locations carry out bead making traditions much older than the present works. One of the values of studying such bead makers is that they provide a clue to the bead production techniques which were in use long before the present, for in each of these three study cases, the workers have immigrated to their present locations, bringing with them primitive techniques which they still apply to the making of glass beads.

In the cases which we shall be studying we shall be concentrating on several aspects of the bead makers' story. It will be of interest to trace the history of the current works as far back as we can, to understand the means of producing the beads, to discover the source of raw materials where possible, to learn about the market for the beads made by the factories and to distinguish the actual beads made at each center.

TURKEY

The glass bead makers of Turkey are currently found in three villages along the western (Aegean) coast of Turkey: Gorece, Kamelpasha and Bodrum. The origin of each of these centers, however, can be traced back to about 1880 when two glass workers, Salim ve Halil and Husnu emigrated from their home in Lebanon and set up shop in the Kadifekale district of the near-by city of Izmir. Apparently their movement was entirely voluntary, and they were able to make the transition easily because they were simply resettling in another part of the Ottoman Empire, which encouraged the movement of craftsmen as had the Roman, Byzantine and Muslim empires before them.

Salim ve Halil and Husnu were not originally bead makers, at least they had not come to Izmir to make that product, but were, rather, makers of glass bangles, greatly favored ornaments in the East. The demand for bangles, however, did not meet their expectations, and so they switched their production to making beads. As it is not uncommon to find bead makers also making bangles, the chances are excellent that both had been produced in their former concern in Lebanon, and so the switch is not a drastic one. (see Afghan and Pakistan sections.) The beads they began to make were designed for a particular market - that of ornaments for horses used extensively in Turkey to ward off the Evil Eye. For this reason the beads were nearly all of a blue color and they were undecorated. The new bead production business proved modestly successful.

There was a problem for the little glass factory, however. The great quantities of smoke produced by the burning of pine wood greatly annoyed the neighbors of the district. This was apparently the chief motive for another move by the glass factory now under the management of Mehmet Erdal, to the small village of Gorece (pronounced Go-rej-eh) around 1930.

The plain blue horse beads continued to be the basis of production in Gorece until 1951, when the factory started producing beads with decorations of two or three layered rings of contrasting colors to produce eye beads. These were well received by the local people, but the repertoire of beads was still quite limited.

After the death of Mehmet his son, Zekai Erdal, became master of the works. By about 1960 Zekai had concluded that he could sell many more beads if he expanded his line and could encourage the growing number of tourists to buy his products, as well as sell them to his compatriots. He then embarked on a research program, visiting several museums of the area, including such famous Greco-Roman sites as Symna, Pergamun and Ephesus. He consciously copied designs that had been employed two thousand or more years before the glass beads, worked out methods to reproduce them and manufactured them in his factory. His idea was not to precisely imitate the old beads, but to gain inspiration for designs and techniques.

Zekai Erdal's business sense was a boon to the Gorece economy. The village has a population of around 1200, but has four bead factories, employing a total of 100 workers during the peak season. The workers are not, for the most part, full-time for most of them tend farms as well, and work when there is little to do with the land or the flocks, especially in the winter. The community benefits even more directly because the workers own their factories jointly, and thus share in the good fortune of an expanding business. In the last decade or so, business has become

sufficiently good that some of the workers have left Gorece and resettled in Kamelpasha, and another master has set up shop at Bodrum. Gorece, however, remains the center and the largest producer of Turkish glass beads.

Bead Production*

The beads are produced in small cinderblock buildings placed just outside the village itself. In the center of the house a furnace of mud-coated bricks about 90 cm. high is constructed. The furnace has a slight dome top and five arms jutting from the sides, which form five bays, four of which are used by single workers and the fifth as an opening into which the wood is fed. The furnace is rebuilt each year.

The basic raw material for Gorece beads is broken glass bought from scrap dealers in the city of Izmir. The glass is broken down into small pieces and added continuously to the batch as it is being worked. Coloring the glass is quite important, as most of the glass is colorless or simple bottle-green. The most used color is blue, which is formed by adding copper oxide, salt and sawdust (or wheat husks, for even burning) to the glass. The copper oxide is obtained from local coppersmiths who heat copper to red-hot and then plunge it into water, which produces the necessary powder. The variations of light and dark are made simply by controlling the amount of colorant used in the glass. Yellow is produced by mixing one part of zinc with two parts tin and four of lead and heating the mixture at the furnace. White is made from bone dust, which is heated at the mouth of the furnace for a day. Green is simply the mixture of blue and yellow, while red and many other special colors are rarely used and obtained from the original colors of the re-cycled glass. Sismanoglu stated that the glass masters were not aware of the chemical compositions of the dyes they employed, but Erdal was able to inform me on my visit; perhaps he had been informed by Sismanoglu the year before.

To make a bead the worker sits on the floor in front of his opening of the furnace. Just inside this opening the glass is kept at a constantly molten temperature, and each worker has several colors of glass at each opening. He takes a long rod, the *asebe*, and dips it into the blue glass and twirls it a few times, building a glob of glass onto the mandrel. He quickly removes the glob and shapes it into a rounded form with the help of a curved scoop, the *kalip*. The globe is then reheated and in the meantime a smaller mandrel with a 90 degree hook on the end, the *merdan*, is used to draw up a small bit of white glass. The globe is then withdrawn and the white glass is placed on the bead, forming a ring. Again the bead is reheated

*After visiting Gorece, the author came across the report by Sismanoglu (13) which he had presented the year before. Nearly all of the information presented was identical with that gathered personally from Mr. Erdal, who was most likely Sismanoglu's source. Therefore, the paper has not been referred to in the text, but the author wishes to call the attention of interested readers to it.

and the *merdan* takes another bit of glass, this time yellow, and that is placed on the white ring. The process may be done a third time with a bit of blue or black glass and then the whole bead is remarved with the help of the *kalip* scoop, knocked off the *asebe* mandrel into a closed compartment on the side of the furnace, and left there for cooling.

This compartment, the *kavara*, is closed off from the direct flame, as opposed to the open bowls, the *canablar*, which hold the molten glass. Glass must be cooled slowly so as not to crack, so the beads will sit in the *kavara* for 24 hours, or at least overnight and slowly cool as the furnace itself cools off after being shut down for the night.

The bead whose manufacture is described above is one of the larger common eye beads, but there are a number of other types of beads that are made by the Gorece workmen as well. Another common shape for the eye beads is tabular or heart shaped; they are made as described above, except that they are not rounded by the scoop, but are flattened by shovel-like instruments, the *metleke*, some 10 cm. long. The author timed a good worker for some while and determined that a large eye bead with a diameter of about one inch (c. 2.5 cm.) with a tri-layered eye took 30 seconds to make, while a heart shaped tabular of about twice that in length, also with a tri-colored eye needed 80 seconds to produce.

Two other tools are necessary for the whole operation. A short *kazaki* with a bent end is used to gather glass which has gotten mixed in the furnace and has to be replaced in the proper section. A thick, heavy tool called the *kachek* is employed for stirring the glass, particularly as new broken glass is added to the furnace during working time. Also, each worker has two anvils, made from old railway rails, one in front of him on which he works the bead and one behind him, which he knocks the mandrels against to improve his grip. All the tools, except for the anvils, are made by the workers themselves from iron rods. Interestingly enough, the tools retain their Arabic names from the work brought from Lebanon 100 years ago; even though none of the workers speak Arabic, they have retained the old names for their equipment.

The Beads (Plate 1, Rows 1—8)

The beads produced by the Gorece factory are mostly variations on a single theme. By far the most popular of the Turkish beads are those with eye motifs, designed to keep away the malevolent power of the Evil Eye. Such beads make up the bulk of production, the most common being blue with yellow, white and blue eyes. They are mostly oblates or slightly ovoid, but are also made as square tubes, tabulars and heart tabulars. They range in size from ½ mm. to 8 mm. (3 inches) along the longest axis. All sorts of color combinations are made of the eye beads, and a great variety, especially among the short square tubes, can be found.

Unicolored beads are also made, including oblates, short tubes and bicones. Some of the bicones have impressed wave decorations on their surfaces, but otherwise impressed decoration is not found among Turkish beads except for melon beads. Oblates and tubes are also sometimes decorated with trailed zones of different colored glass. An attractive bead made since 1970 is a round tabular with a rosette of eyes, five of one color and the center of another.

Perhaps most interesting are beads made in direct imitation of old Roman beads. Several of the above beads may be so considered, though they are very common types. However, tubes with combed lines look much like their ancient counterparts, and the Gorece bead makers also produce jug-shaped beads with two handles which recall (except for the eyes) a particular Christian amulet of the fourth century, (15: 112) as well as some horned eye beads.

Incidentally, in the Istanbul bazaar the author has come across several dealers selling strands of zoned oblates and combed tubes which had been artificially weathered in some way and were being offered as ancient beads (they were said to be Phoenician.) This kind of dishonesty is no doubt more than mere misidentification, as these beads must be well-known to Turkish merchants. It was the translucency of the beads that first made the author suspicious, as Roman beads were rarely translucent, and the subsequent visit to the Gorece factory cleared up the mystery. In no way is it being suggested that the bead makers have anything to do with this duplicity.

A number of novelty bead types are also made at Gorece, many of them employing eye forms. One bead is made to look like a cat's head, while two others have small, smiling human faces, one a head and the other a body. Fish are also made, with perforations going lengthwise. Small boots and occasionally crosses are also manufactured as glass beads at Gorece. A special type which was discontinued around 1960 was made of opaque glass in graduated shapes of rounded claw-like pendants.

In some cases the beads are sold connected to other ornaments made of ceramic in various shapes, a horseshoe being the most common. These ceramics are made and put with the beads at factories at Eskişehir and Istanbul.

The Gorece glass factories produce a limited amount of other products. The only other ornaments they produce are finger-rings of various unicolored glasses, though an attractive one with an eye is also made. The workers also produce a few ashtrays and candleholders as well as large fish as knick-knacks. All of these products are made in the same manner as the beads, decorated with eyes and have perforations where the mandrels have held the glass to be shaped.

The primary market for Gorece beads is Turkey itself. The beads are worn by women, but also widely employed as eye charms on busses, trucks and cars, as well as their original use on horses. Turkish artists employ the beads, which often have large holes, in macrame pieces. Some of the more fancy objects are used on keychains. The very large tabulars have been used to decorate walls, being

employed for hotels inside Turkey and in Europe. Such uses, which require large amounts of specially made beads, must be ordered in advance. There is some export trade to Europe and the USA, and also to other Middle Eastern countries, where the eye charms are appreciated.

AFGHANISTAN

History

The Turkish bead makers moved from their home in Lebanon on their own volition, but the glass makers of Herat, Afghanistan, are just one group of a long list of refugee bead makers forced from their original homes by political or military events. The Herati bead makers had originally lived in Bokhara (in Soviet Uzbekistan) and left that city in 1917 to escape the Communist regime which had overtaken Russia in that year.

Earlier history of the glass makers is not known, but it is interesting to speculate on the origins of the Bokhara glass makers. They may have come to the Central Asian city as some of the many medieval itinerant members of glass guilds who journeyed to centers in the Middle East and Central Asia practicing their art. In this case, they may have found Bokhara congenial and settled there. On the other hand, they may have been descended from the Syrian glass craftsmen who were deported *en masse* by the conqueror Tamerlane after his invasion of Damascus and Aleppo in 1402. Tamerlane forced the glass workers, as well as other craftsmen, to his capital at Samarkand (also now in the U.S.S.R.). Samarkand was subsequently invaded several times and it is possible that glass makers from there moved to near-by Bokhara. This is mere speculation. Though it is known that some beads were made in Samarkand (7: 248), none are known to the author to have been recorded as being made in Bokhara. As an example, Burnes in his *Travels into Bokhara* of 1834 mentions no glass works. This is not conclusive since Burnes was not primarily interested in the city's industry. (2)

The Herati glass works were visited briefly by the author in April, 1978. In the week following that visit the Afghan government was overthrown by a Communist-led *coup d'état*. Since that time there has been heavy fighting throughout Afghanistan, including the Herat area, by the citizens trying to reverse the revolution. It is not known at this point what effect this has had on the Herati glass works. It is possible that the glass makers who once fled Communism have done so again. In that case it is altogether possible that glass beads are no longer being produced in Afghanistan. As travel has been severely restricted, nothing definite can be said as of this writing concerning the future of the Herati bead makers.

BEAD PRODUCTION

The glass used for the Herati beads is produced at the factory itself from local sand and using the abundant pine trees in the area for fuel. The use of pine, which we have also encountered in Turkey, is favored, as it burns with a steady high heat, which is what glass making needs, even though it is inconveniently smokey. The glass made in Afghanistan is a simple translucent type showing many imperfections, including bubbles and clay inclusions. Only four colors are made: blue, green, clear and brown/amber, but the glass is lively and has a charm of its own.

Beads are produced by the winding method as is used in Turkey, but the technique differs radically. Instead of being wound onto the mandrel dipped into the molten glass, glass is removed from the furnace with a scoop and is dripped onto an iron rod, which is rotated. This operation must be done quickly because the glass cools and then becomes unworkable. Most beads are made with a double wind of glass, and the maximum workable length of the glass along the mandrel is about four centimeters (a little less than two inches.) In this length the operator may choose to make a single tube bead (c. 10 mm. in diameter,) four large oblates (15 mm.) or six smaller oblates (10 mm. or less in diameter.) The oblates are made in series, that is, attached to each other and broken apart later into single beads or double or triple segmented beads. The mandrel used for the beads is tapered so that the perforations are slightly conical. As might be expected with this crude process, the final diameters and lengths are widely variable.

In 1978 there were only four workers at the factory, which is located a couple miles outside of Herat. The grandfather, his son and two grandsons did all the work. A third grandson was employed as shop-keeper in the small show room the family had recently opened next to the large mosque in the center of the city. Only a few beads were produced each day, as demand was not great and other products are made as well.

Among the other glass products made at Herat are tumblers, ashtrays, bowls and whimsical trail-decorated candle holders. These items are all made out of the same glass as is used for the beads. Another product of interest is produced as well: bangles. These bangles are made on large cylinders, wound three times around and resemble the rest of the stock. The bangles are fairly large, 8 to 8.5 cm. in diameter and a centimeter thick and are heavy, weighing from 20 to 25 grams each.

The Beads (Plates I, row 9 and II, rows 8—10)

With the limited facilities and markets of the Herati makers we can only expect a small range of beads. This is, indeed, the case. In addition to the tubes, segmented tubes (perhaps better called multiple beads) and sub-oblates mentioned above, only two other types of beads are made.

Both of these other beads are conical in shape. One is a plain cone, 20 to 25 mm. in length and varying from 5 to 15 mm. on the two ends. The other cone bead is very much larger, up to 65 mm. in length. These second cones are only made in brown glass and have been wound so as to produce definite heavy wind marks around the surface. Then they are combed, drawn down four or five times with a rod along their lengths, to produce an effect that reminds one of nothing so much as the pine cones which abound in the area.

The beads being made in Herat at present have obvious connections with those that were made by the family while still at Bokhara. (Plate 1, 9) A strand of these Russian-made beads show that the manufacturing technique has not significantly changed, even though the quality of glass is very different and the older beads were more carefully formed. The Bokhara beads are tubes wound on tapering mandrels in the same way tube beads are being made in Herat. However, they are made of a finer glass of varigated color, ranging from olive to mustard. The Bokhara beads have also been refired so as to smooth out the wind marks and give their surface a polish. That step is no longer being done in Herat, a loss of craftsmanship that my informant, Jalal, bewailed. One other difference between the Bokhara beads and the Herati ones is evident. The Bokhara tubes were sometimes made in pairs and later cut apart, as is done today with the smaller beads in Herat, though tubes are no longer being produced that way in Afghanistan.

Afghanistan itself is the largest market for the Herati beads; they are worn by women and also put on animals for protection from the Evil Eye, which is feared there as well. The largest amount of exporting was done to Iran, though Herati beads are seen only occasionally in that country. On rare occasions they have been sold to Lebanon and to Europe. What the revolution has done to this trading pattern as, indeed, to the whole production, will have to be investigated at a later time.

PAKISTAN

History and Production Methods

The bead makers of Hyderabad, Pakistan are, like those of Herat, refugees. They are the Muslim Bead makers who once worked in the glass centers around Agra, India, and chose to go to Pakistan after partition in 1947. They have been working in Hyderabad, then, for only about 30 years.

The Hyderabad bead makers' district is the largest of the three surveyed in this work. In a section of town named for the bead makers about a dozen furnaces are operated, each one employing from ten to fifteen people. The furnaces are fired only every other day, being allowed to cool on alternate days while other work is done to keep up maintenance. In addition to the furnaces in the district, there are a large number of home-workshops which are dedicated to the making of bangles, which are a very popular ornament in the Indian sub-continent. The raw bangle forms are manufactured by the bead makers and are decorated and polished in these separate establishments.

The furnaces are large round clay structures, about two meters in height and diameter, half dug into the ground. Along a ramp the wood (a scarce commodity in this arid region) is placed to burn for the necessary heat. Along the top of the furnace are from ten to twelve stations, each of which is an open square shelf into which a cubical clay box is placed. The glass is melted in these boxes, one color per box. The glass is obtained commercially from the Indus Glass Company of Hyderabad and is supplied in flat cakes about fifteen cm. across (6 inches) in any color desired by the bead makers.

The beads are made by drawing glass out of the clay boxes with a metal scoop and trailing it onto a mandrel twisted in the right hand. The mandrels are from one to one and a half meters in length. Three to four beads are made at a time on the mandrel before the glass cools and is no longer sufficiently plastic, but the beads are made separately, not in connected series as at Herat. After reheating, the beads are shaped with a small triangular metal paddle about ten cm. long, mounted on an iron rod. A great variety of shapes and designs can be made with the deft manipulation of this paddle. If more than one color is desired for a bead, the worker goes to other color boxes and applies the appropriate hue. When the beads are completed they are placed in a cooling chamber connected to the furnace.

The boxes holding the various colors last only a week and then are broken out of the furnace, the glaze is removed and new boxes are constructed. This is one of the activities of the off-days. A good worker can make as many as 12,000 to 15,000 plain beads in a day. Ornamented beads of any sort, of course, take relatively longer to make.

The Beads (Plate II, rows 1-7)

Of the three bead producers of the developing countries we have surveyed, the Pakistani factories manufacture by far the greatest range of bead styles. The range of colors they have available is quite large, as they obtain their glass in raw cakes directly from a large glass producer. The designs that are employed are varied because of the long tradition that India has in the making of beads and because new ideas are introduced by way of commissions from foreign customers. The Pakistanis say they can produce any design of glass beads a customer may want.

There are a great many different sorts of beads produced in Hyderabad. Opaque and translucent glasses are made into oblates, tubes, bicones, short cylinders and 'garden roller' cylinders. These glasses are further decorated with zones of other colors. One particularly effective bead is a black matrix with a raised line of white spiralled along its length. Black bicones are made with added circles of red, yellow and white, and a black oblate is produced which resembles white-spotted eye beads made by many other manufacturers.

A number of specially impressed designs are employed. Some of these are old types like melons and mulberry and even an old Indian type consisting of translucent tubes with impressed rows of dots along their lengths. Black melons are made with trailed zones of white, green, orange and yellow, duplicating similar zoned melons found in many collections whose origin is a question of controversy. A unique impressed design is that of an eye form pressed into oblates. The eyes are ellipsoids with circles and dots in their middles.

Among multi-colored beads the Pakistanis excel at producing beautiful swirled glass forms. These come in nearly any bead shape: oblates, tubes, cubes, barrels, tabulars, bicones, melons and heart tabulars, as well as several gadrooned forms and a distinctive large, wavy-edged disc. Another design used is an impressed form distinctive to India and Pakistan. It is a tri-lobed bead made by pressing the triangular paddle into the side of a barrel. Yet another special type is an oblate that has been 'pinched and twisted' causing the glass to swirl around the depression.

Crumb beads, made by adding small bits of glass to the surface, are also made in Hyderabad in a number of different styles. They vary in size and are shaped into oblates, long cones and 'garden rollers'. The Pakistanis also make a bead in imitation of the Venetian millefiori. The canes are no doubt imported from Venice, and they are made in Hyderabad into oblate and cylindrical forms. These imitations have large solid colored patches and are colored on the ends, unlike the Venetian products.

Pakistani beads sell within the country, which is a large market itself, and have been exported to neighboring Iran. The Pakistanis have also exported their beads to many other places, particularly the USA and, to a lesser extent, Europe. Business has slowed some in the last few years and is not as voluminous as it could be. One would expect that with the technical expertise, the fine product, the low wages and consequent low prices that the Hyderabad bead industry might be in line for an increase in foreign orders.

CONCLUSIONS

A study of the bead makers of these three centers is valuable because in their way they each continue older bead producing processes from other locations. Each of the centers in Turkey, Afghanistan and Pakistan have been functioning for only a century or less. They are all immigrants to new places. Of the three,

only the Turkish bead makers left their original home in Lebanon of their own free will; both the Afghan and Pakistani workers left because of political events. The three centers are all relatively small industries, ranging in size from the tiny Herat works to the largest of the lot, the Hyderabad bead factories, which may employ as many as 180 laborers. The bead makers are all found within countries which have not become completely industrialized. All of these factors play a part in the continuous bead making tradition which they represent, apparent in the use of old style glass furnaces, simple tools, primitive production methods and, interestingly, in the common use of wood for fuel.

Thus, it is particularly important to the history of beads that these centers perpetuate processes that were old before the establishment of the present factories. It is true that the Lebanese who moved to Izmir in the last century originally intended to manufacture bangles, but we have observed the close connection between bangles and beads in each of these centers, and the fact that the tools and furnace sections retain their Arabic names strongly suggest that the original immigrants were familiar with bead making techniques which they had first learned in Lebanon. Thus, in Turkey we have one of the last continuous bead making centers in the Levant aside from Hebron.

The connections between the older centers and the newer in the case of the Afghan and Pakistani bead workers is also evident. The beads made in Bokhara, Russia, before the family moved to Herat bear close similarities to those made today in Afghanistan. The beads produced in India are not dissimilar to those made by the Muslim immigrants in Pakistan. In both cases the old techniques have survived into new settings.

There are some differences between the three centers, however, and these bear scrutiny, as they are important to the history of beads. The primary difference is that even though each of these centers make wound beads they make them in quite different ways. The Turks wind the mandrel directly into the molten glass in the furnace, while the Afghans and Pakistanis draw the glass out and wind it onto a mandrel outside of the furnace. Furthermore, the Afghans make a series of beads which they later cut apart, except in the case of tubes and cones, and the evidence shows that in Bokhara the tubes, too, were made in this way. While the Pakistanis do occasionally make multiple beads, this is only done for special effects; most of their beads are made individually, even though three or four can be wound on a mandrel at a time. These distinctions are rarely touched upon in the literature and may provide clues to other bead making centers.

The types of beads made at each of the centers are markedly different from each other. Each makes beads primarily for the home market, though they all export their products to some extent, the Turks and Pakistanis being the most successful. The tiny Herat glass works is extremely limited in its varieties of beads, making only five types of beads from four colors of glass. However, this is suitable for them, because beads are a side-line as they are employed in producing other glass

products as well, and their market apparently calls for no other types of beads. The most employed bead in Afghanistan are tiny seed beads used to decorate clothing and accessories, but these beads are technically out of reach of such simple manufacturers, and must be imported.

The Turkish beads are much more varied than the Afghan, but their styles are largely variations on the dominant theme, that of the eye bead designed to protect against the Evil Eye, the most widespread superstition of the Mediterranean basin and the Middle East. In recent years, especially under the leadership of Zekai Erdal, the Turks have expanded their range of styles, many of which are based on ancient bead types. These are sometimes made well enough to be 'aged' and passed off as antique beads by unscrupulous dealers in the Istanbul bazaar.

The widest range of beads is produced by the Pakistanis. They have the largest number of workers and factories, access to the best glass, more export orders and middle men who search for newly commissioned styles. As a direct descendant of the Indian bead industry, they have also inherited many differing styles from the flourishing trade practiced there.

Though the furnaces, tools, fuel and some of the techniques show similarities, one marked difference between these three centers is the source of glass they use. The Afghans make their own glass, and though it has its own appeal, it is the least fine glass of the three. Next in quality, though quite variable in fineness, is the glass used by the Turkish bead makers, who recycle bottles and other glass products. The best glass of the group is that used in Hyderabad, as might be expected, since they buy their glass directly from a commercial factory and are able to obtain any type or shade they desire for their work.

What of the future of these small bead makers? As in the past, politics and economics will largely determine whether they continue to exist or will be forced to shut down. Each of the countries surveyed have deep political and economic problems, but the very existence of each of these bead centers prove the ability of the manufactures to ride out at least some of the storms which they face. The most precarious of the three is the Afghan factory. It is possible that it doesn't even exist at the time of this writing, for the family fled Communism in Russia 60 years ago and might have already fled it again in Afghanistan. On the other hand, they might have remained to fight or wait out the tenuous hold the new government has. Neither of the neighboring states of Iran, Pakistan or Russia would seem to offer the Heratis a good place to set up shop, so perhaps they are holding on.

The economic situation in Turkey is going from bad to worse. Prices are escalating at a rate of about 70% a year, and this may mean trouble for the bead makers. The price of raw, even recycled, glass has gotten rather high, and the beads made by the Gorece bead makers are already rather expensive. If they are not priced out of the market, however, there seems no reason why the producers shouldn't continue in business, as they apparently have as many orders as they can fill.

The Pakistani bead makers appear to be in the best position of the three. They have the largest operation, can produce beads at the best price and have the optimal chance for major export expansion. Barring unforeseen events (and as long as the wood supply holds out) they appear to be in a solid state for a long time to come.

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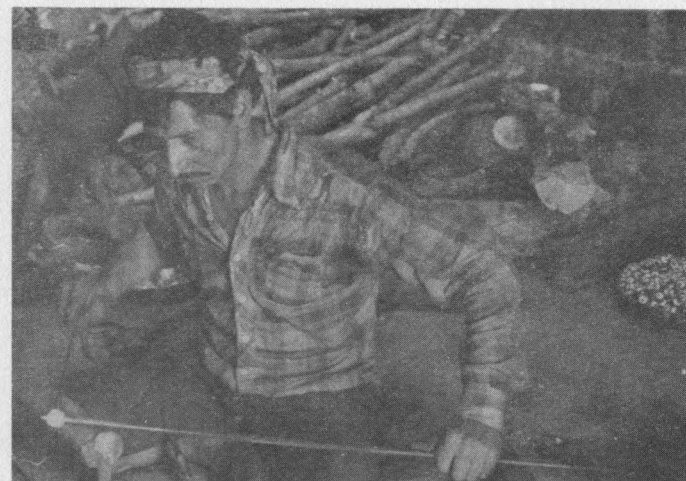
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Hydrabad, Pakistan. A worker repairing a box on the furnace which holds glass. The entrance on his right is another such box.



Gorece, Turkey. A worker adds the eye decoration to a bead which is still white-hot. Behind him is a plate of beads that had been made the day before.

PLATE II

Beads from Hyderabad, Pakistan

- Row 1: Unicolored beads of different shapes.
- Row 2: Large swirled glass beads.
- Row 3: Smaller swirled glass beads.
- Row 4: Crumb beads.
- Row 5: Beads with impressed designs
- Row 6: Beads with added decorations.
- Row 7: Beads of swirled and varigated glass. Last bead is of the millefiori type.

Beads from Herat, Afghanistan

- Row 8: Beads made in series, cut into singles, doubles and triples.
- Row 9: Tube beads.
- Row 10: Cone beads.

