THE GLASSMAKERS OF FIROZABAD AND THE GLASSMAKERS OF KAPADWANJ: TWO PILOT VIDEO PROJECTS

Robert H. Brill

Since 1977, The Corning Museum of Glass has conducted occasional field research in India, studying traditional glassmaking methods that survive there. Since 1986, the emphasis has been on documenting the glassmaking on videotape. The work has been done in collaboration with Prof. Andre Billeci (now retired from Alfred University) and several individuals in India. 1

The videotaping has focused on glassmaking in the Firozabad region and in Gujarat. Many of the factories studied in the earlier stages of this work no longer exist, and the glassmaking methods they employed are believed, in many cases, to have disappeared along with them.

The presentation at the congress consisted of a pilot programme in which the footage shot over the past 15 years was condensed and assembled in a roughly edited form.

For the most part, it combined footage from the glassmaking regions mentioned above, but footage selected from other regions was also included in order to illustrate various glass products in use. Additional editing and research are planned.

Eventually, two separate productions aimed at popular audiences will be created. Bead-making was not included here, but it will be the subject of another video in the future.

The remarks that follow have been extracted, with minor revisions, from the provisional script that accompanied the presentation at the congress.

The first part of the presentation dealt with the glass made in Firozabad. The earliest glass excavated in India dates from about 600 BC. This, and most of the other early glass, consists of scattered finds, mostly beads and thin bracelets commonly called 'bangles'. Similar bangles are still worn today by women throughout the country. Prior to the Mughal period, starting in the 16th century, the story of Indian glass is something of a dark age in the history of glass. From the Mughal period onward, Indian glass has many connections with English and European glass.

In Firozabad and its sister city, Shikohabad, it is said that there were once 400 glass factories of all sizes and types, and that 70,000 people owed their livelihoods to glassmaking. Glass is known to have been made there for at least 200 years.

There are still large factories in the area that are reminiscent of what factories in the West might have been like during the early part of the last century. The video pictured the mass production of jars, tumblers, lamp chimneys, and electric light bulb envelopes. Although some of the work is semi-automated, manual labour predominates, and the pace is frantic. During the mid 1980s, young boys made up a sizable part of the work force, but child labour laws have finally had their effect, and children are no longer evident in the large factories.

Glass bangles play an important cultural role in India, and consequently they are an important part of its glass industry. Nowadays, bangles are mass-produced by a clever contraption that would be outmoded in the West. However, it is well adapted to the Indian economy, which is based on abundant sources of inexpensive labour. Molten glass is wound onto spinning mandrels, forming long, springy glass spirals. Each has about 250 revolutions. The spirals are scribed by hand and broken into individual rings. But each ring has a gap in it, and it has to be ressealed. The rescaling, along with various types of decorating processes, is carried out in numerous small workshops in nearby villages.

The methods of mass production have now replaced the smaller shops where bangles used to be made individually by a half-dozen men crouching around small wood-fired furnaces. The methods they employed resemble those described by Theophilus, who wrote about the manufacture of glass bracelets in Europe in the 12th century. The owner of one such factory told of an unusual way of making glass by melting a single starting ingredient. This ingredient was reh, a naturally occurring form of soda that accumulates as a whitish crust in fields not far from Firozabad. Reh is still used occasionally for the making of glass nearby, as it was in the 19th century. But chemical analyses suggest that reh may also have been used for making glass in India centuries earlier.

The video then shifted to locations elsewhere in India to show examples of the Firozabad and Shikohabad glass in use. These include wedding bangles worn by a young woman in a bridal costume in Varanasi, bangles worn by Tharu women near the Nepalese border, and drinking tumblers and lamp chimneys in use still farther north.

The second part of the presentation concerned a special type of glass made in Kapadwanj in the state of Gujarat. Glassmaking there dates back at least 300 years. Objects such as sprinklers have long been connected with the region, but their production ceased some years ago. That glass was made by factories with European connections. Today, only one kind of specialty glass is made in Kapadwanj. It is produced in a factory owned by Mohamed Siddiq Shishgar. This factory has a single tank, and it employs about 16 people.

The glassmakers start by resoftening cullet from a naturally occurring form of soda that accumulates as a whitish crust in fields not far from Firozabad. Reh is still used occasionally for the making of glass nearby, as it was in the 19th century. But chemical analyses suggest that reh may also have been used for making glass in India centuries earlier.

The video then shifted to locations elsewhere in India to show examples of the Firozabad and Shikohabad glass in use. These include wedding bangles worn by a young woman in a bridal costume in Varanasi, bangles worn by Tharu women near the Nepalese border, and drinking tumblers and lamp chimneys in use still farther north.

The second part of the presentation concerned a special type of glass made in Kapadwanj in the state of Gujarat. Glassmaking there dates back at least 300 years. Objects such as sprinklers have long been connected with the region, but their production ceased some years ago. That glass was made by factories with European connections. Today, only one kind of specialty glass is made in Kapadwanj. It is produced in a factory owned by Mohamed Siddiq Shishgar. This factory has a single tank, and it employs about 16 people.

The glassmakers start by resoftening cullet from a naturally occurring form of soda that accumulates as a whitish crust in fields not far from Firozabad. Reh is still used occasionally for the making of glass nearby, as it was in the 19th century. But chemical analyses suggest that reh may also have been used for making glass in India centuries earlier.
round, coin-sized pieces of mirrored glass. Similar pieces of mirrored glass that date back to the 5th century have been found in the Levant, so this technology might be ancient.

Years ago, glass was melted at the factory directly from batch materials, but not anymore. One of the materials was a white efflorescent substance collected on the riverbanks after the monsoon subsided. Chemical analyses of this material, called oos locally, show that it consists primarily of silica sand and soda. Glasses melted from this oos would have characteristics in common with certain 11th-century Indian glasses from excavations.

Most of the mirrored glass is now used for decorative embroidery known as abhala bharat. Much is distributed from the city of Bhuj in Kutch, to the west of Kapadwanj. Tribal women there, and in Rajasthan, are renowned for their beautiful embroidery work of this type. Traditionally, the embroidery is an important part of a woman’s dowry. It tells much about the wearers of the clothing: their ethnic community, their status in society, their family’s occupation. Mirrored embroidery is also worn in adjacent parts of Pakistan, and it extends into parts of Afghanistan. Mirrored glass of the same type has been used for the decoration of walls in palaces, such as the Sheesh Mahal, in Jaipur.

Not long after our most recent visit, a devastating earthquake struck Kutch. Officials described it as the worst earthquake ever to strike India. The epicentre was located just east of Bhuj. Months afterward, recovery efforts were still under way – as they will be for a long time to come. Many thousands of people lost their lives, while countless others were left homeless. Mr Shishgar’s family and their factory were far enough away that they were not affected. The fate of the villagers shown in the video is unknown, except that all of the villages were reported to have been levelled and the inhabitants were said to have been resettled elsewhere.

ENDNOTE
1 These individuals include Raj Kumar Paliwal (and family), Mohamed Siddiq Shishgar (and family), Hari Chand Bhardwaj, Yashodhara Agrawal, and Bhaktisiddhanta Das (Alfred Valerio).

ROBERT H. BRILL
E-mail: brillrh@cmog.org