

Bijoypur Pottery in the Cumilla District: An Ethnoarchaeological Insights into Pottery Traditions

Md. Sadequzzaman*

Abstract

This study investigates the ethnoarchaeological dimensions of Bijoypur pottery, a traditional craft practiced in the Cumilla District of Bangladesh. By integrating ethnographic methods with archaeological analysis, the research aims to document and examine the techniques, styles, and cultural significance of Bijoypur pottery. The study traces the historical development of this craft, its socio-economic impact on local communities, and the transmission of traditional knowledge across generations. Through interviews with local artisans, participant observation, and comparative analysis of pottery artifacts, this research provides insights into the continuity and transformation within this artisanal tradition. The findings underscore the challenges faced by potters in an increasingly modernized society and emphasize the importance of preserving this cultural heritage. This paper contributes to a broader understanding of South Asian ceramic traditions and presents a case study on the interplay between material culture, tradition, and modernity.

1. Introduction

Bijoypur is a significant pottery-producing village located in the Sadar Dakshin Upazila of Cumilla District, adjacent to the Lalmai-Mainamati archaeological zone. The pottery of Bijoypur is a reflection of the unique society and culture of the region, encapsulating the traditions of its ethnic communities. It offers valuable insights into the historical and social evolution of the Cumilla region and is an integral part of its cultural heritage. The pottery of Bijoypur illustrates a blend of traditional and modern art forms that have evolved over time, alongside the profession and practices associated with pottery-making. This research seeks to explore the pottery traditions of Bijoypur from both archaeological and ethnographic perspectives, with the goal of understanding its historical development and contemporary practices. Through ethnographic research, the study examines various aspects such as pottery-making techniques, the functional use of pots, the division of labor, social organization, and the spatial and quantitative dimensions of pottery production and marketing.¹

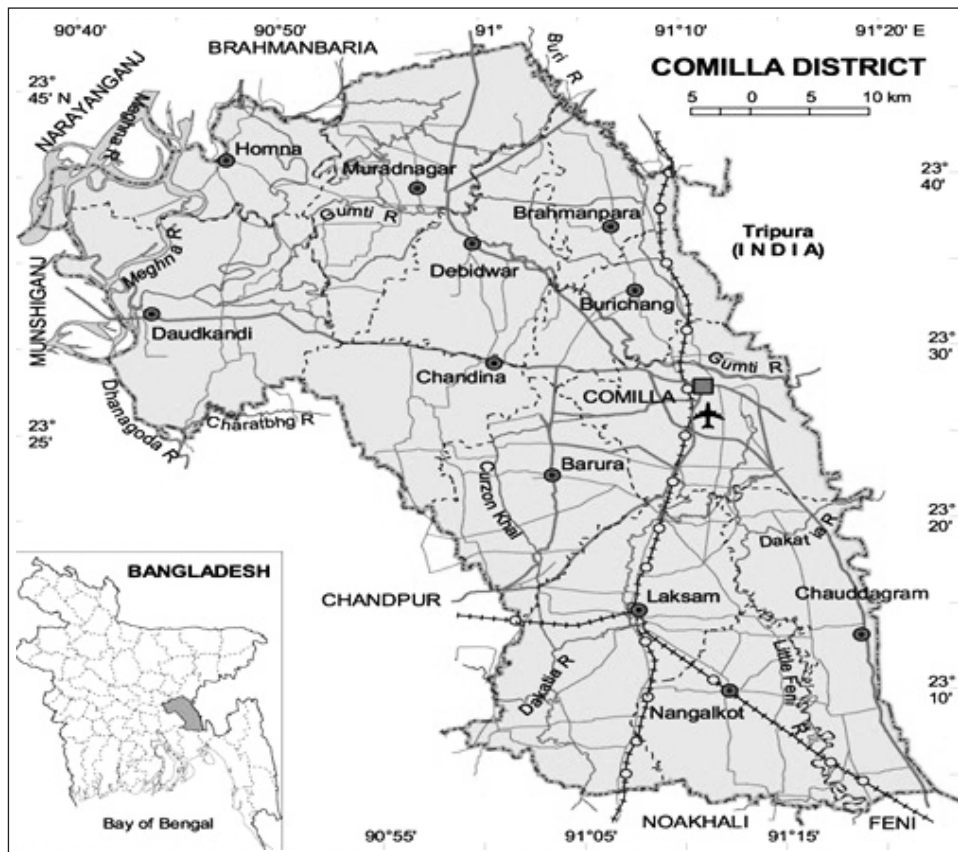
* Assistant Professor, Department of Archaeology, Comilla University, Bangladesh

1. C. Kramer, 'Pots and people', *Bibliotheca Mesopotemica*, Vol 7, 1977, pp. 77-91

Furthermore, this study aims to assess the socio-economic and cultural status of the pottery communities within an ethnographic framework by analyzing the methods employed in pottery construction in Bijoypur. The research also seeks to determine the nature of pottery found in the ancient Lalmai-Mainamati archaeological area and its relationship with the pottery of neighboring Bijoypur. By investigating these aspects, the study aims to deepen our understanding of the history and cultural significance of Bijoypur pottery.

2. Exploration Zone

Bijoypur is located at $23^{\circ} 26' 24''$ North Latitude and $91^{\circ} 09' 21''$ East Longitude. The Rudrapal potters inhabit seven villages within the Bijoypur Union: North Bijoypur (Palpara), South Bijoypur, Middle Bijoypur, Bijoypur, Nowapara, Lalmati, and Dharanibandh. Given the focus on pottery, additional field visits were conducted in Gangkul, Teguiapara, Jelkhala Bari Pottery, Abhay Pottery, and the Training Centers of Barpara Union, which lies outside Bijoypur Union, to gather further observations.



Cumilla District



Cumilla Sadar Dakshin Upazila, Cumilla

3. Exploration Method

The research adopted a qualitative methodology grounded in ethnographic research methods. Data collection was carried out using two specific techniques within the ethnographic framework. Firstly, data were gathered through direct observation of the potter community in the study area. Secondly, interviews were

conducted with the head and elder members of each potter family. Additional information was acquired through interviews with other professionals residing within the same society as the potter community. The potter communities in the study area were considered collectively, with each pottery-producing family serving as the unit of analysis. In addition to primary data collection, secondary data were sourced from various materials, including books, journals, and online resources.

4. Literature Review and Historical Background of Bijoypur

Pottery is a traditional element found across all regions of Bangladesh, with Bijoypur in the Cumilla district standing out as a notable center for pottery production. Bijoypur pottery provides employment for many, thereby influencing the lifestyle changes in rural populations. Despite its significance, there has been limited research highlighting these aspects. Among the four classes of people with the surname Pala, the Rudrapal class is specifically associated with pottery-making, as mentioned in S. Khan's edited book *Bangladesher Lokojo Songskruti Gronthomala Cumilla*. However, there is limited additional information on Bijoypur pottery.² Researchers have noted that red clay pottery plays a vital role in a predominantly rural country with simple needs and low income. The methods of production remain outdated and substandard, and the products often lack consistency in quality. This is largely due to a lack of scientific and technical knowledge, exacerbated by illiteracy and poverty.³ Another study identified the pottery industry as one characterized by low investment, operational flexibility, reliance on local resources, and potential for both domestic and export markets.⁴ Ceramic ethnology is now recognized as a subfield of ethnoarchaeology.⁵ In the riverine Bengal region, where stone is scarce but alluvial soil is abundant, the ancient inhabitants effectively utilized this natural resource for pottery-making. The abundance of raw materials and the malleability of clay have contributed to the development of pottery since ancient times. Historical sites such as Wari-Bateshwar, Mahasthangarh, Govindavita, Vasubihar, Raja Harishchandra's Bari, Paharpur, Shalban Vihar, Anand Vihar, and Bhoj Vihar, as well as Pandu Rajar Dhibi, Mahishadal, Bharatpur, Mangalkot, Chandraketugad, Tamluk, Bangar, and

2. S. Khan, M. A. Hossain & A. R. Sultan, *Bangladesher Lokojo Songskruti Gronthomala Cumilla*, Bangla Academy, Dhaka 1000, Bangladesh, 2014
3. S. P. Mishra and A. J. Mansuri, 'Problems of Indian red clay pottery (Terracotta) industries and policies for development,' *International Journal of Advanced Research in Management and Social Sciences*, 5(11), 2016, pp. 12-29
4. S. Akilandeewari and C. Pitchai, *Prosperous of pottery industry and the artisans of Manamadurai*, *Inter J Res-Granthaalayah*, 4(5), 2016, pp. 44-52
5. M. T. Stark, 'Current Issues in ceramic ethnoarchaeology', *Journal of Archaeological Research*, Vol 11, 2003, p. 202

Rajbaridanga in West Bengal, reflect an enduring tradition of pottery that persists in Bangladesh today.⁶ The artisans or craftsmen of pottery, known as ‘Kumar’ or ‘Kumbhakar,’ have passed down their craft through generations, with potters learning their skills as apprentices within their families. The potters of Bijoypur are no exception. Like other regions in Bangladesh, the Bijoypur community has preserved its traditional craft, nurturing, practicing, and transmitting pottery-making skills across generations. All the potters in Bijoypur belong to the Hindu Pala community. According to the Bijoypur Pala community, their group is divided into Rudrapal, Teli Pal, Kayastha Pal, and Barai Pal, with the Rudrapal community being actively engaged in pottery-making, while the others pursue different occupations. The Rudrapal community in the region employs both traditional and modern methods in pottery production. Currently, the potters of Bijoypur produce a range of items including daily household goods, religious idols, various decorative objects, and sports equipment, tailored to customer demands. Notably, they often demonstrate greater craftsmanship in decorative items than in utilitarian ones. Given Bijoypur’s proximity to the Lalmai-Mainamati archaeological site, it is unsurprising that the region’s pottery has a history spanning thousands of years. Lalmai-Mainamati is one of Bangladesh’s ancient monuments, and like other historical sites, it has yielded numerous pottery artifacts. These artifacts provide insights into the period, socio-cultural status, and religious practices of the people who used them. By analyzing pottery patterns from any location, we can infer construction methods, technical skills, marketing practices, and the socio-economic and cultural status of the potters. There is a pressing need for further research into the socio-economic and cultural status of potters, particularly through studies of local potter communities and their surrounding areas. While pottery from various places, including Savar near Dhaka, has been analyzed, Bijoypur’s pottery remains under-researched. Therefore, an ethnoarchaeological study of both the Lalmai-Mainamati region and Bijoypur’s pottery is essential. Although it is challenging to precisely determine the antiquity of Bijoypur’s pottery, field genealogies offer some clues. Deepak Chandra Pal (45 years old), a resident of North Bijoypur, traces his ancestry through seven generations of potters, including himself. His ancestors are Shankar Chandra Pal, Navin Chandra Pal, Ishan Chandra Pal, Gaur Chandra Pal, Sachindra Chandra Pal, Nityananda Chandra Pal, and Deepak Chandra Pal. This lineage indicates that pottery-making has been a practiced craft in Bijoypur for hundreds of years. Cooperative societies and training centers have also been established to support this traditional craft.

6. Sufi Mostafizur Rahman, *Pottery, Archaeological Heritage*, Bangladesh Asiatic Society, Dhaka, Bangladesh, 2007, p. 140

5. Pottery Practices in Bijoypur

In Bijoypur Union, located in the Comilla district, both traditional and modern pottery practices coexist and flourish. Modern pottery is produced at three prominent locations: Badal Chandra's house, Bijoypur Rudrapal Pottery Society Ltd., and Abhay Pottery Park in North Bijoypur. Simultaneously, potters in other parts of Bijoypur continue to create pottery using traditional methods.

5.1 Raw Material Collection and Preservation for Pottery Production

The primary material for pottery production is clay, with only a specific type being suitable for this purpose. The Rudrapal potters of Bijoypur source this clay from areas such as Nabur Jala, Shivar Dighi, Hossain Jalla, Parashpur Jalla, and from depths of 1 to 1.5 feet below the ground near Lalmai Hill and the Dakatia River. The collected clay is stored in designated areas around their homes, often covered to prevent it from drying out over time. This method of clay collection and preservation is utilized in both traditional and modern pottery production in Bijoypur.

5.2 Preparation of Clay for Making Pottery

Clay preparation is a critical step in the pottery-making process, involving several stages depending on whether traditional or modern methods are employed.

5.2.1 Traditional Method

- 1. Initial Preparation:** The clay is initially extracted from the soil pile using a spade, followed by the removal of stones, gravel, plant remains, and any iron particles.
- 2. Kneading:** Water is added to the soil, which is then kneaded by foot. The amount of sand mixed into the clay depends on the desired shape of the pottery. After kneading, the clay is piled again and allowed to rest for a day or two, if necessary.
- 3. Final Preparation:** The prepared clay is brought to the pottery-making area, where it undergoes further pounding by foot to create a homogeneous mixture, rendering it ready for shaping.

5.2.2 Modern Method

- 1. Softening the Soil:** The soil is cut with a spade and mixed with water to soften it, after which it is moved using feet.
- 2. Auger Machine Processing:** The softened soil is processed through an auger machine to further loosen it. During this process, impurities such as stones, iron grains, and gravel are manually removed.
- 3. Kneading and Shaping:** The soil is transformed into workable clay through repeated kneading by hand and with the aid of a jigger machine. This prepared clay is then used to create pottery products.

5.3 Shaping and Forming Pottery

In Bijoypur, the shaping and forming of pottery products are carried out through both traditional and modern methods, each with distinct processes:

5.3.1 Traditional Method

1. **Initial Shaping:** The prepared clay is placed on a flat surface covered with wood powder and shaped into a round form, similar to a loaf of bread. This loaf-shaped clay is then placed on a terracotta base called a 'para' and manually pressed to form the 'kanda' (base) and the round body of the pot.
2. **Drying:** The shaped pot is dried in the sun to harden it slightly.
3. **Final Shaping:** Once partially dried, the pot is brought indoors and placed on an 'atail' (a type of support). It is then shaped into the desired form using small and large tools like 'dals' or 'debbar', fingers, and a pestle. A wet cloth or wool is used to smooth the surface of the pottery. The final shape is primarily achieved using hands and fingers.
4. **Tools Used:** Traditional tools include the 'pitna' (a kind of stick), 'atail', 'pata' (a flat board), and 'kathi' (a wooden stick).

5.3.2 Modern Methods

Molding Method: In this technique, clay is placed into a mold to give it a specific shape. Two types of molds are used in Bijoypur:

- **Single Mold Method:** Clay is pressed into a single mold to create a specific shape, often used for making parts like the front side of an idol's face.
- **Two-Mold Method:** This involves using two molds to shape both sides of the object, which are then joined together. It is commonly used for making sculptures, toys, and other items.



Wheel Machine Method: This method uses a machine with a rotating, wheel-like plate made of iron. The clay is placed on this plate and rotated, either by foot or electricity, to shape the pottery. There are two types of wheel machines:

- **Foot-Powered Wheel Machines:** Operated by feet to rotate the wheel.

- **Electric-Powered Wheel Machines:** Controlled by switches to rotate the wheel. The potter uses wet hands to shape the clay as it spins.

Jigger Machine Method: This motor-driven machine produces pottery in specific forms. It has a rotating part and a handle. The clay is placed in a form, and the handle is pressed down to shape the pottery. This machine also includes a component for smoothing the pottery.

Tools Used: In modern methods, tools such as wheel machines, jigger machines, molding machines, measuring sticks, knives, turning plates, decorating tools, and other specialized equipment are employed to shape the pottery.

5.4 Sun Drying of Prepared Pottery

The drying of pottery in Bijoypur relies heavily on traditional sun-drying methods, which are highly dependent on weather conditions. Under favorable weather, pottery products typically require 2-3 days to dry, while in less favorable conditions, drying can take 4-5 days. With modern techniques, the drying process is expedited, taking only 1-2 days in good weather and 2-3 days in poor weather. Once dried, the pottery is stored on wooden racks.

5.5 Application of Decoration and Color in Pottery

In Bijoypur, decoration and coloring techniques are integral to both traditional and modern pottery, applied at various stages of the production process, both before and after drying and firing. Cooking pots and storage containers are initially shaped using wooden molds before drying. Common designs include *Khunchi*, *Tuli*, *Tanna*, as well as linear, geometric, leaf, mat, and concentric round patterns. To enhance their visual appeal, a thin coating of soda, catechu, or hill soil is often applied for added brightness. In traditional methods, toy dolls are painted in red, yellow, purple, green, and other colors after firing. In contrast, modern techniques utilize linear, geometric, leaf, mat, and concentric round designs, as well as appliqués, applied using molds and tin jute before drying. After firing, these pots are decorated with paint in shades such as ash,



light brown, dark brown, and light purple. Additionally, some pots receive a thin coating of soda, *kheer*, or hill soil to enhance their brightness.

5.6 Firing of Manufactured Pottery

The firing of pottery in Bijoypur follows traditional methods, typically conducted in earthen kilns located in open areas adjacent to homesteads. The kiln is circular and slightly elevated above ground level to prevent the accumulation of rainwater or other liquids. The lower part of the kiln is hollow, with an opening on one side to allow for the fire. Initially, wood is placed in the kiln to arrange the vessels. Straw is then spread over the wood, and bowls are arranged in a circular pattern on top of the straw. The pots are coated with a three-layer mixture of mud and straw before the firing process begins.

Modern pottery firing employs gas-fired kilns; however, due to the absence of gas connections in North Bijoypur, traditional firing methods are still used in this area. In contrast, supplied gas or cylinder gas is used for combustion at Bijoypur Rudrapal Pottery Factory and Abhaypal Pottery Factory. While the materials used for kiln construction differ between traditional and modern methods, the essential steps in the pottery-making process remain similar. Modern pottery is generally more durable and of higher quality compared to traditional pottery. Modern production techniques are employed at three locations: Badal Chandra's House, Bijoypur Rudrapal Pottery Co-operative Society Ltd., and Gangakul Abhay Pottery Park in North Bijoypur. In Bijoypur, 75% of pottery production uses traditional methods, while 25% utilizes modern techniques.

6. Varieties, Morphological Features, and Practical Aspects of Bijoypur Pottery

In the seven villages of Bijoypur Union, located near the foothills of the Lalmai Hills in Comilla District, a diverse range of pottery has been produced for an extended period. In addition to pottery-making, the local population engages in agriculture and animal husbandry. Pottery in this area has been crafted both for personal and local use, as well as for commercial purposes. The types of pottery produced include utility or household pottery, decorative or hobby pottery, religious pottery, and toy pottery.



**TRADITIONAL
METHODS TO
POTTERY
FIRING IN
BIJOYPUR**



**TRADITIONAL
METHODS TO
POTTERY
FIRING IN
BIJOYPUR**

6.1 Daily Necessities or Household Goods

In Bijoypur, pottery items intended for daily use are the most commonly produced. These include cooking pots, curd pots, curd cups, pans, bowls, cups, lids, coil pots, ashtrays, halim bowls, storage containers, jugs, jars, shanks, banks, pen holders, lamp holders, and more. These everyday items typically



feature minimal ornamentation. Cooking vessels often display simple decorations on the top and handle, while coil baskets are designed using cutting techniques. Storage vessels and teacups may exhibit grooved decorations. The practical functions of these items are evident: plates, bowls, jugs, and mugs are used for cooking and eating, storage containers for collecting and storing paddy, rice, and water. *Kalas* (earthen vessels) are typically used for weddings, religious ceremonies, and funerals. Earthen pitchers are commonly used for storing and preserving water.

6.2 Pottery for Religious Purposes

Religious pottery in the Comilla district is predominantly produced at the Madhupan Puja pottery center in North Bijoypur, which supplies icons to various parts of Bangladesh, including the Comilla region. Icons produced include Durga, Saraswati, Ganesha, Kali, Loknath, Radha-krishna, Shiva, and Lakshmi, crafted according to Hindu rituals and scriptures. These icons are often adorned with various weapons and coins, featuring applique designs and vibrant colors. The use of molds in the creation of these icons is also significant. In addition to icons, censers and agardani are crafted with religious considerations in mind.

6.3 Pottery Used in Home Decoration

Pottery used for home decoration in Bijoypur includes a variety of items such as terracotta plaques, wall mats, sculptures, flower tubs, and vases. These decorative pieces are primarily produced by the Bijoypur Rudrapal Pottery Cooperative Society Ltd. and Abhay Pottery Park factories. Notable designs on terracotta plaques include leaves, female figures on pitchers, Radhakrishna, wheeled horses, and other equine figures. Vases and flower tubs are especially popular for interior decoration, while sculptures are another common pattern used in home decor.

6.4 Entertainment and Toys

The production of entertainment and toy items in Bijoypur includes dolls, pairs of dolls, elephants, horses, peacocks, tigers, deer, hobby bears, tepa dolls, and more. These items are designed with animal characteristics to create lifelike representations. They serve dual purposes, both as toys for children and as decorative pieces for showcases. Generally, these entertainment and toy goods are manufactured at the Bijoypur Rudrapal Pottery Cooperative Society Ltd. and Abhay Pottery Park factories.

7. The Potters Group of Bijoypur

Bijoypur Union, located in Sadar Dakshin Upazila of the Comilla District, comprises 26 villages. A survey has revealed that a significant portion of the population in this area adheres to the Hindu religion, with many identifying as members of the Pala community. It is believed that pottery has been associated with the Pala community from its inception, with deep-rooted connections to religious beliefs. Doli Rani Pal, a 37-year-old informant in a study on the pottery profession, provided insights into the beliefs and myths surrounding pottery making. The village potters pray to the god Brahma before firing their pottery in the kiln, believing that Brahma, as the god of fire, will reduce the time needed for firing if he is pleased by their prayers. Additionally, Doli Rani Pal explained that potters avoid firing pottery during the month of Baisakh, as it is believed that Lord Brahma is displeased by this practice during that time, potentially leading to defects in the pottery. According to the Pala community, Shiva is also associated with pottery. They believe that Shiva did not eat or perform worship without earthen vessels and therefore entrusted the task of making earthen pots to this community as a divine order. As a result, potters are regarded as Rudrapalas, followers of Shiva.

8. Exploring the Socio-Economic and Cultural Context of Bijoypur Potter Group

Bijoypur Union is situated in Sadar Dakshin Upazila, Comilla District, and consists of 26 villages. This rural settlement is organized into *para* or micro-villages, with each village typically comprising both nuclear and joint families. The patriarch generally serves as the head of the family, indicating a predominantly patriarchal structure. The local economy is primarily dependent on pottery, agriculture, employment, and trade. In Palpara, many families rely on pottery, while in Teghuria Para and Gangkul, economic dependence on jobs and expatriates is higher. The standard of living for the Pala community in Bijoypur is generally low. There are two main groups within the potter community: the middle class and the poor, with the majority being impoverished. Economic challenges are exacerbated by inadequate pricing of pottery. Poorer potters often rely on donations from wealthier community members, with the condition that the pottery must be sold to the donor.

at a slightly lower price. Potters without their own kilns often have their pottery fired by kiln owners under special conditions, usually requiring them to give half of their production to the kiln owner. If kiln owners do not provide fair compensation, potters can remain trapped in a cycle of poverty and outdated technology for years.

In North Bijoypur, many families are engaged in pottery, but most are now also involved in agriculture. Pottery also plays a role in construction. The Bijoypur Rudrapal Pottery Cooperative Society Ltd. and Abhay Pottery Park are key institutions where people from nearby villages such as Teghuria Para, North Bijoypur, Middle Bijoypur, Gangkul, Nowapara, and Dhanmura work as pottery workers. Salaries at these organizations range from Tk. 4,000 to Tk. 6,000. Notably, women contribute significantly more than men to pottery production in Bijoypur, with their participation being particularly pronounced in Palpara and Gangkul. An observation of seven villages involved in the fishery industry within Bijoypur Union reveals diverse types of homesteads. Houses are primarily mud houses, tin houses, semi-paved buildings, and paved buildings. Mud houses are common in North Bijoypur and are often constructed with *dochala* and *chouchala* roofs. Tin houses, usually ramshackle and made with minimal straw or chaff, are more prevalent in other areas. Semi-paved and paved buildings are also present in Bijoypur. Historically, homesteads had mud walls and thatched or tin roofs. Currently, 48% of homesteads are mud houses, 32% are tin houses, and 20% are concrete buildings. Settlement patterns in Bijoypur include clustered, row, and scattered settlements. Palpara exhibits clustered settlement patterns, Gangkul and Teghuria Para show row settlements, and Madhyam Bijoypur displays scattered settlements. Significant social events for the Rudrapal community in Bijoypur include Pahela Baishakh, Jamai Shasthi, Annaprasana, Shraddha, Nam-Sankirtan, and various pujas. Pahela Baishakh, marking the Bengali New Year, is particularly important. On this day, a fair is held around Bijoypur where potters sell their wares, providing a key source of income. The Jamai Shasthi ceremony is observed on the sixth day of Shuklapaksha in the month of Jaishtha, with rituals to honor the son-in-law. *Annaprasana*, or the first feeding of a child, is performed around the age of six to eight months for boys and five to seven months for girls. *Shraddha* is a ritual for appeasing the souls of ancestors and is performed after a person's death. Other customs include naming ceremonies, pre-marriage blessings, and the *Sadh Kheya* ceremony for pregnant women. Bijoypur is home to several Hindu communities, including the Pal, Dev, Sarkar, Shila, and Tagore families, most of whom are directly involved in pottery. Among the four Hindu castes, the Palas belong to the Vaishya caste. Their major religious festivals include Durga Puja, Saraswati Puja, Ganesh Puja, and Kali Puja, celebrated annually, while Lakshmi Puja is observed weekly on Thursdays, and Krishna is worshipped daily. In

Madhyam Bijoypur, daily worship of Shiva is conducted by a local priest, and there are several temples dedicated to Durga, Shiva, Kali, and other deities throughout the region.

9. Pottery Artifacts from Lalmai-Mainamati: Discoveries from the 7th to 13th Centuries AD

Between 1963 and 1966, the Directorate of Archaeology conducted extensive excavations at three key sites: Shalban Vihar, Kutilamura, and Charapatramura, with additional experimental excavations at Rani's Bungalow in the Mainamati Hills. Excavations at Anand Vihar were carried out from 1974 to 1976. By 2024, the Directorate of Archaeology had excavated a total of 13 archaeological sites in the region. The majority of the archaeological remains discovered in the Lalmai-Mainamati hills are associated with religious institutions, with a smaller portion linked to settlements. Among the significant archaeological finds from these excavations are pottery artifacts.

9.1 Pottery

Pottery uncovered during the excavations in the Lalmai-Mainamati archaeological area can be categorized into several types based on color: red pottery, red-coated pottery, pale red pottery, uneven pale red pottery, black pottery, and gray pottery. Additionally, the pottery can be classified by its use into categories such as pots, cups, bowls, vases, pitchers, lamps, kalkis, storage vessels, begging vessels, and censers. The use of both handcrafting and wheel techniques in pottery production is noteworthy. The design and decoration of the pottery fragments are also significant, with features such as grooved marks, incised marks, pinched marks, stamped marks, combed marks, and lattice marks commonly observed on both the interior and exterior surfaces. Devanagari inscriptions were found on the remains of three large storage vessels and a few potsherds. The pottery samples from the Lalmai-Mainamati archaeological area are considered important artifacts for comparing and correlating different sites in the region and with contemporary pottery-making villages.

9.2 Terracotta Plaques

Excavations in the Lalmai-Mainamati archaeological area have uncovered numerous terracotta plaques at Vihargatra. Originally, these terracotta tiles were used for architectural decoration. The discovered plaques depict a wide range of subjects, including domestic and wild animals, aquatic creatures, mythical beings, men and women, gods and goddesses, mythological stories, and religious symbols. The carved human figures on the plaques include dancers, ascetics (*tapas*), wrestlers, archers, shield-and-sword warriors, flying women, and cowherds. Images of the king's war marches are also depicted. The plaques displayed in the Mainamati

Museum feature various animals such as lions, elephants, fish, peacocks, royal geese, crows, capricorns, and bulls, whose expressions likely represent religious beliefs and deities. In addition to animals, the plaques also include carvings of symbols such as the lotus, trident, and Dharmachakra. These symbols suggest that the potters were probably Hindus, as most of the symbols are associated with Hindu religious practices. However, some symbols, like the lotus, Dharmachakra, and trident, hold sacred significance in both Hinduism and Buddhism. Some plaques also depict Buddhist figures, such as the Buddha in Kimpurusha, Kinnari, and flying Gandharvas holding garlands, as well as the Abhay mudra.

9.3 Terracotta Toys

Terracotta toys have been used for entertainment and leisure since ancient times. These include terracotta animal and bird figurines, discs, balls, and cube-shaped objects. The earliest use of terracotta toys is observed in the Harappan civilization.⁷ Terracotta toys discovered in various locations, including Wari-Bateshwar, Mahasthangarh, Paharpur, Mainamati, Tamluk, Chandraketugarh, Mangalkot, and Bangarh, offer insights into the leisure activities and amusements of ancient Bengal. These toys provide an understanding of the animals and birds, environment, arts, and religious beliefs of that era. A number of terracotta toys are on display in Showcase No. 8 of the Mainamati Museum. These toys include figurines of various animals and birds, discs, small clay boats, spheres, and small pot-like structures with square and rectangular designs. Animal figurines include rams, horses, elephants, and some unidentified animals. Images of elephants are also found on plaques from various locations, including Mainamati and Paharpur. Other toy artifacts in the museum include boat-shaped toys and small balls that resemble marbles. Most of the toys discovered at sites from the Second Urbanization of the Gangetic Valley are made of terracotta. At Mainamati and Paharpur, there are statues of hares, horses, birds, and male and female figurines, which were popular as toys.⁸

9.4 Terracotta Beads

Terracotta beads have been discovered at numerous archaeological sites across the Indian subcontinent, dating back to the Neolithic period. The abundance of clay as a raw material and its pliability made it an attractive medium for artisans. Alongside glass and stone beads, terracotta beads have been found at sites such as Wari-Bateshwar. The Mainamati Museum displays terracotta beads unearthed during excavations at Shalban Vihar, Anand Vihar, and Itakhola Mura. These beads are predominantly black, suggesting they were fired in a closed furnace. Both large

7. Md. Mokammel Hossain Bhuiyan, *Prachin Banglar Poramatir Shilpokormo*, Dibbo Prokash, 38/2ka, Banglabazar, Dhaka, 2014, p. 155

8. Sufi Mostafizur Rahman, *Chittobinodon, Archaeological Heritage*, Bangladesh Asiatic Society, Dhaka, 2007, p. 222

and small terracotta beads served as ornaments. Additionally, uniquely shaped terracotta beads, known as 'water droplets,' may have been utilized in fishing nets. Such net beads have been discovered at Wari-Bateshwar and Mahasthangarh. In ancient times, terracotta beads, along with tree seeds, fish bones, animal teeth, and snails, were commonly used as ornaments. Even today, similar ornaments crafted from snails, oysters, and animal teeth are still in use.

9.5 Pottery Making Tools (Dabber)

Since ancient times, potters have utilized dabber (tools) to prepare clay and craft pottery by hand. The Mainamati Museum displays dabbers found during excavations in the Lalmai-Mainamati archaeological area. Pottery is typically shaped by striking the clay repeatedly using a dabber. This type of tool is still widely used by potters in the Bijoypur region today.

9.6 Shivalinga and Gauripatta

The Shivalinga and Gauripatta hold significant religious value in Hinduism and are revered as objects of worship. In Hindu temples, the Shiva Linga is venerated alongside the icon of Shiva. There are two types of Shiva Lingas: the common linga and the facial linga. The lingas exhibited in the Mainamati Museum are of the ordinary variety. In Gallery No. 8 of the Mainamati Museum, two large terracotta Shiva Lingas are displayed on Gauripattas. Alongside the Shiva Lingas, several Gauripattas are also exhibited. A Gauripatta is characterized by its divided soil and the presence of round holes in the middle. The Shiva Lingas with Gauripattas are quadrangular, while the other Gauripattas are round. The discovery of these artifacts in the Mainamati region suggests that the Shiva Linga and Gauripatta were worshipped as symbols of Shiva and Parvati. Similar artifacts have also been found at Paharpur and Mahasthangarh.

9.7 Terracotta Lamp and Lamp Stand

Several terracotta lamps and lamp stands are displayed in Showcases No. 29 and 39 at the Mainamati Museum. These lamps are primarily gray or red, with a few in black. The tops of the lamps are short and curve inward, and although the lamps are round, they feature slightly angled sockets. Many of the lamps also have light holes for placing the wick. Lamps were used both religiously and secularly. In religious contexts, they were employed in worship, while secularly, they served as sources of light. Lamp stands were used to hold these lamps, and during pujas or other ceremonies, the lamps were placed on stands rather than directly on the ground. A lamp stand displayed in Gallery No. 40 at the Mainamati Museum is thickened at the bottom, narrow in the middle, and rounded at the top. The flat area at the top was designed to hold the lamp. The stand features lines drawn in three concentric circles.

10. Comparative Study of Bijoypur Pottery and Pottery Exhibited in the Mainamati Museum (7th-13th Century AD)

A notable resemblance exists between the pottery produced by the artisans of Bijoypur and the pottery artifacts displayed in the Mainamati Museum. Exhibits in Showcases Nos. 38, 39, 40, 41, and 42 of the Mainamati Museum feature pottery used in daily life, showcasing similarities with contemporary items from Bijoypur such as haris, clay lamps, kalkis, pots, bowls, lids, plates, lamp holders, perforated pots, and dabber tools. Dabbers, essential tools in pottery production, are displayed in Showcases Nos. 28 and 41 at the Mainamati Museum. These tools are used to form vessels by kneading clay, a technique consistent from ancient times to the present day, as evidenced by the continued use of similar dabbers in Bijoypur. The Rudrapal community of Bijoypur still handcrafts cooking pots using traditional methods, with cooking utensils featured in Showcases Nos. 38, 40, and 41 of the Mainamati Museum. The size and design of these pots suggest they were used for serving food. Various types of bowls are still produced in Bijoypur, resembling those exhibited in Showcases Nos. 28, 39, 41, and 42 of the museums. The Rudrapals also construct barns similar to those from ancient times. Additionally, terracotta toys displayed in Showcase No. 30 of the Mainamati Museum bear a striking resemblance to those made by Bijoypur potters. The morphological similarities between storage and cooking vessels in the museum and those from Bijoypur, including comparable decorations, further indicate a continuity of pottery-making techniques over approximately 1200-1300 years. This continuity suggests that the artisans of the 7th-8th centuries AD may be the ancestors of today's Bijoypur potters.

11. Analysis and Interpretation

While extensive research has been conducted on the archaeological sites and specimens unearthed in the Lalmai-Mainamati area, there has been a lack of focused study on the pottery from this region. Archaeology involves not only the study of past societies and their cultural practices but also the examination of contemporary populations through an ethno-archaeological lens. A crucial aspect of this research is understanding the construction processes, uses, and technological transformations in pottery. By analyzing the structural aspects of pottery, along with its decoration and construction techniques, one can appreciate the level of technical knowledge that contributed to the development of the urban center.⁹ Pottery-making techniques in Bijoypur can be divided into two main categories: traditional and modern technology. Traditional technology includes methods used since the inception of pottery-making, such as handcrafting and wheel-throwing, which are still employed

9. M. T. Stark, *op.cit.*, 2003, p. 202

today in creating large idols. Modern technology, or advanced technology, involves the use of electricity, electric machines, and gas furnaces, significantly increasing production efficiency and output with fewer workers. The introduction of gas-fired furnaces, in particular, has revolutionized the production process.

The advent of modern technology in Bijoypur began with the establishment of the Bijoypur Rudrapal Pottery Cooperative Society Ltd. The impact of modern technology has been substantial, leading to several key developments:

1. **Employment Creation:** The introduction of modern technology has generated significant employment opportunities.
2. **Product Quality:** The quality of pottery products has improved, enhancing their value both domestically and internationally.
3. **Product Variation:** There has been an increase in product variations, with more refined decoration and color.
4. **Increased Production:** Modern technology has greatly expanded pottery production, enabling both domestic fulfillment and export to markets in the European Union, Japan, Canada, Holland, and the Middle East.

To preserve traditional pottery in the Bijoypur region of Comilla district, the cooperative movement was initiated in the 1960s by Akhtar Hamid Khan, a key figure in the development of the Comilla method. In 1961, the youth organization 'Pragati Sangh' in Bijoypur village was transformed into 'Bijoypur Rudrapal Sambay Samity Ltd,' which was registered by the Cooperative Department in 1962. In 1998, it was renamed 'Bijoypur Rudrapal Pottery Cooperative Society Ltd.' This cooperative has maintained pottery traditions while establishing a modern pottery factory under its supervision. The use of advanced technology has significantly increased production, leading to the creation of international-quality pottery that meets local demands and contributes to foreign currency earnings through exports. Additionally, other large-scale commercial pottery centers, such as the Abhay Pottery and Training Centre, Jelkhana Bari Pottery, and Bijoypur Shiva Bazar Pottery Centre, have developed.

The development of pottery in Bijoypur has been positively influenced by several factors, including the availability of raw materials, favorable climate and environment, increased demand for pottery, respect for traditional professions, religious sentiments, professional skills, and support from both government and private sectors. However, the industry also faces challenges, such as reduced demand, rising raw material costs, indebtedness, low social status, lack of patronage, and gas shortages. These multifaceted problems, coupled with a lack of support, have created a crisis in the industry. Despite these challenges, there is potential to develop the tourism industry around Bijoypur's pottery. With thousands of tourists visiting the Lalmai-Mainamati archaeological area each year, showcasing

the ancient and unique aspects of Bijoypur pottery could significantly enhance its tourism potential.

12. Conclusion

The pottery of Bijoypur exhibits many similarities with the pottery and construction materials discovered in excavations at the Lalmai-Mainamati archaeological area. However, significant research on Bijoypur pottery has not yet been conducted, making it challenging to determine whether the ancestors of the Bijoypur potters were also responsible for the pottery displayed in the Mainamati Museum. Nonetheless, observations suggest a similarity and possible connection between the pottery patterns and construction materials preserved in the Mainamati Museum and the present-day pottery of Bijoypur. Research into modern pottery-making techniques has revealed new possibilities within the socio-economic context. The introduction of modern technology in pottery production has expanded opportunities and transformed the industry. This research has aimed to illuminate aspects of the ancient Lalmai-Mainamati pottery, including construction technology, production systems, marketing strategies, and the socio-economic and cultural status of potters, based on ethno-archaeological findings. Such insights could contribute to understanding pottery products discovered elsewhere in Bangladesh and serve as a foundation for future research in the field.