

# Challenges and Relevance of Bronze casting in Contemporary Art Practices

**Dr. Shanta M Sarvaiya**

Assistant Professor, Faculty of Fine Arts, The M.S.University of Baroda  
Email - shanta3111@gmail.com

**Abstract:** *The ancient technique of bronze casting, long a cornerstone of sculpture and art, is confronting considerable hurdles in the sphere of contemporary art. As the art world continues to evolve, this venerable method is struggling to adapt and maintain its relevance. This paper explores the primary obstacles, including high costs, environmental impact, skill retention, technological integration, market shifts, and limited access to specialized foundries. The high expenses and resource intensity of bronze casting, particularly through the lost wax method, create economic barriers for emerging artists, restricting experimentation and diversity. Environmental concerns and the decline in traditional skill transmission further threaten the craft's sustainability. Additionally, the art market's evolving preferences like valuing conceptual art and installations. Also there is a scarcity of artist-friendly and low cost foundries. Addressing these issues necessitates the establishment of supportive structures such as affordable foundries, grants, and educational partnerships to preserve and advance bronze casting in contemporary art.*

**Key Words:** *Bronze casting, Contemporary art challenges, Resource intensity, Environmental impact, Skill retention, Technological integration, Specialized foundries, Lost wax method, Sustainability in art, Traditional craftsmanship, 3D printing in sculpture, Art market evolution, Dhokra casting, Ceramic mold casting, Sand casting, Artist-friendly foundries, Affordable art practices, Artisan knowledge transmission*

## 1. INTRODUCTION :

Bronze casting which is an age-old technique for centuries, faces significant challenges in the context of contemporary art practices. While the medium continues to be celebrated for its durability and aesthetic appeal, modern artists and artisans encounter a myriad of obstacles that threaten the sustainability and evolution of this traditional craft.

### **High Costs and Resource Intensity**

One of the primary challenges of bronze casting today is the high cost and resource intensity involved in the process. Bronze, an alloy of copper and tin, is expensive, and the price fluctuations of these metals in the global market can significantly impact artists' budgets. Additionally, the casting process itself requires substantial energy and resources, from the melting of metals to the creation of molds and the finishing of cast pieces. This high cost often limits access to bronze casting for emerging artists and smaller studios, restricting the diversity of voices and expressions in the medium. Furthermore, lost wax method of metal casting is a long process and also labour intensive. It is not something that could be done alone or done at one own pace.

### **Environmental Impact**

The environmental impact of bronze casting is another pressing concern. The process involves high energy consumption and the emission of pollutants, contributing to environmental degradation. In an era where sustainability is increasingly paramount, artists and foundries are under pressure to adopt greener practices. However, finding environmentally friendly alternatives that do not compromise the quality and integrity of the bronze castings remains a significant challenge. The search for sustainable methods and materials is ongoing, with some artists experimenting with recycled metals and more efficient kiln technologies.

### **Skill and Knowledge Retention**

Bronze casting is a highly skilled craft that requires extensive knowledge and experience. As contemporary art education increasingly favors digital and conceptual practices, the transmission of traditional techniques like bronze casting is at risk. Many master artisans are aging, and there is a noticeable decline in the number of apprentices willing to commit

to the rigorous training required. This loss of skill and knowledge threatens the continuity of bronze casting traditions, making it imperative to find ways to preserve and pass on these essential techniques to future generations.

## 2. Technological Advancements :

While technological advancements offer new opportunities, they also present challenges for bronze casting. Digital modeling and 3D printing are revolutionizing sculpture, enabling artists to create intricate designs with unprecedented precision. However, integrating these technologies with traditional bronze casting techniques can be complex. Artists must navigate the balance between innovation and tradition, ensuring that the essence and craftsmanship of bronze casting are not lost in the pursuit of modernity.

### Market and Audience Shifts

The contemporary art market and audience preferences are continually evolving, often favoring novel and ephemeral works over traditional media like bronze. This shift can make it difficult for bronze casters to find a market for their work, particularly in an art world that increasingly values conceptual art and installations. Artists must be adept at marketing their work and educating potential buyers about the enduring value and significance of bronze sculptures.

### Limited Access to Bronze Casting Foundries

One significant challenge facing contemporary artists interested in bronze casting, particularly through the lost wax method, is the scarcity of foundries dedicated to serving the artist community. This limitation has profound implications on the accessibility and affordability of the craft, especially for younger and emerging artists who wish to experiment and innovate within this medium.

### Scarcity of Specialized Foundries

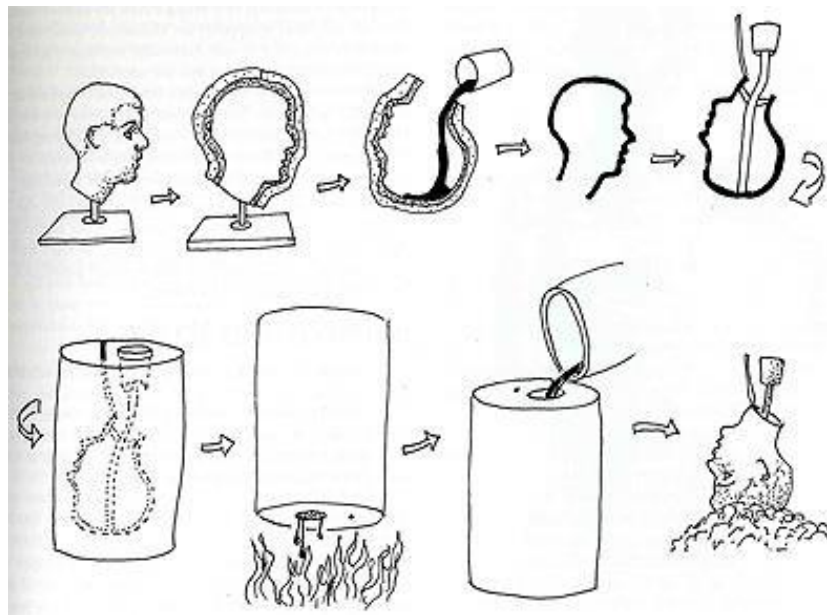
Bronze casting foundries that specialize in the lost wax method are few and far between. The lost wax method, known for its ability to produce detailed and intricate works, is a highly specialized process that requires specific skills, equipment, and expertise. As a result, not many foundries are equipped to offer these services, particularly those that can cater to the unique needs of artists as opposed to industrial clients. This scarcity creates a bottleneck, where demand from artists far exceeds the available supply of foundries capable of executing their vision.

## 3. High Costs of Services :

**Metal casting process:** For this let us understand the different techniques of Bronze casting. **The lost wax method** of metal casting, favored by many artists for its ability to produce detailed and intricate works, is particularly demanding. This technique involves creating a wax model. It can be directly created with wax on armature or creating the art work in clay, taking a mould and then casting it in wax. After the work is complete, encasing it in a ceramic shell or making a mould using grog and plaster, melting the wax out to leave a cavity, and pouring molten bronze into the cavity. After the bronze cools and solidifies, the shell is broken away to reveal the bronze sculpture, which then undergoes further finishing. Each step requires skilled labor and significant resources, contributing to the overall expense. This process is lengthy and labor-intensive, requiring collaboration and specialized skills, making it impractical for solo artists or those working at their own pace.



*The workers at Schaefer Foundry in Arlington, TX, carefully lift up the crucible, containing the molten bronze, out of its heating furnace. Photograph by Elizabeth Loggins.*

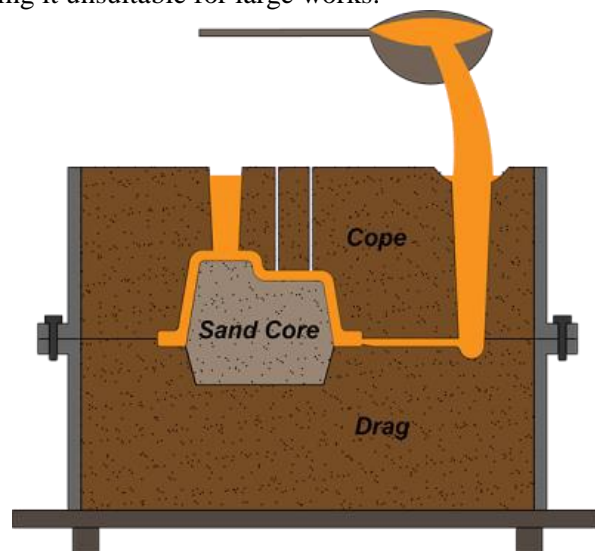


The above diagram is found in Sculptor Tuck Langland's book "From Clay to Bronze: A Studio Guide to Figurative Sculpture".

Dhokra casting, an ancient Indian technique, uses a mixture of different types of clay, charcoal powder or cow dung, rice husk, silt clay, and ant hole clay for the core and mold. While artist Meera Mukherjee has extensively used this method, it is limited by the fragility of the molds, making it unsuitable for large works.



Mould making process of Dokra casting ( Dhenkanal, Orissa)  
 (Baral and Rashitha)



Sand casting (Sand casting process overview)

Industrial methods such as ceramic mold casting allow for multiple castings but require significant infrastructure. Sand casting, another industrial method, involves creating a model in wood, fiberglass or any other strong material and pressing it into sand to create the mold. Later bronze is melted and poured into this mould which solidifies and taken out after cooling. While this method also supports multiple castings, the surface quality of the final product is often compromised.

The limited number of foundries that do offer lost wax bronze casting services often charge high prices due to the labor-intensive nature of the process and the high costs of materials

### **Economic Barriers for Emerging Artists**

For many young and emerging artists, these high costs present a significant barrier to entry. Art students, recent graduates, and early-career artists often operate on limited budgets, relying on personal funds, small grants, or modest sales to finance their projects. The prohibitive costs of bronze casting foundries mean that many of these artists cannot afford to experiment with bronze, thus limiting their creative opportunities and professional development. Experimentation is a crucial part of artistic growth, allowing artists to push boundaries and develop their unique styles. Without affordable access to foundries, many are forced to abandon their interest in bronze casting or seek out alternative, often less desirable, materials and methods.

Bronze casting is expensive, and fluctuations in the global market prices of these metals can significantly impact artists' budgets. Moreover, the casting process itself is resource-intensive, requiring substantial energy and materials for melting metals, creating molds, and finishing cast pieces. These high costs often limit access to bronze casting for emerging artists and smaller studios, thereby restricting the diversity of voices and expressions in the medium.

### **Impact on Innovation and Diversity in Art**

The financial barriers imposed by expensive foundry services not only stifle individual artists but also impact the broader art community. When only a select few can afford to work in bronze, the diversity of voices and perspectives represented in bronze sculpture diminishes. Innovation in the medium suffers as well, as high costs discourage risk-taking and experimental projects that might otherwise push the boundaries of bronze art. The art world loses out on potential groundbreaking works that could have emerged if more artists had the opportunity to explore this medium without financial constraints.

### **The Potential of Bronze Casting in Contemporary Art**

The medium of bronze casting holds immense potential for formal play and re-contextualization in contemporary art. Despite the postmodernist inclination over the past few decades to appropriate industrial and non-conventional materials, which has dominated the art scene, this trend is reaching a point of saturation. Audiences may soon find these approaches less exciting, creating an opportunity for a resurgence of classical mediums like bronze casting. This shift is already observable in the global art landscape.

## **4. Misinterpreting 'New Materiality' :**

The current buzz around 'new materiality' often misinterprets the movement, overlooking the innovative ways contemporary artists are revisiting and reinterpreting traditional materials and methods. Artists like L.N. Tallur with his work "Gandhi," Shazia Sikander with "Witness," Ai Wei Wei with "Zodiac Heads," Urs Fischer with "Big Clay," Damien Hirst with "Demon with the Bowl," and Marc Quinn with "All the Nature Flows Through Us" are successfully establishing new languages within their practices by exploring the historical and cultural connotations of classical materials like bronze. These artists are not merely reverting to traditional methods but are pushing the boundaries of these mediums to create contemporary relevance and dialogue.

### **The Myth of Skilled Craftsmen Scarcity**

Contrary to the belief that the gradual decline in bronze casting is primarily due to a scarcity of skilled craftsmen, this is not entirely the case, especially in the Indian context. The decline is more complex and multifaceted. Factors such as economic barriers, limited access to specialized foundries, and high costs of materials and processes play significant roles. In India, the tradition of metal casting, including the Dhokra technique, has deep roots and a wealth of skilled artisans. However, the challenge lies in the lack of infrastructure, financial support, and opportunities for these craftsmen to collaborate with contemporary artists.

### **A Genuine Interest in Classical Mediums**

The return to classical mediums is not merely nostalgic but is driven by a genuine interest in their potential for formal innovation and historical depth. As the art world seeks new ways to captivate audiences, the re-emergence of traditional techniques like bronze casting is likely to continue gaining momentum. This resurgence will not only revive age-old practices but also infuse them with new meanings and relevance in the contemporary art context.

## **5. Need for Supportive Structures :**

To address these challenges, there is a need for more supportive structures within the art community. This could include the establishment of more artist-friendly foundries that offer affordable services, particularly for emerging artists. Grants, subsidies, and residency programs specifically aimed at supporting bronze casting projects could also alleviate

some of the financial pressures. Additionally, partnerships between established artists, educational institutions, and foundries could provide mentorship and access opportunities for younger artists.

## 6. Conclusion :

The challenges of bronze casting in contemporary art practices are multifaceted, encompassing economic, environmental, educational, technological, and market dynamics. Addressing these challenges requires a concerted effort from artists, educators, and industry professionals to innovate while preserving the rich heritage of bronze casting. By embracing sustainable practices, investing in education, and finding a balance between tradition and modernity, the art of bronze casting can continue to thrive and evolve in the contemporary art landscape.

The limited access to bronze casting foundries, particularly those specializing in the lost wax method, presents a significant challenge for contemporary artists. The scarcity of specialized foundries, coupled with the high costs of services, creates substantial economic barriers, especially for young and emerging artists. This limitation stifles creativity and experimentation, crucial elements for artistic growth and innovation.

The financial barriers not only hinder individual artists but also impact the broader art community by reducing the diversity of voices and perspectives in bronze sculpture. Innovation within the medium suffers as high costs discourage risk-taking and experimental projects that could otherwise push the boundaries of art.

To overcome these challenges, the art community must develop more supportive structures. Establishing more artist-friendly foundries, providing grants and subsidies, and creating residency programs can help alleviate financial pressures. Partnerships between established artists, educational institutions, and foundries can also provide mentorship and access opportunities for younger artists. By implementing these measures, the art world can ensure the sustainability and evolution of bronze casting, allowing more artists to explore and contribute to this rich and enduring medium.

The challenges of bronze casting in contemporary art practices are multifaceted, encompassing economic, environmental, educational, technological, and market dynamics. Addressing these challenges requires a concerted effort from artists, educators, and industry professionals to innovate while preserving the rich heritage of bronze casting. By embracing sustainable practices, investing in education, and finding a balance between tradition and modernity, the art of bronze casting can continue to thrive and evolve in the contemporary art landscape.

## REFERENCES:

1. Dempsey, A. (2010). *Styles, Schools, and Movements: The Essential Encyclopaedic Guide to Modern Art*. Thames & Hudson.
2. Adamson, G. (2013). *The Invention of Craft*. Bloomsbury Academic.
3. Greenhalgh, P. (1997). *The History of Craft*. Bloomsbury Academic.
4. Simon, J. (2011). *Sustainable Sculpture: Environmental Considerations in Contemporary Art*. International Sculpture Center.
5. Walker, S. (2014). *Sustainable by Design: Explorations in Theory and Practice*. Earthscan.
6. Dormer, P. (1997). *The Culture of Craft: Status and Future*. Manchester University Press.
7. McCullough, M. (1998). *Abstracting Craft: The Practiced Digital Hand*. MIT Press.
8. Thornton, S. (2008). *Seven Days in the Art World*. Granta Books.
9. Art Foundry International (2020). *The Challenges of Bronze Casting in Contemporary Art Practices*. Retrieved from <https://www.artfoundryinternational.com/challenges-of-bronze-casting>
10. Meskimmon, M. (2010). *Contemporary Art and the Cosmopolitan Imagination*. Routledge.
11. Fineberg, J. (2010). *Art Since 1940: Strategies of Being*. Laurence King Publishing.
12. Shiner, L. (2001). *The Invention of Art: A Cultural History*. University of Chicago
13. Mukherjee, M. (1995). *The Dhokra Craft: An Overview*. Indian Institute of Art and Design.
14. Agarwal, V. (2013). *Traditional Crafts of India*. Roli Books.
15. Barrett, E., & Bolt, B. (2012). *Practice as Research: Approaches to Creative Arts Enquiry*. I.B. Tauris.
16. <http://www.gobronze.org/from.html>
17. <https://www.dsourc.in/resource/dhokra-metal-casting-dhenkanal-orissa/making-process>
18. <https://www.dolincasting.com/sand-casting-process-overview.html>