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Tactile Experience of Designing Art

Shatarupa Thakurta Roy

The much-admired painting titled 'Olive Trees' by Vincent Van Gogh in the year 1889 made news in November 2017 as the conservator Mary Schafer at The Nelson-Atkins Museum of Art in Kansas City, found through her magnifying glass a tiny grasshopper stuck in the paint. The news caused sudden increase in the visitors' footfall. Through the identity of the species, they tried to track information about, the exact season when Gogh went out in the woods to paint it. The red pigment that entrenched it has lost its luster over time, altering the interrelationship within other shades in the painting. Yet, the once alive grasshopper is expected to uncover stories of the time when Gogh's turbulent paintbrush was striking restlessly on the canvas to unknowingly captivate the insignificant creature. The story of that grasshopper to me is just another version of the story of the tactile experience of Pablo Picasso in his synthetic cubism.

Twenty-three years old Meret Oppenheim in 1936 got a cup, saucer and a spoon from a supermarket store, wrapped them in fur, leaving her Freudian audience with a somewhat gastro-sexual interpretation in a surreal object aptly titled 'Luncheon in Fur'.

The fear and hesitation generated by the possible interaction through a sensation of touch, has always pulled the viewers towards an art object. Although in a museum space, Art is expected to be just a yield to be experienced with all our senses except 'touch', in the process of artmaking the artists solely explore 'touch' to build the optimum form. Artists act as skilled

performers sure of establishing synchronic resonance in the viewers. The designing of a form, before being identified as art, experiences the momentum of 'truth, belief and justification' in tactility.

In physiology, the somatosensory system is the network of central nervous system that causes perception of touch. The neural structure in the brain senses modalities like pain, pressure, temperature etc. to help detecting quality of material even in the absence of any visual impression. Touch triggers cultural association, memory, morality and above all the sense of being in the present.

Marina Abramovic confronts real pain, hurt and injury beyond physical limit. In her art 'The Artist is Present' in 2009 she allowed the audience to come close to her, sit opposite to her and make prolonged eye contact in silence. She has dealt with the concept of trust, power and relationship of the two in 'Rhythm 0' in 1974 by placing seventy-two objects on a table that random visitors were allowed to use the way they chose. They did not have to hold any responsibility for any harm caused by their actions. Through the performance Abramovic commented on the condition of abusers and abused. By letting the audience touch her body with chain, lipstick and knives, she proved how close art can get to reality.

The seven scholarly articles in this issue point out to the common aspect of being involved in the creative process by wilfully getting the hands dirty. There is no room for passivity in designing an artwork. It is the choice of the maker that may elevate a designed object to the level of art. A manmade object such as an artefact may meet the standard of beauty, conceptuality and functionality through a deliberate process of design.

To examine how new possibilities are realized in the realm of tactile physical experience that dictates an artist's visual language as an integral component of art-style, divergent topics are put together. All the authors of this issue are researchers as well as practicing artists themselves who experience tactility of different materials that demand newer methods of exploration. They delve inside their own creative process as well as others and reveal what keeps them going. May it be the artists who are women and identify themselves with some unique tactility of stitches, embroideries traditionally known as men's craft, or the block printers and dye makers who identify their creations in association with touch, smell and sonics.

It investigates the changing identity of a print in the context of technological empowerment, only to find out a disruption in the narrative caused by the unfair conundrum about the edition and exclusivity, ignoring the concern of tactile experience involved in graphic printmaking.

Articles reveal how the complex knowledge of fractal geometry dwells in the physicality of Mughal architectural structures. The sharp edges of the facets soften with the deposition of dust transforming its ontology into a habitat through the skilled hands.

There are comments on the role of an art teacher in the rudimentary level who directs the young minds towards innovative thinking. The legacy of learning by doing expands the view of both the academic and non-academic spheres.

The idea of touch is dependent on a sense of safety and security. The artist through art boosts that sense in the physical world that surrounds them. In the process of doing so, materials like clay, stone, metal, wood, oil, chemical and water are deliberated to lose

their initial identity to be interpreted as art. The articles are primarily speculative about those magical happenings.

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A Tactile Enfoldment: Reflections on the Practice and Process of Dyeing

Rajarshi Sengupta

Abstract

In the art historical scholarship, a prime challenge remains in establishing a connection between objects of research and the authors' lived experiences. This essay is posed as an attempt to address this concern and present ways to further this discussion. In this essay, I will draw upon the practice of natural dyeing and painting from my fieldwork and individual practice to elaborate on the significance of sensory knowledge. Furthermore, I will refer to the process of arriving at certain visuals, featured on two of my recent works. This essay will emphasise the two prime aspects of tactility, practice, and process, stressing the interconnectedness of observation, perception, analysis, memories, and lived experiences. Through this, fresh perspectives on the entanglement of history, memory, past, present and lived experiences are presented.

As art historians continually examine and analyse images from shared repositories, how do we embrace historical material as part of our lives? Simultaneously, does our hands-on involvement with material practice serve as a way of envisioning their historicity? Can our anecdotes be included in bridging critical analysis of artworks and our sensory memories? While penning down sensory engagement with historical imagery as well as hands-on art making, a major challenge emerges about contextualising our own experiences concerning our observations

and explorations. While observing artworks and objects—even the ones protected within glass vitrines or out of our immediate reach—we cannot undermine how our sensory memory constitutes our perception and analysis of them. While the tactile experience of historical art objects is often not possible or permissible, engaging in hands-on processes of making similar objects infuses life vitality into history. In other words, a focus on tactility enables feeling, sensing and subsequently enfolding objects of our study into our lives.

In this essay, I will draw upon the practice of natural dyeing and painting from my fieldwork and individual practice to elaborate on the significance of sensory knowledge. Furthermore, I will refer to the process of arriving at certain visuals, featured on two of my recent works. This essay will emphasise the two prime aspects of tactility, practice, and process, stressing the interconnectedness of observation, perception, analysis, memories, and lived experiences.

On Practice

What comes first? In the endless cycle of making, unmaking, and re-making narratives, it is always hard to determine what constitutes the beginning. Perhaps there is not one. For some of us, an utterance starts a story; others might argue the story prompts the utterance. Some might say drawing a line initiates a narrative but others might disagree; doesn't the drive to depict a narrative translate into the depth of the line? In our imagination of a hill, what came first? A hill from memory? Or a hillock that is an intrinsic part of our lived experience? Hillock formations of the Deccan plateau of southern India have frequently appeared in the famed kalamkari textiles, at least since the early modern era. In *Janamaz* or Islamic prayer mats, the hillock formations support

the growth of a tall cypress tree, revered in Islam for its unmatched verticality. The tear-drop formation of the tree seems to reflect the triangular hillock formation (Image 1). Smaller diamond-shaped rocks that constitute the hillock are carefully drawn individually with utmost care. The vibrant and prominent borders of the rocks encapsulate a space filled with patterns. The alteration of blood red and dark soothing blue of the borders provides a protective space in-between where delicate tonality of red and blue thrive. The rock formations are then connected with the flora and fauna around. A prominent woodblock-printed border running beneath the hillock formation marks an end to this rocky terrain. This triangular hill structure often emerges prominently not only in prayer mats but in hangings and bedspreads as well. This hybrid hill becomes a platform for the towering cypress tree to stand; the hill form becomes the base to hold our stories. Did the hill come first, or did the mountain of stories turn into the hill?

Image 1: Kalamkari, 19th century, Attributed to India, cotton, 201.9 x 129.5 cm, The Metropolitan Museum of Art, New York. Acc. no. 08.108.3, Rogers Fund 1908. Image courtesy of The Metropolitan Museum of Art, New York.

The cycle of making and remaking narratives from the textile informed my experience of visiting the Golconda fort in late 2020. After a prolonged monsoon, I made my long overdue trip to the fort. Visiting certain places when in the Deccan is an unspoken ritual for me. I step into my old shoes and old self. After reaching the fort, I encountered a long queue of visitors. The entrance to the fort was a confluence of traffic from all directions without a single traffic controller. After crossing the ticket counter, I suddenly found myself in a vast, open yard leading to the fort complex. The contrast between the narrow roads outside the complex and the open space within the walls was striking. While climbing the granite stairs of the fort, I usually stop at a few locations to look above the walls. The silence and vastness of the ruined fort complex were complemented by the sea of houses on the other side of the wall. Houses were set against a wavy landscape. As if there was a sea and one fine morning, the sea froze, and the waves too. Slowly people gathered and started making their homes there. The sea was replaced by a sea of houses, mosques, occasional trees, and the Qutb Shahi tombs. Where the land/sea met the horizon, I saw a number of monumental housing projects under construction. Later, while going through the photos of that afternoon, I saw that the sea of houses seemed like a plateau constructed of houses. A mountain of houses or houses forming a mountain? Which came first? In my memory, the houses replaced the triangular rock formations of the kalamkari textile.

Study of the textile and my visit to the fort complex were parallel to the development of *Catalogue Mountain* (Image 2). Rock formations with narrative fragments, eventually turning into a mountain of inconclusive stories, stayed at the heart of this textile. Some of the stories came from the historical kalamkaris I

have studied over the years, such as an image of a man aiming at a bird. There are images of movement: a firing canon, running legs, a gracefully moving elephant and a staircase. Some images show an entrance or a threshold, inviting the viewers to participate in the narrative making. Alongside, there are images of working hands with drawing tools—indicating the continuation of a narrative that is yet to be concluded. The in-between mountain forms in this textile remained on the fabric after repeated wash. I was assured that the images were there to stay. In early 2021, I folded it, threw it into my luggage and set off for a trip. After almost ten months, I got back to Hyderabad, and the mountain made its safe return. By that time, the hand-drawn narratives on the textile surface were overlapped with silent stories of travels. The textile travelled along with me; it grew along with me. Swift strokes of mordant in selected areas created dark patches or recessed areas. They dissolved in the background while the pronounced lines pertained to their distinctive identity. Through this process, the mountain is manifested as a catalogue or repository of observations, patterns, experiences and imagination. The patchwork-like mountain form also resulted from my interactions with the Fine Arts students at the University of Hyderabad. All of a sudden, I found myself surrounded by conversations, ideas, expressions, images, words and stories of the students who were not part of my world. What do we do at a time like this? How do we respond to that? How do we speak about that in your visuals? I wondered if the textile makers of Coromandel encountered situations similar to this when surrounded by traders, merchants, sailors, and travellers from places distant to them. Did they find a way to speak about their experiences through the scopes of textile making? Through this exercise, *Catalogue Mountain* became part of a lived experience: a habitual practice that enables us to make sense of the world.

Image 2: Rajarshi Sengupta, Catalogue Mountain, 49x66.5 inches approx, fermented black dye, catechu and pomegranate skin on treated handwoven cotton, 2020-21.

On Process

The way in which history, memory and practice intertwine with our lived experiences is essentially through a repetitive set of actions. Through the repeated actions of throwing shuttles in the loom, the repeated beating of iron tools over wooden blocks, through the repeated pressing of yarns in the dark and cold indigo vats, the knowledge of the Deccani textile makers are generated and sustained over time. These actions, often considered as mechanical and generational, are the results of long-standing trial-and-error processes carried out in the workshops of the craftspeople. Even though repetition might seem quite the opposite of innovation, in the workshops of the textile makers, these two ideas come together. The sequence of craft making thrives through the rhyming of a certain set of actions. When a set of actions are repeated, the past breathes into the present. Repetition and innovation are also brought together by this

rhythm. Unlike proud proclamations of innovating technologies for our phones or gadgets, unlike recognised faces making speeches before the media announcing revolutionary claims, these innovations are knotted with daily practices and mostly unrecognised.

In recent years, dyeing has emerged as a habitual process through which I make sense of the world. Dyeing is addictive and it does not let us stop where we intend to. I thoroughly wash and boil the fabric to get started. After the fabric was dried, it was dipped into a myrobalan solution. To make a solution of myrobalan, I boil a pot full of water and then add the myrobalan powder. The solution must be kept on the stove for a while before the fabric is dipped. After the initial treatment, I look for available resources for tinting the fabrics. It was finally time to open my bag of dye material collected from the bazaars of Kolkata and Delhi. Burra Bazar, with its chaotic gallies and a never-ending supply of materials, is always fascinating. Earlier in 2019, I dragged Ajit, a long-time friend now based in Amritsar, to the bazaars of Chandni Chowk and Sadar Bazar in Delhi on his birthday to hunt for dyestuff. He was not fond of crowd and chaos, and now I think I owe him a trip to a serene place. I was excited to find pomegranate flowers, manjistha, and myrobalan. Prior to dyeing, dyestuff needs to be soaked. After soaking them overnight, the solution of madder or *Manjistha* turns blood red. A solution of pomegranate flower or *Anarkali* also obtains a bright shade of red. These two solutions were boiled in low heat on the stove and slowly, the fabrics and yarns were added. Even though the pomegranate flower solution looks red in colour, it turns the fabrics into rich yellow. The yellow is calm and bright at the same time. Lately, I found myself to be amazed by the shades of yellow. When I see textiles and ceramics, the colours that draw my attention are reds and blues; I did not

plan to appreciate yellow. Myrobalan and turmeric produce two different kinds of yellow, and the yellow of Anarkali is markedly distinctive. It is a prolonged set of actions that asks us to be patient. It is a reminder that everything is on the verge of transformation.

One might wonder why I left the measurements out of the dye experiments. We can easily find these measurements from the dye recipes, however, the measurements are not universal. They might vary for the weather, for water, for sunlight, or even for the people who are handling them. Dyeing and cooking, in many contexts, run side by side. They are not distinct. Planning in cooking also does not quite work. After years of eating at canteens and eataries during my studies, when I finally started cooking by myself, I felt the need for a recipe book. I imagined this situation in advance and kept pestering *Ma* for recipes and measuring ingredients for cooking. Ma always ignored the measurement part in my queries and said, "you will figure it." I felt anxious. How was I supposed to figure this? It took me a while to understand what she meant by that. The measurement of ingredients that work for her might not suit me. The only way to figure this out is to repeat the exercise. One can only start to comprehend this by repeating a technique over time.

During the visit to my parents' home in 2020, I did my customary cleaning, which involved unloading cupboards and shelves. Out of nowhere, a piece of khadi cotton fabric appeared from the heap. *Baba* said he intended to make a *dohar* with this which was not actualised. I immediately claimed it and imagined the next several weeks working on it. At home, a small amount of *kasim* or fermented iron solution was kept in a safe corner. That week, I collected marigold flowers and sun-dried them. To begin the work, myrobalan was essential and its reserve at home was almost over.

I decided to make a trip to the nearby bazaar and buy the myrobalan fruits. While gathering the materials, I was simultaneously thinking about what to draw. Once the materials were collected, the myrobalan fruits were pounded in my grandfather's *hamam dasta* or mortar and pestle, I felt peaceful. I spread the piece of fabric on the floor and gazed at it. It was as if the rectangular piece demanded to be transformed into a spread or cover (Image 3). The unique nature of these utilitarian fabrics is their refusal to be displayed as a hanging. I immediately thought of the floor spreads I encountered over the years which can be approached from at least two sides. Viewers have to walk around them to make sense of all the components; seeing them from one vantage point is not possible. I planned to make mirroring rows of imagery lengthwise, something that I learned from the spreads I have studied. Initially, I took impressions of a woodblock in multiple places on the fabric so that I don't start from a void. Images from books, postcards, web sources, and textiles started appearing in clusters.

Image 3: Rajarshi Sengupta, World at the Table-posh, 44x65 inches approx (with mounting), fermented black dye, pomegranate skin and embroidery on treated handwoven cotton, 2020-21.

The cluster of figures or elements against a background filled with floating foliage, birds, and animals appears in some of my favourite kalamkari *rumals*. There can be a cluster of musicians and dancers; there can be a cluster of royal spectators; there can be an absent-minded hunter lost in the jungle of motifs and patterns; there can a distracted *pankha*-bearer—most of them disjointed from each other yet brought together by the perimeters of the fabric.

Of the stillness and restlessness, my attention kept looming over an image of a running grey rabbit facing backwards from the cloth. It started with my interest in the prevalence of hunting scenes in the kalamkari floor spreads and hangings. Set against a forest of arabesque or pleasurable Deccani gardens, the hunting scenes seem slightly odd to me; it was certainly not odd for the patrons of these lustrous fabrics. I was particularly referring to a floorspread from the Calico Museum collections (Ahmedabad), which celebrated hunting scenes by showing a hunter aiming with his gun at groups of animals (A/c no. 403). The running long-eared rabbits always caught my attention. The figure of the hunter, with plump cheeks and a protruding belly, is quite intriguing, too. I wonder if the painters of the textiles also infused their humour while constructing the figure of this man. The textiles also show the running animals in clusters confined to a certain section of the textile surface. I wanted to utilise the running figures for two reasons. First, I wanted the running rabbits to confuse the hunter rather than submit to him. I drew a small group of rabbits running away from the hunter, and one of them was hiding behind a shrub inscribed with Thai *flame* patterns. The figure of the grey running rabbit appears in a different direction and far from the hunting scene. The rabbit is almost self-motivated. Its distance and orientation point to my

second motive for this compositional decision. It moves out of a cluster and plays a part in setting up a conversation between various sectors of this textile. In other words, the rabbit manifests as a connecting thread. Even though the image stays truthful to its sources, it acquires a different life with a new narrator.

Can narratives survive without narrating content? Or perhaps a coherent story? The windows of the evenings, which became a familiar sight to me over the months of the lockdown in 2020 in Hyderabad, tempt viewers to weave stories out of them. Different homes inhabited by people from diverse social and linguistic backgrounds, people of different age groups, and people with varied dressing habits dare us to build narratives around them. Even though they are visible, their accounts are never conclusive. During the Deepavali weekend, many of them seemed to have been doing similar activities, such as decorating their balconies with hanging lights, attending guests, and bursting crackers. The firecrackers' continuous sounds echoed as if it were a dramatic monsoon night with thunderstorms and no rain. However, beyond the festivities, I could not trace a common thread that could hold the narratives of the windows together. Yet, the narratives are connected. All the events of the evening unfold within rectangular window frames. Also, they have a common spectator; in other words, the spectator is the connecting link between the frames. The windows of the evenings are not meant to make sense together until a viewer registers them. The lure of the seemingly disjointed narratives never fails to draw my attention. Before I realised it, the evening windows were absorbed into the textile I was working on (Image 3).

The repetitive exercise of dyeing in the kitchen and studio and the experiences of observing the live around came together in the layers of visuals periodically imprinted on the textile. In a strict

iconographical analysis, the visuals would refuse to yield anything concerning the immediate physical environment around us; however, the emphasis on the tactile involvement with the dyeing and drawing present renewed ways of interpreting and enfolding these visuals into our lives.

Moutushi Chakraborty ***currently serves as Assistant Professor at the department of Fine Arts, Amity University Kolkata. She has been engaged in pedagogic practices at Art institutions across Kolkata, Delhi, and Bangalore for the past thirteen years. She is a practising artist working in the realm of prints and archival photography for many years and participating regularly in national and international exhibitions. In 2019 she held her third solo show 'The Homeland' at the India International Centre, New Delhi. Moutushi is alumnus of Visva-Bharati Santiniketan (BFA), M.S.University Baroda (MFA) and Wimbledon School of Art in London (MFA). She is currently pursuing her PhD from Department of Visual Arts, Kalyani University in West Bengal. She is recipient of the Charles Wallace India Trust Award (2001), the Commonwealth Foundation Fellowship (2001), the Lalit Kala Akademi Award (2000) and the AIFACS award (1998).***

Moutushi also serves as Board of Studies member for Department of Graphic Arts at Visva Bharati and Rabindrabharati University in West Bengal. In 2022 she was invited by JNAFA University Hyderabad to deliver a lecture-presentations on 'Printmaking in 21st century - Approaches, Inclusivity & Relevance' for Faculty members and 'Print Technologies – Evolution & Approaches' for

students. In 2023 she was invited to conduct VISCOSITY Printing workshop at The Government College of Fine Arts Thrissur, Kerala. She has participated in four Conferences and written nine publications. In 2022 she was invited to make a presentation on her artistic journey at IIT Kanpur.

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Prints: The tactile emissaries of cultural aesthetics

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At the core of all existence lies communication, aided by touch, smell, sound, images, text or sign languages. The act itself aims to build a communion between individuals, with the objective of collective development through knowledge transference. Printing or imprinting motifs and symbols, as a mode of communication may be traced from the Pre-historic Caves to later civilizations across the world. As the cultural fibres strengthened so did the means of communication, traversing over time local topographies to reach foreign terrains beyond. Among all other creative practices, Prints are perhaps the most democratic of all mediums, as it is meant to reach out to the masses through a system of multiple editioning, irrespective of social standings or political ideologies of the viewers. The medium therefore became an effective tool for mass awakening, to become the core of some of the greatest evolutions of mass consciousness across the world. The history of printmaking becomes a narrative of the amalgamation of world cultures, reaching towards the cohesive brilliance of shared aesthetics. This paper concentrates on the history of printmaking in India with selective parallel references of developments beyond its borders which strengthened the identity and scope towards the progression of this medium. In view of the dwindling connoisseurship of Prints in contemporaneous times, it becomes essential to enquire, understand and divulge the history, character, and possibilities

that this medium still has to offer and to unravel the biased conundrum that collectors harbour regarding the aspect of editioning of prints.

Key Words: ***Print, Communication, World Cultures, Connoisseurship, India.***

INTRODUCTION

'The printmaker has something of the minstrel spirit; he sings, and in every print that is made from a single block of wood, copper plate or lithographic stone he repeats his song, over and over again. It does not really matter if the occasional sheet gets lost or stained or torn; there are copies enough to convey his thoughts, and if there are not sufficient available he can print a new series, in which each individual work is equally perfect, original and complete, as long as the plate from which it is printed is not worn.'

M.C. Escher (from '*Regular Division of the Plane'*, 1958)

Communication as an essentiality for subsistence, has manifested in multiple ways over time with the objective of connecting multitudes in a communion of shared knowledge. The intent of the tactile experience of mark making, as a testimony of lived experiences, is an inherent human nature evinced by the hand stencils and hand stamp imprints at numerous Prehistoric sites world over. Whatever may have been the purpose, the existence of these marks aspires to communicate the presence of humanity and herein begins the history of '*imprinting'* or '*printing'* of multiples.

Fig. 1. Prehistoric Hand Stencils Sonari, Hathajodi, Chhattisgarh, MP, India.
Image source:
https://www.bradshawfoundation.com/rockartnetwork/hand_stencils_chhattisgarh.php

Fig.1 features 10,000-year-old Hand Stencils from a Prehistoric cave in Sonari, Hathajodi, located at Chhattisgarh, Madhya Pradesh in India. Fig.2 is a 30,000-year-old Prehistoric Hand Stamp impression from the Chauvet Cave in France, and Fig.3 is a contemporaneous image showing Handstamp impressions on a Temple wall at Rajasthan in India – an example of the continued legacy of mark-making in ritualistic traditions.

Fig. 2.

Fig. 3.

Fig. 2. Prehistoric Hand Stamp, Chauvet Cave, France.
Image source: https://www.donsmaps.com/chauvetcave.html

Fig. 3. Hand stamp impressions on a Temple wall, Budha Pushkar, Rajasthan, India.
Image source: https://www.brettcolephotography.com/media/79d50275-f0c6-4f6f-a556-9839e58026b3-hand-prints-on-a-temple-wall-budha-pushkar-rajasthan-india

Printing impressions by the way of stencilling or stamping enacts a way of personalizing a space, be it a structure or an object, the tactility of the process itself adds further meaning and significance to its existence. The hand impressions on the Prehistoric cave walls reminds us of our predecessors who strived to exist against the fury of nature, leaving behind their personal marks on the walls of the space they inhabited. In a similar manner hand impressions of people on the sanctified wall of a Temple creates a personal connection between the space and the people who built or visited this structure. In India the system of stamping impressions was also practised for more personal usage like imprinting motifs on body, garments and even food - embodying a culture of *joie de vivre* by celebration and sanctification of a space through embellishment.

As civilization progressed imprinting symbols gained a more layered meaning with the origin and usage of Seals which became a formal system of codification. In case of terracotta seals, impressions were stamped onto wet clay and later fired to add strength and durability – a method that continued to be in practice in later years as well. Fig.4 is a Terracotta Seal from Indus Valley Civilization (1st millennium BC.), while Fig.5 is a Terracotta Seal from Nalanda, Pala Dynasty (9th century AD). The same method of stamping impression was also used in printing garments, except that the *matrix* (surface from which print is taken) was wood instead of terracotta, as seen in the engraved Wood-block in Fig.6.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

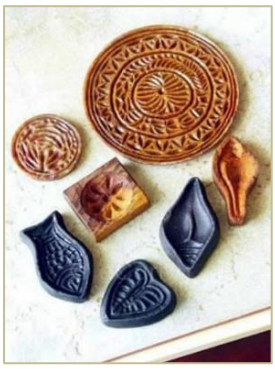

Fig. 8.

Fig. 9.

Fig. 4. Indus Valley Terracotta Stamp Seal, c. 1st millennium BC.
Image source: https://www.reddit.com/r/AncientCivilizations/

Fig. 5. Terracotta Seal from Nalanda, Pala Dynasty, 9th century AD.
Image source: National Museum, New Delhi

Fig. 6. Engraved Wood Block for printing Textiles, Kathiawar, Gujarat.
Image source: Personal documentation

Fig. 7. Mehendi impression applied on body from an engraved Wood-Block matrix.
Image source: Personal documentation

Fig. 8. Carved Wood-Block matrix to imprint motifs on food. Sandesh
Fig. 9. Moulded impression on Sandesh (Sweetmeat) from carved Wooden matrix.
Image source: Personal documentation

Matrixes made of engraved Wood-block were also used as a tool for religious propagation and knowledge transference. Evidence found in the form of baked and unbaked clay seals from Nalanda in Bihar, establish the use of clay tablets to record Buddhist inscriptions that were necessary for scholastic practices at the University. The 6th century clay tablet inscribed with Brahmi script from *Nidana* or *Pratittya Samuptpada* Sutra from Nalanda (Fig.10) is a case to the point. Built in the shape of palm-leaf manuscripts,

it is a precursor of carved wooden matrixes used for printing *Pecha* or Tibetan manuscripts (Fig.11) of later times.

Fig.10. Terracotta tablet with text from Pratittya Samuptpada Sutra, 6th cent Nalanda
Image source: Nalanda Museum

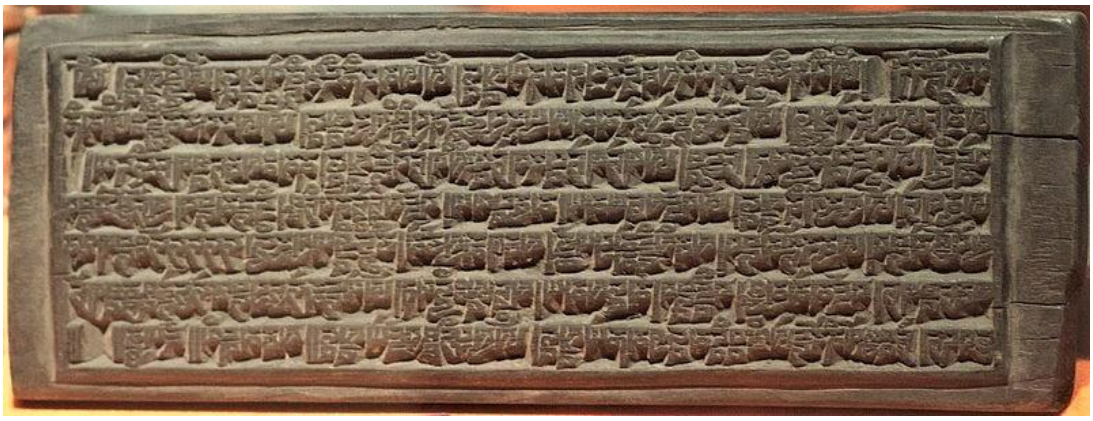

Fig.11. Carved Wooden matrix used for printing Pecha (Tibetan manuscript)
Image source: Tibetan cultural museum of Qinghai at Lushar

The discovery of '*Diamond Sutra*' (Fig.12) - the earliest dated printed book in the form of a 16-feet scroll created in 868 AD establishes the urgency in creating multiples to propagate the sermons of Buddha. The book is a translation of the Buddhist manuscript *Vajracchedika Prajnaparamita Sutra* in Chinese script, replete with elaborate images and text that indicate an absolute mastery of craft; a sophistication which alludes to a long and matured expertise in printed scroll-making.

Fig.12.

Fig.13.

Fig.12. Wooden Matrix replica of the 'Diamond Sutra' created by Wei Lizhong of China.
Image source: https://www.shine.cn/feature/art-culture/2104127295/

Fig.13. 'Diamond Sutra' – the original 16ft. printed scroll created in 868 AD. China.
Image source: The British Library Collection, London, UK.

The propagation of Buddhism was especially achievable since the religion did not discriminate the right to knowledge transmission based on caste or nationality. Establishment of educational centres like Taxila, Nalanda and others further spearheaded the propagation of Buddhism while inspiring scholastic progression across the borders. The Silk Route not only paved the way for merchandising but also the pathway for exchange of theosophical ideas and technological inventions. It was through this route that Buddhism had reached China from India, and the art of papermaking came to India from China, where it was discovered in 105 CE. by Ts'ai Lun during the Han Dynasty rule. Knowledge about the method of papermaking reached Central Asia through a trade route via Samarkand which was 'experiencing a golden age of science, mathematics, and literature' in the 8th century CE. The 'inexpensive production of paper allowed that knowledge to be recorded and spread' From Samarkand the skill for production of good quality paper reached Baghdad, where the 'water-powered paper mill' was first established in 794 CE. From here

papermaking spread to other parts of the Islamic world. The cheap production of paper expedited the art of Book making in the Islamic world, resulting in hand-written copies of Quran being published with elaborate decorations. The skill of papermaking eventually reached Europe in 11th century due to the conquest of Spain and Sicily by the Arabs. In 1454 AD Johannes Gutenberg established the first commercially functional Printing Press in Germany with movable metal types and printed 42-line Gutenberg Bible (Fig.15) in the following year. The Gutenberg press (Fig.14) galvanized the Printing Revolution in Europe by allowing scholars and religious heads to reach out a larger mass, thereby democratising the process of knowledge transmission.

Fig.14.

Fig.15.

Fig.14. Gutenberg Press.

Image source: https://www.printmuseum.org/gutenberg-press

Fig.15. Gutenberg Bible, Germany 1455 AD.

Image source: https://en.wikipedia.org/wiki/Gutenberg_Bible

The Revolution that was triggered by Gutenberg's Printing press, eventually spread to the rest of the world. In India it commenced with the arrival of the first Printing Press from Portugal at Goa in 1556 AD, the same year as Emperor Akbar's accession to the Mughal throne. The Press was procured by the Jesuit missionaries

with the intent of spreading the Christianity among the natives, as envisaged by St. Francis Xavier. The Press with movable printing types was set up by Spanish Jesuit João de Bustamante at the St. Paul's College in Goa. St Xavier's '*Doctrina Christam*' and '*Conclusões e Outras Coisas*' were the first two books to be printed from this Press. The necessity for printing books in vernacular languages was however advocated by the Jesuit Priest Henrique Henriques, who established a printing press at Quillon, which was instrumental in printing the first book in vernacular language from engraved metal plates in 1578. The book titled '*Thambiran Vanakkam*' (Fig.16) was a Tamil translation of St Xavier's *Doctrina Christam.* Henrique was the first Tamil scholar of European dissent, also attributed for writing and publishing the first Tamil–Portuguese dictionary. For the effective evangelisation of native populace, it was essential to educate them and to speak in local dialect, aided by vernacular publications.

Fig.16.

Fig.17.

Fig.16. A printed page from the book 'Thambiran Vanakkam' - 1578 AD.

Image source: ***https://en.wikipedia.org/wiki/Printing_in_Tamil_language***

Fig.17. Akbar in religious assembly with Jesuits at Ibadat Khana in Fatehpur Sikri. Detail of painted illustration from Akbarnama - 1605 AD.

Image source: **https://painting-mythology.blogspot.com/2015/09/14-christian-themed-mughal-miniatures.html**

The Jesuits first arrived at the Mughal court of Akbar in 1580 as seen in the illustration from Akbarnama (Fig.17). The reign of Akbar, considered to be the golden age of Mughal rule in India, saw the burgeoning of maritime trade with European merchants visiting the court to seek trading licenses. Due to his eclectic demeanour Akbar permitted these merchandising, while adapting newer technologies to strengthen the economic and martial resources of his empire. He attempted to create similar confluences of theosophical ideas and artistic practices by directing the indigenous artists in his *atelier* to refer to the printed European publications (presented to him by visitors in his court) and make paintings after the engraved illustrations (Fig. 19 and 20). The convergence resulted in a unique synthesis of Oriental and Occidental aestheticism, by introducing European perceptions of delineating perspective and *chiaroscuro* in paintings, thereby enriching Mughal art.

Fig.18.

Fig.19.

Fig.20.

Fig. 18. 'Madonna del Popolo' Engraving by Giovanni Battista de Cavalieri (1560-1600)
Image source: ***https://blogs.bl.uk/asian-and-african/2015/11/further-deccani-and-mughal-drawings-of-christian-subjects.html***

Fig. 19. Mughal depiction of the Virgin Mary and Jesus (1630), British Library coll.
Image source: **https://painting-mythology.blogspot.com/2015/09/14-christian-themed-mughal-miniatures.html**
Fig. 20. The Virgin Mary holding a book (1585-90) – attributed to Basawan.
Image source: **https://painting-mythology.blogspot.com/2015/09/14-christian-themed-mughal-miniatures.html**

The decisive victory of the British East India Company at the Battle of Plassey in 1757 firmly established their supremacy as a Colonial power in India, with Bengal becoming the centre of their political stronghold. It prompted the urgency of setting up Printing Presses in the region. Around 1778 Sir Charles Wilkins, the English Orientalist, began producing publications in Bengali vernacular language at the Hooghly region in Bengal. A master typographer himself Wilkins trained Punchanon Karmoker, a local metalsmith, in cutting metal types for Bengali fonts. The Serampore Mission Press was established in 1800 by William Carey at the Danish colony of Hooghly. Carey put to use the typographic expertise of Wilkins and Karmoker to develop an extensive range of types, resulting in the Press to become a publishing hub for books in foreign and vernacular languages.

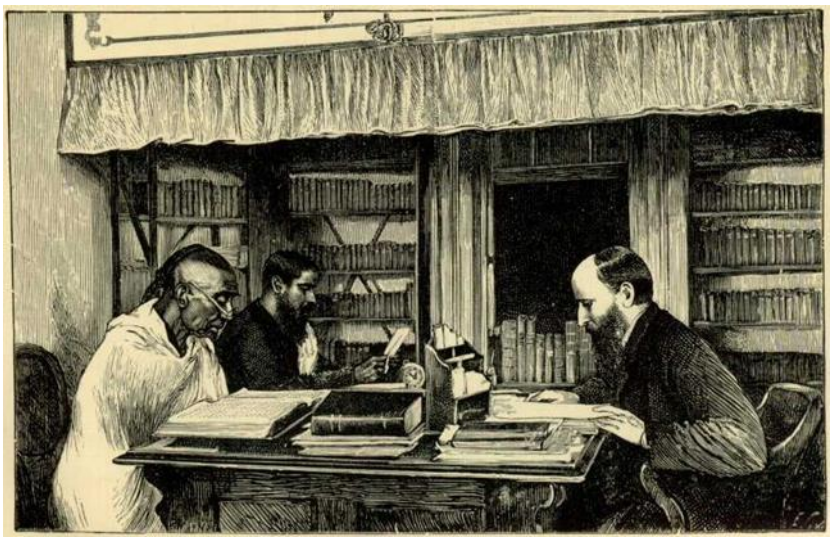

Fig. 21. Scholastic collaboration of indigenous and European academicians
Engraved illustration
Image source: http://ceias.ehess.fr/index.php?3557

The extensive scholastic collaborations between indigenous and European academicians, as demonstrated by the engraving (Fig.21) created enlightened passageways that attempted to bridge the cultural chasms between nations. Printed publications of prominent books translated into indigenous and foreign

languages paved doorways of mutual respect, having profound impact on society in the years to come. As the world opened up to information coming in from foreign shores through European traders and travellers, the curiosity to know about these fabled lands and its people grew among the European populace. Developments in printing technology (advent of Intaglio and lithography printing) coupled with skilled craftsmanship allowed the fulfilment of such aspirations by facilitating colourful production of printed Albums of depicting lives of indigenous people and their customs; local flora, fauna and festivals; as well as important archaeological sites and historical events. It drew artists like François Balthazar Solvyns (Fig.23), Thomas and William Daniell (Fig.22) and many others to travel to the virgin territories of India and document the distinctive character of the land. The tactile beauty of the Albums of Colored Engravings, as seen below, greatly intrigued the audience in the West and remain crucial sources of documentation in the time preceding the advent of photography.

Fig.22

Fig.23

***Fig.22. 'The Observatory at Delhi' Colored Engraving, Thomas & William Daniell* (1808)**
Image source: ***https://scroll.in/article/1035118/the-art-of-conquest-images-of-india-on-the-verge-of-british-rule-as-seen-by-two-travellers***

Fig.23. 'Costume of Hindostan' Colored Engraving, François Balthazar Solvyns (1807)
Image source: **https://sarmaya.in/objects/rare-books/the-costume-of-hindostan/**

The fabled perception of India as an exotic land of excess however received a rude shock with the 1857 Rebellion led by the Indian soldiers serving in the British army. The glorious image presented to the West stood challenged by the prints that recorded the gruesome details of the massive uprising as seen in Fig.24. Publication of political satires in periodicals like '*Punch*' caused much debate and furore on the atrocities of the East India Company.

Fig.24. 'Storming of Delhi' - Lithographic print, 1859.
Image source: British Library Collection

Fig.25. 'A dish of mutton-chop's' - hand-coloured Etching by James Gillray (1788)
Image source: https://www.npg.org.uk/collections

The political cartoon 'A dish of mutton-chop's' (Fig.25), a hand-coloured Etching by James Gillray shows the Governor of Bengal Warren Hastings, gluttonously feeding on a plate of mutton chops along with his allies. The barbed satire is a scathing comment on the crimes of Warren Hastings for abusing his position to extract

huge amounts of money to from sovereigns of Indian states. The caricatures had profound impact on society with people crowding in front of Gillray's print-shop to catch a glimpse of his printed cartoons. Warren Hastings was finally prosecuted on corruption charges at the British Parliament and the British Crown took explicit control of the British colonies in India. 'Disputed empire!' (Fig.26) another illustration by John Tenniel printed in Punch in 1877 is a cryptic comment on the 1876-78 famine that took a huge toll on native lives in India claiming five million lives soon after Queen Victoria assumed the title 'Empress of India.' The crowned skeleton alludes to the regent governing a disputed empire bereft with inequalities. Fig. 27 is yet another representation on famine from a later time is a Linocut print titled 'Famine – Calcutta streets' by artist Somenath Hore (1940) while Fig. 28 is a Linocut print by artist Chittaprosad Bhattacharya (1952). The poignancy of all three images speak of the crude reality of an unyielding world, layered in onerous socio-political complexities.

Fig.26. ***Fig.27.*** ***Fig.28.***

Fig.26. 'Disputed empire!' Illustration by John Tenniel - Printed in Punch (1877)
Image source:
https://www.granger.com/results.asp?image=0043792&itemw=4&itemf=0001&itemstep=1&itemx=4

Fig.27. 'Famine – Calcutta streets' - Woodcut Print by Somenath Hore (1940)
Image source: Seagull Foundation for the Arts

Fig.28. 'Gone Mad' – Linocut by Chittaprosad Bhattacharya (1952)
Image source: https://collection.waswoxwaswo.com/early-bengal-gallery.php?galleryid=26#prettyPhoto

Despite the long history of indigenous past that this medium is associated with, it lacks connoisseurship in recent times. Following is excerpt from an interview with the artist and print collector Waswo X. Waswo that tries to understand the reason behind this reluctance.

Q1) Why did you specifically decide to collect prints?

WXW: *"In my younger days I worked for years in an industrial screen-printing company. It was demanding and precise work, and through that experience I leaned how challenging printmaking could be. So, I developed a great respect for just the mechanics of printmaking, quite aside of the artistic qualities, but I also always loved the look of etchings that I would find in the local art museum, and especially fell in love with woodcuts."*

Q2) What prompted you to collect prints from artists in India?

WXW: *"When I moved to India it was the early 2000s, and the Indian art scene was really taking off. I'd always been a bit of a collector, but soon realized that most Indian artists were already beyond my means during that art bubble. I remember sitting at my Goa house and taking mental stock of what I had already collected. It occurred to me that in my collecting tastes I had a preference for works on paper, and already had some nice etchings and lithographs by Braque, Wifredo Lam, Rufino Tamayo, and Roberto Matta. I had also already bought two or three prints by Indian artists. Good quality prints were still reasonably priced at that time. So, I decided that Indian Printmaking would be what I would focus on. I wanted to highlight this area of Indian art that as of that time was not getting much attention."*

3) Why do you think people shirk away from collecting prints? Is this bias only in India or does it exist world over?

WXW: "*I think the bias is very much an Indian thing. One reason is that there is wide confusion here among the public as they equate a print with a reproduction. Of course a fine art print is not a reproduction, it is a unique piece of work solely created as a print in a limited edition. Yet people imagine that there is some kind of an original that has been copied. Prints in Europe, Mexico, and Japan are highly valued as the difficult and painstaking artform that they are. Why this is not understood in India is beyond me, though I sometimes feel Indian printmakers themselves just need to do a better job at marketing themselves. We can't always blame others for their ignorance, we need to blame ourselves for not conveying the message.*"

4) What has been your overall experience as a print collector and connoisseur?5

**WXW: "*I totally loved the experience of buying each print. It is a deeply personal collection, and I needed to relate to, and love, each etching, woodcut, drypoint, lithograph, and serigraph that I purchased. I met artists and gallery owners. I read books. I wanted to become very acquainted with each piece and each artist that I bought. There was an initial focus upon the old Bengali masters, such as Chittaprosad Bhattacharya, Mukul Dey, BB Mukerjee, and Haren Das. But then I moved on to the Delhi and Baroda schools, and even Kerala. I began to buy the works of young and unknown printmakers, many of which have made good names for themselves today. Watching them grow was half the fun.*

With Lina Vincent Sunish's help, we travelled the collection between the India Habitat Centre in New Delhi, and the National Museums of Art in both Bangalore and Mumbai. Today the entire collection is with the University of Iowa Stanley Museum of Art,

with the exception of only a few historical works that needed to remain in India. I donated it to them some years back, and eventually there is to be an exhibition and a catalogue. This episode in my life is now over, but I look back at it with extreme fondness and joy. I wish more individuals, who have the means, would follow in these footsteps."

CONCLUSION

Print has always been a medium for the masses due to the attribute of multiplicity through editioning, thereby remaining the most democratic process of image-making. Due to its easy accessibility to a larger audience, it became a tool of dissent, effectively aiding mass uprisings in the history of mankind across the world. The economical means of its creation makes it accessible for all. The tactility of viewing and owning an original print and personalising the essence of its aesthetic language, is the inherent charm of this medium. In that it is anti-elitist, as it induces plurality as opposed to exclusivity.

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He is a curator, art historian, and researcher. He is currently doing his doctoral research in the Humanities & Social Sciences Department at the Indian Institute of Technology, Kanpur. He has done his graduation in H=history of art in Kala Bhavana, Visva Bharati, Santiniketan, and post-graduation in art history and aesthetics in the Faculty of Fine Arts at the M.S. University of Baroda. He has also taught at the S.N. School of Arts & Communication, University of Hyderabad, Rajiv Gandhi University in Arunachal Pradesh, and Sister Nivedita University in Kolkata. He has also worked on developing curriculum and courses for art enthusiasts from different age groups at the Vadodara Visual Arts Centre, Vadodara.

Modern and contemporary art and art history have been his fields of interest, which has also enabled him to work on his curatorial projects like Material Metaphor in 2021. The online show focused on understanding experimental art practice and the concept of different women artists working with different forms of materials. The show is also related to his current research, which explores the idea of experimental material practice by contemporary Indian women artists, its history, stylistic shifts, and other critical aspects. He has presented papers for national and international

conferences in NIFT Gandhinagar (webinar), Thailand, Bangladesh, and Cambodia. He had co-founded and edited the Arts and Aesthetics Journal, 'Insignia', while studying in the Art History & Aesthetics Department of the Faculty of Fine Arts, Baroda. He has also written in art magazines, journals, and blogs like Art & Deal, Art East, Art Facts, Astanzi.com, Searching Lines, Design for All, Artsome.co, and others. He is currently based in Kanpur.

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Transcending Boundaries: Exploring the Artistic Innovations of Women Artists in South Asia

Aranya Bhowmik

Abstract

Since the early 20th century, Bengal (a geographical region expanding both in India and Bangladesh) has been a significant center for the development of modern art in South Asia. However, women artists are rarely recognized as trailblazers of artistic development in the realm of modern and contemporary art, in contrast to their male counterparts. But within the context of South Asia, there are a number of notable female artists who have not only established a unique visual language that transcended numerous boundaries but also managed to open up new avenues for creative expression for succeeding generations of artists. Significantly, a considerable number of these artists from South Asia have worked on a wide range of materials and methods that are informed by diverse contextual, conceptual, and aesthetic sensibilities.

The article aims to analyze the innovative methodologies adopted by women artists of different generations throughout South Asia as it traces the artistic trajectories of pioneering women artists. Artists such as, Meera Mukherjee, Novera Ahmed, Mithu Sen and Dilara Begum Jolly have explored new possibilities in visual realm and pushed the boundaries of conventional art practices with their own artistic language. The tactile and physical experience that

informed each artist's visual language is an essential component of all their work. A closer look at the unique visual dynamics exhibited in the artistic practices of these four female artists from different generations will contribute to the development of a more thorough understanding of modern and contemporary art in South Asia.

Key word- ***Material, contemporary, tactile, woman, South Asia***

Introduction

To understand the role and context of any art practice, one must excavate and explore the history of the time in which the artwork or practice is situated. However, there has been a lacuna and certain gaps in the literature on female artists and their art practices throughout art history, whether in the west or the east. In order to understand this issue, it is essential to refer to Linda Nochlin's influential essay, "Why Have There Been No Great Women Artists?"(Nochlin 2018). The essay critically examines the institutional obstacles that have traditionally impeded women's involvement and acknowledgment in the field of art, thereby challenging the established accounts of art history. Nochlin criticizes the concept of the isolated male prodigy and emphasizes the institutional prejudices and societal restrictions that have hindered women's ability to obtain art education, training, and chances for professional advancement. Nochlin pushes for a more inclusive and equitable interpretation of creative achievement and urges for a reevaluation of the standards used to determine artistic greatness by exposing the gendered dynamics present in art historical discourse. Her essay acts as a catalyst for more extensive discussions regarding gender representation, discrimination, and the imperative for systemic transformation within the arts.

Roszika Parker and Griselda Pollock's,(Parker and Pollock 1981) writings are equally important to understand the history of the role of women in the context of art and craft. Artistic expression by women was largely confined to the domestic sphere for an extended period of time following the Renaissance, per the art and craft hierarchy. Art practice by women such as embroidery and painting were deemed crafty and incompatible for serious art historical discourse, whereas their male counterparts were granted greater recognition and access to such discussions.

In the South Asian subcontinent, Bengali women have played a significant role in preserving and developing traditional art forms such as 'nakshi kantha' (quilting), 'alpana' (floor decoration), and 'tepa putul' (clay dolls). These women have created their unique artistic language in these mediums of expression, independent of any formal academic education. However, it is crucial to look into the unique creative geniuses whose works have been lost to time and history and have disappeared from the discusssions of art historical literature. Recent research conducted by individual researchers has provided new insights about certain individuals, such as Chitranibha Chowdhury[1]. An acclaimed artist studied under the tutelage of Nandalal Bose in Santiniketan, Chitranibha Chowdhury's practice is lost in to the erosion of time. Very few art historical literature has explored her fascinating artistic practice. In 1938, after returning from Santiniketan Chitranibha Chowdhury painted a large mural at the residence of her brother-in-law, Jogendranath Chowdhury, in Dhaka. However, the large mural[2]

[1] Chitranibha Chowdhury was a dexterous painter and designer who was formerly known as Nibhanoni and was later christened with the name Chitranibha by Rabindranath Tagore when she went to study at the Kala Bhavan in Santiniketan in 1928. She harnessed her skill and talent in painting at Kala Bhavan under the tutelage of Nandalal Bose and Benodebehari Mukherjee.

[2] The tragic fate of this expansive mural was known through the writings of the eminent painter and scholar Nisar Hossain, who had extensively researched and traced the original mural in the tragic state.

(fig-1,2) had consisted of scenes of rural life and natural landscapes, but sadly, the original mural has been lost under the white distemper of the house that is now owned by a pump company and used as their office and storehouse. (Hossain, n.d.)

The inability of a section of society to appreciate art, lack of thorough investigation, and failure to acknowledge the importance of these artists have irrevocably hindered the retrieval of these invaluable artworks.

Fig. 1 & 2- ***The mural at Jogendranath Chowdhury residence, Chitranibha Chowdhury, 1938. (Image source- Nisar Hossain's collection, Images were taken by the Hossain's brother before the walls were white washed)***

An investigation into the lives and artistic creations of individuals such as Chitranibha Chowdhury could provide insights into the fate of countless priceless works of art. Numerous female artists have also been overlooked in the literature on art and academic discussions, despite their substantial contributions to the field of art. This paper will examine four such female artists hailing from both Indian and Bangladeshi. The featured artists include Meera Mukherjee from India, Novera Ahmed from Bangladesh, Mithu Sen from India, and Dilara Begum Jolly from Bangladesh. They were selected due to the distinctive approaches, which broke many preconceived ideas about the nature of artistic language and became significant in their own merit.

They freed the Forms from its confines- Artworks of Meera Mukherjee and Novera Ahmed

"Why cannot artists *become* craftsmen? In any manners, completely?"(Sunderason 2020), written in one of her journal entries, Meera Mukherjee expresses her perspective on art and its inherent link to the idea of craft, which she established through her language and profound involvement with the 'gharua' community in Bengal, as well as other metalcraft artisan communities in eastern and central India. Meera Mukherjee was an influential figure in the realm of Indian modern art, advocating for the appreciation of Indian crafts and challenging the notion of hierarchy between art and craft. In 1956, immediately following her return from Germany to India, she received a commission from the Anthropological Survey of India to record the artistic techniques employed by metal artisans in central India. This research had profound influence on her and over the following years, she began integrating folk art forms into her work.(Sunderason 2020)

Her research and experimentation with the "dhokra"[3](Sunderason 2020) gave her a lot of knowledge about how to work with metal. Her language and oeuvre consisted of people and events that she had witnessed in her everyday life. Although, occasional appearances of historical figures can also be found, like 'Ashoka of Kalinga',1972 (fig.3). The bronze sculpture of the great Mauryan Emperor, standing at a height of 11 feet, was crafted using the cire perdue process, also known as the lost wax technique. Meera, after her interaction with the metalcraft community of Baster, had experimented with this method. The sculpture probably depicts

[3] Dhokra is a metal craft practiced by different metalcrafts artisan communities in Central and Eastern India. The technique is also known as cire perdue or the lost wax technique.

Ashoka's realization of the consequences of his victory in the battle of Kalinga, which profoundly altered his perspective and the trajectory of his kingdom. The sculpture's blank, wide-eyed countenance evokes the traditional dhokra statuettes, while also capturing the grandeur and authority of a great ruler. Meera Mukherjee created a language that drew inspiration from the technique and materials used in metalcraft traditions infused with modern aesthetic sensibility. Her work embraced the dynamic and textured surfaces found in dhokra tradition which also brilliantly established a fluid synthesis with visual perception that were celebrated in modern art. Additionally, she incorporated her country's rich tradition and history into her artistic practice.

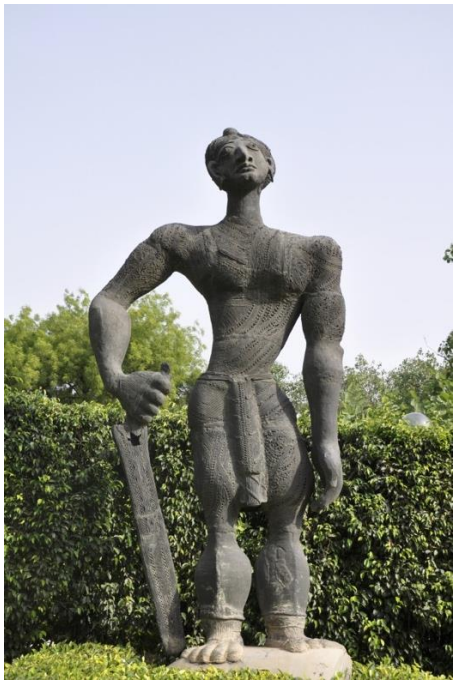

Fig.3- ***Ashoka of Kalinga, Meera Mukherjee (Image Courtesy: Nayanjot Lahiri, The Wire)***

Meera Mukherjee's practice as a sculptor in the context of 'regional modernism' was unbound in her exploration of artistic practice that locates the idea of local and vernacular, incorporating ethnographic and anthropological nuances with a

sensitive eye towards art and craft. As art historian Nandini Ghosh writes (Ghosh 2018),

"Her role in this respect was not merely that of an urban modern artist who parasitically sought for motifs and structures from the folk practices; she had an active and dynamic engagement with the circuit, and worked in close harmony such that the relationship was in effect symbiotic. Since she had been trained abroad. She could be expected to have been aware of the trend within modern art identifies as 'primitivism', but her adoption of the marginal cultural expressions from her own national culture, for instance the dhokra metal casting and the kantha quilting process should probably be distinguished from the same."

In the artwork "Pilgrims to Haridwar,"(fig.4) a group of men and women is depicted in a distinctive formation, clustered together while simultaneously moving towards their pilgrimage site. The sculpture symbolizes the "Kunwar Yatra", a sacred pilgrimage undertaken by devotees in North India to worship Shiva. During this pilgrimage, the devotees carry a Kunwar or a pole with water pots to be filled in the river Ganges at Haridwar. They then transport the water back to their local shrines to pour it on the Shiva Linga as a gesture of reverence during the holy month of Shravan or August. Meera's many travels across the country have afforded her the chance to observe and engage with diverse individuals and locations, which frequently manifest in intriguing ways in her artistic endeavors. This work also depicts instances in which she witnessed devoted individuals embarking on long journeys to get water for the purpose of venerating their deity. The works intriguingly convey the devotion and journey, as men and women traverse the arduous way with their staff and vessel, striving for the ultimate goal of receiving the blessings of their god. In a country such as India, religious belief is deeply ingrained

throughout the socio-cultural fabric of country. Meera, in her distinctive manner, crafts captivating human figures where the kunwars or poles accentuate through the rhythmic contours of the figures, which are then combined to make an intriguing coherent constellation. Meera Mukherjee, through her practice, was not only able to gauge the gap between art and craft but also resonated with the lives and accounts that she had observed and experienced that tell the story of mundanity, struggle, beauty, nature, history, and an unquenchable thirst for a creative life.

Fig.4: ***Pilgrims to Haridwar, bronze, Meera Mukherjee (Image Courtesy: pundoles.com)***

The selection of material and media by Meera Mukherjee elicits a palpable quality that amplifies the emotive essence of the artwork. The process of meticulously crafting a wax sculpture and subsequently casting it in bronze is arduous and time-consuming. The active participation of the artists is essential in this process, resulting in a final product that reflects a sensory and tactile sensitivity, which is inherent to the entire process. Mukherjee actively participated in molding and fostering the materials and medium of her artworks, resulting in a unique embodiment that surpassed the traditional notion of figurative depiction commonly seen in modern sculpture. The sinuous shapes and smooth curves

of her sculpture convey a style that surpasses conventional anatomical standards yet represents a delicate physicality that is also cerebral in essence. The artist employed a hybrid visual language that fused elements of modern and folk art, necessitating a more meticulous and discerning interpretation of her visual idiom.

Material surface, organic semblance of forms, and their methodological implications played a major role in Meera Mukherjee's practice, as they did in the works of Novera Ahmed. The persona of Novera Ahmed in the context of Bangladesh's art is filled with enigmatic facets blended with a penchant for art and life coherence and a liberated spirit for taking creative stances that shaped the life and practice of the artist. Novera Ahmed is considered to be one of the most significant and radical figures in the modern art of Bangladesh as well as in the South Asian subcontinent. She was able to create a language that responded to the ideas and elements of the West but also evoked the experiences of her country's own context. Ahmed was trained in the premier institutes of the West under the guidance of artists like Karel Vogel and Venturino Venturi. Her works have a diverse style that stems from her constant experimentation with various materials, methods, and sculptural idioms.

Her initial exploration of sculptural form was shaped by European modern artists, including Henry Moore, Barbara Hepworth, and Pablo Picasso. According to critic Mustafa Zaman, Novera Ahmed skillfully combined local and international aesthetic ideas in her work, which introduced a new approach to art in Bangladesh and can also be considered as the advancement of indigenous art or vernacular modernism(Zaman, n.d.). Novara mostly used cement as her media of choice, skilfully manipulating it to build sculptures

that blend contemporary components with indigenous influences. Her work often references commonplace themes; for example, The artwork titled as "composition" (fig.5) is made of cement, yet its surface and modulation suggest the delicate qualities of stone. The sculpture consists of two seated figures representing a couple cradling their children. The artist deftly plays with the proportions of the figures, resulting in a captivating visual effect that adds a sense of dynamism to the artwork. The figuration is similar to the traditional "tepa putul,"(fig.6) or clay dolls, that are made with clay pinching popularly found in various regions of Bengal (in both India and Bangladesh).

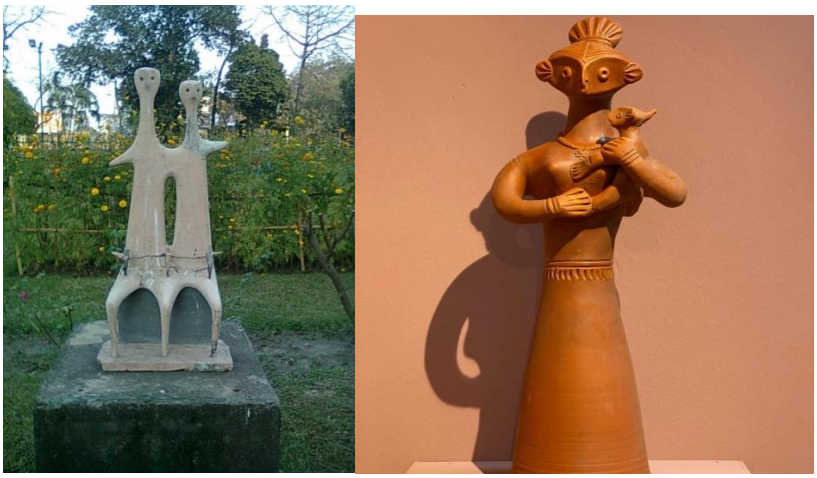

Fig.5 & 6 : ***Composition, Cement, Novera Ahmed, tepa putul (Image Courtesy: Bengal Institute, Brihatta Art Foundation)***

Novera Ahmed's life is replete with eccentric and intriguing experiences. Nearly one third of her life has been dedicated to traversing the globe, exploring various cultures and societies absorbing diverse elements into her life and artistic endeavors. She left Dhaka in the late 1960s never to return, and moved to France, where she lived until her last days. Perhaps the reason behind it was, as the eminent artist and scholar Lala Rukh Salim points out, "...the difficulty of pursuing an independent lifestyle and an innovative art form in a prohibitive social

environment, and secondly the disappointment of not gaining appreciation from other contemporary artists, which felt like injustice to her identity as an artist."(Tipu, n.d.).

While her primary focus was on cement, she also ventured into working with other materials such as bronze, clay, and the wreckage of crashed airplanes. 'Once in America', created in 1968-69 (fig.7), is an artwork from a series that was made using remnants from US air force planes discovered in Vietnam. This work showcases her fascination with found material and her keen political awareness. Unlike her other works, it possesses a distinct historical and thematic connection to the Vietnam War. In her work there is a sense of physicality that she had extensively explored, where her interaction with different medium and material plays an important role in shaping her artworks. Though highly proficient in working with conventional materials like cement, bronze, and clay, her innovative approach towards other materials and found objects exudes a sense of haptic and material sensibility that imbues her visual language with a powerful combination of aesthetic and conceptual significance.

Fig.7: ***Once in America, U.S.A. Airplane debris, Novera Ahmed (Image Courtesy: Depart Magazine)***

As art scholar Shakawat Tipu writes, Novera's uniqueness lies in the ways she merged indigenous and avant-garde elements, "However the archaic quality plumbed by Novera separates her from her European counterpart. Perhaps the static yet culturally potent objects – the clay dolls of the region – made her resign to a line of creation which resided in between her learning from Europe and an understanding of her own context." (Tipu, n.d.)

Novera Ahmed and Meera Mukherjee, who are both pioneers in their respective fields, have successfully developed their own unique artistic styles that greatly enrich the modern art scene of Bengal, transcending national boundaries. Their artworks demonstrate distinct materiality and techniques that are both unique and effectively combine global and local influences, challenging the hierarchical distinction between art and craft, modern and indigenous. They express both physical and intellectual sensibility through their visual language.

The Discourse on Identity, Existence and Material-Artworks of Mithu Sen and Dilara Begum Jolly

The practice that Meera Mukherjee and Novera Ahmed had developed created new avenues for the later generations of women artists who have been able to explore new possibilities in art that dealt with issues and ideas pertinent to their contemporary context. Mithu Sen and Dilara Begum Jolly, who belong to different generations and contexts but are equally responsive and bold in their artistic practice, have been able to cause commotion in contemporary art.

Women artists in India have been involved in the development of distinct art practices that embody unconventional material-based language. After India's economic liberalization in the 1990s(Ciotti

2012), which opened new avenues for Indian artists and art institutions[4]. The art practice pioneered by female artists is a significant shift from the earlier approaches of modern art in India, which emphasized the freedom and diversity in adopting various, unconventional mundane, industrial, and flexible materials. By employing varied materials and techniques, female artists were able to distinguish their artistic approach, encapsulating their societal, cultural, gender, and creative identities, from that of their male counterparts.

"My medium is life – human experiences. In my practice, the cognitive and sensory projections in the form of life and human experiences are the actual material that produces my art."(A. Kumar 2019) Says Mithu Sen about her work and process. In order to trace the origins and progression of non-traditional material-based artistic techniques employed by women artists in India, Mithu Sen's artwork significantly contributes to the comprehension and navigation of post-liberalized India's contemporary art scene. Her selection and usage of materials like hair, teeth, dental polymers, and found objects are implicit with conceptual and political connotations that refer to gender, sexuality, and society in a very distinctive manner. Her works also involve new media and performance art as important mediums, which helps in understanding the choices and shifts the artist has made away from the conventional ways of representing social and political ideas in art.

Mithu Sen's thought-provoking artworks, such as 'No Star, No Land, No Word, No Commitment' and 'Border Unseen', employ experimental materials and possess a unique visual concept.

[4] Institutions include not only art schools, but also galleries, non-profit organizations, and other spaces that promoted and supported contemporary art in India after liberalization.

These artworks not only explore conceptual ideas but also provoke critical questions about society and identity. An intriguing work titled "No star, no land, no word, no commitment" (figure 8,9) was produced between 2004-2014; it consists of manipulated synthetic hair to prompt contemplation on linguistic boundaries that transcend national and provincial borders. Sen's piece offers an intriguing critique of the hierarchical structure of linguistic debates. She accomplishes this by creating a wall-mounted installation that features a quasi-language, which appears to resemble a particular dialect but is imaginative.

She incites the audience to engage in the process of decoding an unfamiliar language. She endeavors to comprehend the psychological aspects underlying the act of assigning meaning to things that are unfamiliar within one's own cultural context. The conscious incorporation of hair in the creation of these pseudo-alphabets leads to a profound alteration of the fundamental nature of the material, resulting in a unique identity that is closely linked to the body and the senses. This produces a sensory association through the tactile sensitivity associated with hair in general, resulting in a complex and multi-faceted experience for the observer.

Fig.8 & 9: ***'No Star, No Land, No Word, No Commitment", artificial hair, 2004-2014, Mithu Sen (Image Courtesy: Mithu Sen)***

In her artwork, titled "Border Unseen" (fig.10,11) from 2014, she aims to explore the concept of a border, including its physical nature, historical significance, and geopolitical and ontological implications. The artists deliberately constructed this 82-foot-long irregular dental polymer sculptural installation to divide the gallery space[5] in half, thereby enabling the viewer to traverse the area in a peculiar fashion. Incorporating an additional stratum of significance into the piece, Sen constructs an uninterrupted line endowed with corporeal qualities owing to the texture and hue of the material. Embedded inside the polymer matrix are little figurines and artificial teeth that exude the whimsical, erotic, and characteristically sensitive wit of the artist. The audience is forced to submerge themselves beneath the structure in order to navigate the border, which creates a critical interaction that subtly evokes ideas related to the segregation of space/land through a cartographic line.

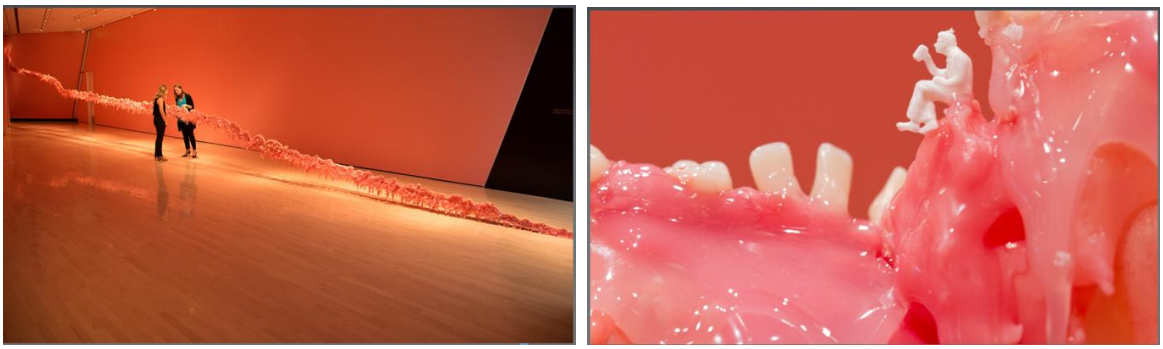

Fig.10 & 11 : ***Border Unseen, Polymer gum, artificial teeth, found object,2014 Mithu Sen (Image Courtesy: Mithu Sen)***

This line represents the complex historical trajectory of migration from different parts of the world. The installation's physicality and monumentality enable viewers to experience the concept of boundaries and how they restrict human movement and enclose a space where geographical features, societies, and cultures are

[5] The gallery space was designed by the famous architect Zaha Hadid, where Mithu Sen's installation creates a critical intervention.

also confined; they are all constrained to a significant degree by the borders that regulate and restrict human interaction. The border is a conceptual construct devised by human society based on imperialistic principles of power hierarchy, which holds great importance in the global geopolitics. Mithu Sen questions the concept of imperialism and the hierarchical system that restricts and limits human freedom of movement. As she states, the ideas behind her works are more important to her than the actual, concrete objects; rather, they represent the results of her thought process and life experiences. Her art exhibits a tactile quality that serves as a conduit for her conceptual and aesthetic ideas.

The observant, curious, and responsive nature of Dilara Begum Jolly creates a distinctive art practice that is deeply embedded in her socio-political context. Jolly, like Mithu, uses an array of materials and media that help her construct her artistic language, which addresses various ideas and issues related to social, cultural, and political structures. Her conscious and sensitive selves try to navigate through the historical trajectories of Bangladesh and locate the injustice and agony that people, especially women, have faced. The plight and agony of 'Biranganas', (the women war heroins of the Bangladesh Liberation War in 1971), have been the locus of many of her works. Dilara Begum Jolly says in an interview,

"The realities of being a woman has always been my preoccupation, but it has been over a decade since I began to critically engage with the vulnerability of women vis a vis times of war. War leaves its indelible marks on their body and more insidiously on their psyche, specially the trauma that relentlessly haunt and irreversibly transforms the lives of war victims. For

obvious reasons, my enquiry homed in on the victims of the Bangladesh's Liberation War of 1971."(R. Kumar 2020)

Fig.12: Alor Stambha, , New Media, 2020 Dilara Begum Jolly (Image Courtesy: Stir World)

Her seminal works on the Biranganas, 'Alor Stambha' or 'Parables of Womb', 2020 (fig.12) bring out the anguish and tragedy of the Biranganas, who were victims of severe sexual violence by the Pakistani army in 1971. The piece titled 'Alor Stambha' an installation piece that consists of ten images of Biranganas's portraits that are mounted to a light box. The portraits are pierced with countless needle punctures that act as a conduit between the light within the box and the darkness outside. The needle marks and the painstaking process are a metaphor for the pain and suffering that women had to go through during the war. The piece highlights the fragility of women in conflict, as they not only lose their lives and those of their families but also their integrity due to the terrible abuse, they endure during the war.

Dilara Begum Jolly's recent artistic creations delve into the indigenous traditions of Nakshi Kantha embroidery in a unique way that imbues her creations with a contextual and critical dimension. The 'Deher Akhyan', 2020 (fig.13) series is a collection

of artwork that the artist created during the period of pandemic lockdown. This body of work explores the intersection of existential anxiety and the concept of gender identity and other different critical connotations. The artworks are made out of manipulated female undergarments punctuated with running stitch and pricked needles, producing a corporeal form that resembles a suspended cadaver. The act of stitching and leaving the needle pierced in the pieces, resembling wound marks, is a continuation of her previous needle punctures that adopt a more corporeal form. This work questions the male gaze and the objectification of women in society through various media, as if these objectifications were embodied in the corporeal body of these sculptures via such marks.

Fig.13: ***Deher Akhyan, Mixed Media, 2020, Dilara Begum Jolly (Image Courtesy: Promiti Hossain)***

Dilara creates a mutilated form that critiques the societal perception of female sexuality and physicality in order to address

the problematic scrutiny and judgment that women often encounter, which even permeates their garments. These artworks raise the issue of privacy and how it is degraded by the mass media, resulting in the objectification of the female body and the inciting of sexual desire in a perverse manner. These sculpture forms, devoid of any anatomical details, transport the viewer to an experiential realm with psychological implications by evoking a physicality that is the antithesis of any desirable objectification.

Mithu Sen and Dilara Begum Jolly both explore subjects, materials, and methods that are intertwined with social, cultural, and political concerns, and they both place human experiences at the center, where both physical and psychological consciousness is at work. The contexts are different, as are the historical and personal trajectories, but the works tend to talk about the universal human condition and existence, where space, time, and borders diminish.

Conclusion

As is evident from the discourse, female artists hailing from both sides of Bengal on this subcontinent in South Asia have cultivated unique artistic methodologies that have not only introduced novel artistic possibilities but also engendered fresh perspectives on the human condition. Across many generations of artists, they have delved into distinct languages and forms while maintaining an inherent connection to their roots. The choice of material and media significantly influences the artistic expression of the artists, as they have extensively explored and experimented multiple possibilities. The works of Meera Mukherjee, Novera Ahmed, and Dilara Begum Jolly incorporate indigenous traditions, implicitly or explicitly. These artists incorporate new aesthetic and material sensibilities into the visual languages of indigenous idioms,

expanding the horizon beyond the scope of their original forms. Various materials were cultivated in diverse dimensions that elicit personal, political, and psychological significance. On the other hand, the works of Mithu Sen, in which the presence of hair, artificial gum, and teeth alludes to both personal and political connotations, emphasized the susceptibility of inflexible societal structures and established notions.

Unfortunately, there is a dearth of research and art historical literature on the creative processes of these significant modern and contemporary South Asian artists. The presence of women in academia and museums is similarly constrained. While the impact of these women artists on the development of modern and contemporary art is significant, there is a lack of comprehensive critical analysis on their art practices, as well as those of other important women artists in the South Asian subcontinent, with only a few textual sources available. The concern regarding the inadequate representation of women across different institutions was initially raised by the feminist movement in the West sixty years ago. Progressively, this movement exerted an impact on the art world, compelling major publications and museums to allocate more emphasis to the artistic practices of female artists. However, the situation remains problematic in the subcontinent of South Asia, where further scholarly investigation and critical dialogue are required to establish fresh conversations regarding modern and contemporary art. Within the limited scope of this essay, the discussion briefly alludes to the practice of few female artists, there are undoubtedly numerous others whose works demand further investigation and exploration in the art historical discourse.

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Clay Dolls of Jaynagar-Majilpur: Look Through A Craft Tradition with its Modus Operandi

Guruprasad Dey

Abstract

A century-old clay doll tradition existing through different time passages bearing the traces of different temporalities with its idiosyncratic appearance guided by distinctive modelling and brush treatments especially evident in three of its successors: Manmathanath Das, Panchugopal Das and Shambhunath Das are focally discussible in this article. The inevitableness of these dolls' aesthetics is latent in their clay treatment, despite artist changes after a generation, which would not allow them to be cast in other materials except clay to lose their aesthetic vitality. The lack of sufficient literary evidence has strengthened the possibility of an independent visual aesthetic assessment of these dolls. A thorough observation of the making process of present-generation maker Shambhunath Das, along with extended interviews with him and his family in different sessions, has shaped the outline of this article. Besides, various comparative visual studies supported by historical evidence helped decode the possible methods and intentions of Manmathanath Das, who passed away in 1986, leaving no historical written or verbal record of his making and thoughts. An extended interview of Panchugopal Das, taken by Majilpur's local researcher Sanjay Ghosh, played an instrumental role in understanding the early making process of these dolls. This article has shown how various particularities of a craft tradition's making method construct its identity and why any methodological adulteration would violate its visual and vital distinction.

Introduction

Tactility is, especially in the case of appreciating visual art, de facto an avenue to have a corporeal understanding of an image's structure. Folk art is all about structure and where its beauty lies. The social contextual reading might agog about social and historical aspects which fashion the intellectual outline of a craft. However, formal aesthetical appreciation has no direct business with these things. Beauty lies in the structure and composition of form. Moreover, form is determined by the painstaking manoeuvre of artisans. Every craft has its history of making, which is appreciated independently outside its social context. This article pulls out all the stops to understand the structural aesthetics of the clay dolls of Jaynagar-Majilpur. This area once had many potter families. However, over time, all these families were lost in oblivion. Only the Das family, the only existing family, said to be for centuries, has been working on making clay dolls. Born in 1906, Manmathanath Das is considered the salient craftsman of this family.

Fig 1: ***Shambhunath Das at work***

A posthumous certificate of merit, in 1986, conferred by the Ministry of Textiles: Office of the Development Commissioner (Handicrafts), Government of India, for his craftsmanship and contribution of clay/terracotta craft, brought Manmathanath Das

in a sudden light of fame in Bengal's folk cultural discourse. No other clay doll makers individually in Bengal but Manmathanath has registered such a charismatic impact- when other popular folk arts are named after their practicing community and where works of literature are silent about Manmathanath or *Majilpuri clay dolls* before 1986 - that his dolls instrumentally attributed to a new stylistic identity, albeit simulating Kalighat painting style, for his family craft- *Majilpuri putul* or clay dolls of Jaynagar-Majilpur. A recorded interview with Panchugopal Das (P. Das 2007), where he talks about his forefathers, is the sole valid source of this family's history. Assorted presumptions spin a might-have-been story of the Das family in the Majilpur village. Sanctified with historical shreds of evidence and the author's analysis, these presumptions have constructed the body of this article.

The interview of Panchugopal Das with local researcher Sanjay Ghosh (P. Das 2007) revealed a belike story of his family history, passed down through the bloodline entering the auditory meatus of Panchugopal Das, informs about a tale of migration when Kalicharan Payada, a sentinel of Dutta Zamindars, along with them, left their ancestral abodes in Jessore came and settled in Jaynagar. After settling here, Kalicharan adopted the surname, Das. He had two sons: Janaki was the elder and younger Ram. Ram worked on *Saj-bandhai*, decorating ornaments for clay idols of Gods and Goddesses in Kumartui, a potters' colony in Kolkata. Inspired by watching potters making clay dolls, he encouraged Janaki to take a punt at making clay dolls. Thus, Janaki was the first in the Das family to take up this clay doll profession. Following in his footsteps, his son Harinath and Harinath's son Gopal succeeded in this profession. From Gopal, this craft gained popularity. Gopal had four sons: Haranath, Suren, Shashi, and Amrita. Manmathanath Das, the central figure of this tradition,

was the son of Haranath. Haranath had another son named Batakrishna. Sabitri Das informed that Manmathanath was childless (S. Das 2022). Shashi and Amrita both had one daughter. Panchugopal Das was born to Suren. Panchugopal begot one daughter, Arati, and three sons: Gautam, Chandranath, and Shambhunath (P. Das 2007). Panchugopal stated this much. At present, except for Shambhunath, no sibling is attached to this profession. Shambhu and his wife, Rina, have only a tiny daughter, Shuchismita. Perhaps he, Shambhunath says (S. Das 2016), is the last generation of this century-old craft tradition.

The Making Process of the Clay Dolls

Clay Preparation

Paddy fields in the vicinity of Jaynagar-Majilpur supply clayey soil for modelling. After collecting clay, the big chunks are crumbled; sprinkle water on them and wrap them in a jute sack for two to three hours to prevent direct contact with air. Thereupon, unwrapping and squeezing them with pressing feet, assuring the processed clay is closely free of particles, increases the plasticity of the clay and makes them obedient to the maker's fingers. Sabitri Das, the widow of Panchugopal Das, says that females of the family helped prepare clay in Manmathanath's time. Malina Das, the wife of Manmathanath, was to cast clay from moulds. Shambhunath Das shares his treatment to make clay salt-free. The first is to store clay and water in an extensive reservoir. Then, stir them into sludge. The following is to keep the sludge motionless until the thick sludge settles down and saline water comes up. The clay would become almost salt-free after repeating the process thrice to quadruple.

Clay Modelling and Mould Making

An inconsistent endeavour is seen in making new dolls in this tradition—most dolls are in great demand made by Manmathanath. Manmathanath left nearly a hundred terracotta moulds, which, as heirlooms, are used by his successors. Votive dolls are not cast for religious reasons; they are made separately. Cast dolls are mainly for sale. It is not merely in Jaynagar-Majilpur, but the Shikharbali doll makers also use the moulds they bequeathed from their forefathers. Pushparani Pal, a septuagenarian doll maker, told the author how, at the age of fifteen, she came to this potter's family as a bride and learned the techniques of clay doll casting and applying paint. Her neighbour, eighty-two-year-old Bharati Paul, showed the method of casting that she learned from her father-in-law and husband.

These two families are only living doll-making traditions in Shikharbali, *Pal Para*. In West Bengal, *Pal* is generally the surname of the potter's community. Failing to attract big markets and dependence on local festivals bring about a reluctance to doll making to the Pal Para, Shikharbali potter community. Undamaged existing moulds might have been the cause of the two families continuing their century-old tradition. Jaynagar-Majilpur's case, however, is different. Dolls of this tradition gained a national reputation on account of the excellent craftsmanship of Manmathanath Das. Manmathanath was a master modeller.

Traditionally, the senior artisan from the Das family is to be appointed to make the Durga idol for both Zamindars- Dutta and Mitra. Currently, only the Mitra Zamindar family is continuing the Durga puja tradition. This prowess of big idol-making could have

been reflected in Manmathanath's dolls, making the dolls stylistically sharp and unique. For modelling, Manmathanath used his fingers and fine wooden tools. These tools were mainly made of bamboo or orange jasmine wood.

The modelling process was additive modelling. Shambhunath informs that he still follows that process. In Manmathanath's time, moulds were made of clay. Some of them were sunbaked, and some were of terracotta. Two-part mould was impossible in clay, so one-part mould used to be done. These days, Shambhunth would rather use plaster of Paris moulds than clay moulds for a two-part mould helps produce multiple casts quickly; using plaster of Paris, one can easily make a two-part mould.

Furnace Making and Firing

After the casts are done, they are left to dry under shade. The joints are correctly finished at a leather dry stage; dolls are soiled with a thin slip layer and kept under the sun for drying. Dolls are fired in a locally made furnace. Given Panchugopal Das's information, Manmathanath dug a shallow hole and laid parched brunches there; he set a bed of dung cakes on the brunches. On top, he would lay clay dolls in two tiers covered with thinly chopped wood branches. Thus, layering three four levels, the whole structure was covered with straws, followed by smearing the entire structure akin to a small dome with semi-solid mud one to two inches thick. He kept a channel at the bottom of the furnace to release smoke. Locally, this channel was called *Gali*. Appearing fire through the *Gali* indicated the equal fire spread inside the furnace. After that, the *Gali* was to be sealed and let the dolls be fired for three hours. However, Shambhunath has adopted a different technique, though it is often practised in the

potters' community in West Bengal. He makes the kiln following the structure of a mud oven—a cylindrical kiln with a brick structure joint with mud, built over a circular hole. Sundried clay dolls are piled inside in layers, wrapped with straws and branches on a four-parallel bed of iron rods hanging over the dug hole. The gap beneath is to place wood as fuel. After the firing, dolls are taken out, cleaned, and prepared for colouring.

Fig 2: ***Shambhunath Das at workshop***

Paint Application

The chalk-dust solution is brushed on the dolls' surface as a primary coat; after that, paint is applied per the body complexion of different deities, such as blue for Krishna and yellow for Durga. Chalk, locally known as *Kath-Khori,* used to be bought from the market and soaked in water for a night in a terracotta pot. The family women rubbed the soaked chalk on a stone saddle in the morning. Then, I strained the solution and mixed it with tamarind seed glue. Manmathanath collected tamarind seeds from the villagers through a barter exchange of clay dolls. Tamarind seeds were baked in a pan to eliminate worms and preserved inside a mud pitcher. To make the glue, seeds were to be soaked in water overnight. The following day, their skin loosened, and some from the white portions were collected to be ground in a saddle quern

and others to be crushed; both were compiled separately. Both were separately boiled. The boiling crushed seeds discharge a sticky thing, whereas the fine paste produces a thicky solution. The thicky solution was mixed with *Kath-Khori* to make a primary coat. Moreover, the discharge of crushed seeds was mixed with colours. Manmathanath used to produce colours manually. Black was made from lamp's black. Green was produced from kidney bean leaves. Blue was made from camphor—yellow from turmeric, and red from vermillion. After the colouring, to fix it and glaze, Manmathanath used homemade varnish. To make it, he mixed resin, *Garjan,* and kerosine in a *handi* and boiled it until it condensed. Kerosine was also used as thinner. After slight heating, the dolls were smeared with boiled sago solution before applying this solution as a final coat. Currently, Shambhunath uses acrylic to paint and readymade wood varnish to glaze.

Analysis of the Manmathanath's Works

Ganesh Janani

The *Ganesh Janani* dolls that are currently available are cast from Manmathanath's work. Unlike its earlier version of the Kalighat *Ganesh Janani* dolls, Manmathanath's *Ganesh Janani* bears a visual similitude to Buddhist-Hindu iconographical sedentary postures of Indian Classical Art. The author has collected specimens of two-generation *Ganesh Janani* dolls. Found data and shreds of evidence concerning the brush application of Manmathanath and Panchugopal assume which artisan ornaments and which doll. Panchugopal Das says in an interview (P. Das 2004) given to Sanjay Ghosh that Manmathanath was to draw eyes with a single stroke where he requires multiple endeavours to attain the finish. Given this information, the author examines and postulates that the doll in the collection of the Ashutosh

Museum, Calcutta University, could have been created and painted by Manmathanath. Before a detailed analysis of skin treatment, *Ganesh Janani's* structural description is essential. Goddess Durga, in a sedentary position carrying child Ganesha on her lap- her right leg rests on earth with a folded knee; her left foot flats on the ground with an upwardly folded knee- her right palm clings to the stretched shins of Ganesha, and the left wrist bestows crescent support to the tender head of little Ganesha; her left thigh simulates a backrest to reclined Ganesha.

Fig 3 & 4: *Ganesh Janani made by Manmathanath Das and painted by Shambhunath Das*

A right-lolling head, holding a crown with bilaterally cascading hair at the back, shares a benevolent gaze with onlookers. Sanguine are her feet' borders, suggesting an *alaktak*-smearing tradition of Bengali maquillage. Less godly, she seems in attire but an idiosyncratic mother of Bengal's village. Only the iconic treatment of eyes retains the divine vibrance to the viewers' sight.

The doll in the Ashutosh Museum collection, which is supposed to be the work of Manmathanath, is identifiable with its

spontaneously done single black strokes, the quintessential Kalighat painting line delineating its eyes and eyebrows, suggesting the border and folds of the sari she wears. On the contrary, Sambhunath's treatment is much more colourful and ornamental, with patiently done lines.

Jagannath Balaram Subhadra

Fig 5: ***Jagannath Balaram & Subhadra, by Manmathanath Das, painted by Shambhunath Das***

A pristine, enticing appearance attesting to a structural simplicity attracted an Indian Government recognition in 1986 with a certificate of merit conferred on the doll-making efficiency of Manmathanath das, especially accredited with the doll-trio- Jagannath Balaram Subhadra. The trio-deities of Orissa's Jagannath Puri temple inflowed into the air of Bengal following Sri Chaitanya Mahaprabhu's Bhakti movement from 1515 to 1533 (Sanyal 2022, 81-85). The upward stretched arms, short in length, closed fists- the trio-deities face frontward; a bun-like crown on the top, wearing long over-lapping *jama* with a cummerbund, a sash wind around the shoulder; stand upright side by side along a straight line with Subhadra, the youngest sister, in the centre flanked by Jagannath, the younger brother on the left and the

elder brother Balaram on the right. The displayed figures decorated by Shambhunath present ebony-skinned god Jagannath's *jama* tinged with yellow, embellished with multicoloured falling strips, floral motif on breast; white-skinned Balaram in his distinctive blue attire and fair Subhadra devi in pink ornamented with identical to Jagannath.

Yashoda

Fig 6: ***Yashoda,by Manmathanath Das, painted by Shambhunath Das***

Sit upright on a low round pedestal resting a fist forefinger unfolded of a folded sinistral arm on the thigh of a fold-in leg; a rising forearm to the crowned head leaning right- fingers gently clipping the edge of the veil of a blue *sari*, worn in a quotidian fashion; supporting an elbow on the top of the right knee erect- Yashoda, the foster mother of Lord Krishna could be confused with any mother of rural Bengal with her yellow-fair complexion and elongated open iconic eyes, comes into sight sharing a distinctive gesture with the other mother figurines of Jaynagar-Majilpur. Structured by Manmathanath, the figurine gets tinged and embellished with suggestive lines in the hand of Shambhunath.

Nimai Pundit Showing the Moon to His Consort Bishnupriya: An Exceptional Work of Manmathanath Das

Fig 7: ***Nimai Pundit & Bishnupriya, made by Manmathanath Das***

On 26 April 2022, during an informal talk on their tradition with Shambhunath Das in his Majilpur residence, while working on dolls, he suddenly paused, rose, went up the stairs, and came down with a terracotta unpainted statue in hand, a work of Manmathanath. Shambhu said that was about Nimai Pundit, the nickname of Sri Chaitanya Mahaprabhu before initiated in *Sannyas*, showing the moon to his wife Bishnupriya, pointing his finger at the sky. The statue fixed the eyes of the author and made him reshuffle all his arguments as this particular work, as Shambhunath said, was fashioned by Manmathanath, showing an off-centre prowess, was few and far between any folk-art tradition. In search of the textual reference to this moon-showing event, the author has checked with two seminal books on the life of Sri Chaitanya Mahaprabhu, Sri Chaitanya Bhagavat and Sri Chaitanya Charitamrita, but nowhere is this event mentioned. About the wedding night of Nimai Pundit with Bishnupriya, Brindaban Das in the Chaitanya Bhagabat writes-

Bhojon Koriya Sukhe Ratri Sumangale

Following dinner, the night divine

Lakshmi-Krishna Ekatro Rohila Kutuhole

They both spent with love sublime[6] (B. Das 442 Gourabda, 329)

Therefore, this image is fabricated. Did Manmathanath imagine that? It might have been. However, there are no ample examples, except a terracotta *Ekka* horse-drawn cart he composed from imagination. However, it firmly cannot be said too. Did he then copy them from photographs or pictures? Rabindranath Das, a student of Manmathanath, informed the author (R. Das 2022) that Manmathanath was gifted in converting photographs into doll form, especially while commissioned. A reflection of Kolkata's Kumartuli style of modelling is evident in this particular work. The anatomical precision of British academism combined with the rhythm of Indian classical art appeared in a hybrid form with the identical touch of Kumartuli potters made its advent in the nineteenth century.

A composition with two figures erected on a stair base manifested Nimai Pundit, standing in contrapposto, wearing a dhoti with *Kachha* in back, a hanging sash on his shoulder with garlands suspending on his neck, looking toward the moon in the sky, resting his left arm on the sinistral shoulder of Bishnupriya, who stands replicating the posture of Nimai, clubbing her left cup on the right back of the hand, wearing a sari with the veil on the head, a piece of triangular jewellery hanging between her sensitive breasts' swell, merging her gaze with her consort's. An impeccable sense of human proportion, executing drapery, albeit

[6] ***Translated from Bengali to English by the author.***

copied, is a rare quality to an untrained hand, especially where this type of modelling is absent. Manmatha is a master doll maker. Furthermore, he borrowed his inspiration from Kalighat paintings. This particular ilk, which his dolls bear, is noticeable in the facial treatment of Nimai Pundit and Bishnupriya. Eyes, noses, and lips are a little flat, not sharp, to treat that as the painterly foundation of *Pata* so that Manmatha could sweep his quintessential single-stroke brush at ease. An incompatible disproportionate right hand, in rising position, certainly is a later addition as difficult is to believe it as Manmathanath's error, who already proved his excellence in balancing proportion. Unlike his doll-making treatment, Manmathanath modelled the backside of this work with great detail. Hyperbole would not be if this work is placed in the category of small-scale sculptures.

Next Generation Works

Fig 8: *Bhishtiwala, by Panchugopal Das*

Standing astride on an idiosyncratic Majilpuri round toy base, holding a Bhishti on the sinistral shoulder, mouth cupping with his right palm, wearing a half-sleeve kurta tucked in the dhoti worn above the knees, a Bhishtiwala, fashioned by Panchugopal Das, stares with cold eyes at the front with a slightly left-tilted head

with a red ribbon tied around. After trying his luck in various professions in Calcutta, Panchugopal joined Manmathananth's workshop in his forties. Though seeing his uncle Manmatha at work since childhood, his primary reluctance in this profession refrained Panchugopal from absorbing the idiosyncratic quality of Manmathanath's making. Panchugopal admitted that with a single brush stroke, his uncle could design the eyes and other suggestive lines on the dolls; in that case, he needed multiple lines to execute those. However, with sheer perseverance, Panchugopal developed his style, especially in rendering local god images, which, according to him, could not be done by anyone in his locality. Panchugopal thought Manmathanath's figures were voluptuous, and he followed the anatomical proportion in fashioning his idols.

Fig 9: ***Banabibi, by Shambhunath Das***

Panchugopal's son Shambhunath, the present generation, brought a revolutionary change to this tradition. Whatever fame this tradition earned now, undoubtedly at the cost of Shambhunath's bone-breaking hard work. An idol maker of excellence, Shambhunath left his skill traits on making his clay dolls. The

master modeller Shambhunath fashioned fifteen original dolls, a unique addition to this tradition after Manmathanath Das. Shambhunath's Banabibi is his famous creation. Following the Islamic iconography of Banabibi, Shambhunath has fashioned his doll. Dressed as a fair damsel of an affluent Muslim family, Shambhunath's Banabibi wears a ghagra, court shoes wrapping feet, a chaplet around the head and two rolling down hair plaits on either shoulder, two oversized circular earrings on earlobes, cross-legged seated on a rooster, facing front head upright, carrying *Dukhe* on her left lap, rising right hand with a boon-bestowing gesture.

Conclusion

Contemplative scrutiny of Manmathanath's works unfolds the essence of his understanding of form through material execution. The painterly treatment is evident in Bengal's pata, which determines its conspicuous presence in the modelling treatment of Manmathanath. The unpainted casts of Manmathanath are flat, especially where Manmathanath decides to use his brush strokes. An imitative sketch is done from his dolls; it simulates the three-dimensional dolls well. His disciple Rabindranath Das (R. Das 2022) informs that Manmathanath was known as *Ghoton Patua* in his locality. Manmathanath's nephew Panchugopal also confirms that Manmathanath was a champion of drawing Pata painting lines (P. Das 2007). His spontaneous single strokes made his dolls distinguishable, which made him an uncontested master in Jaynagar-Majilpur. Ashutosh Museum exhibits a few specimens of Majilpuri dolls. A meticulous description of Panchugopal Das regarding Manmathanath's brush strokes affirms that Manmathanath Das fashioned these dolls. No effort is seen to make his dolls ostentatious from Manmathanath's side, although a

flat use of colour and distinguishing identical black lines reminisce the prolific tradition of Bengal's pata.

Most of the dolls Manmathanath fashioned are palm-length. Two photographs show him painting his dolls, keeping them against his left palm. An octogenarian artisan poised his head over a doll held in his left palm, deciding his doll's aesthetics with a diagonal brush atypically held in his right fist. This specific position tells the back story of the structure of lines determined by Manmathanath's artistic decision. Panchugopal affirms that he did not assimilate the gestures and postures of his uncle Manmathanath, for his treatment is quite different from his uncle's. An imaginative monumentality and optically sensed lightness, the two essential qualities of Bengal's pata painting, are traced in Manmathanath's dolls. Based on found specimens from different clay doll traditions in Bengal, it can unquestionably be said that this hybridity is a rare quality, which Manmathanath has accomplished skillfully in fashioning his dolls. On the contrary, Panchugopal's son Shambhunath's dolls are of different temperaments. Small was Shambhunath when Manmathanath was alive; suffering his old age, he transferred the responsibility of his workshop to Panchugopal, his nephew.

A little memory Shambhu has of Manmathanath—Shambhunath's understanding of the aesthetics of Manmathanath's dolls through an entirely different practice. Shambhunath is a champion idol maker. Preoccupied with different gods' idols throughout the year, Shambhunath invests his time in continuing his ancestral tradition in intervals, with the association of some hired helpers or his siblings. Impermanent in nature are the clay idols, worshipped for a fixed period and submerged in waterbodies after worship. Big-budget rituals like Durga Puja, Kali Puja and Jagadhhatri Puja, along with Jaynagar's local festivals, sponsor giant clay idols,

which local idol makers fashion. On a bamboo structure with straw and jute thread, a maker decides the shape of the god. A semi-liquid clay coat is applied to it. Then, gradually, in multiple stages, the clay body of a god is structured. After getting dried, the first coat of white chalk is applied to it, followed by various layers of paint to reach the final appearance. Before looking at Shambhunath's dolls or his application of paint to Manmathanath's works, knowing this whole tactile process of idol-making is instrumental in understanding the visual structure of Shambhunath's works. A dialectic appearance of pata painting and a clay doll is evident in Manmathanath's.

The treatment of Shambhunath's dolls recognises the gravity and vitality of clay. The modus operandi of big clay idol-making gets reduced to doll form in Shambhunath's hand. Forbye, the thick lines, the brightness of colour, stiffness in fashioning images and the ornateness of the dolls, contrary to Manmathanath's lyrical feather-light depiction, bestows Shambhunath's works an additional optical weightage. However, a material transformation of clay dolls of Jaynagar-Majilpur would do an unjust to its beauty, for they lose their essentials. Clay, guided by the fingers of the Das family artists, devises a quintessential trait in the dolls that is irreversible on any condition. Intermittent tactile consequences through the passage of three generations, for only three-generation specimens are available of this about two fifty years tradition, as the Das family believes it, give birth to a critical issue.

There is a situational and periodical distance in the artistic succession from Manmathanath to Shambhunath, hindering an uninterrupted passing down of Manmathanath's idiosyncratic tactile techniques. Nevertheless, the condition of the comparative study of the three-generation works for the author opens up the

hidden area of clay-doll-making's tactile understanding in one artisan in his working period, which never gets registered undistorted in the next generation in the Das family. This conclusion might not be unfair if it is said that the traditional knowledge system of folk art does not rely on any exclusive epistemological ground, but its manual manoeuvre registered in the bodily understanding of an artisan gets transferred to other artisans only by minute observation and continuous mimicking. Any historical or biological cumber between two generations, or a teacher-student tradition impedes this unobjected flow of tactile inheritance. Change in form is common to any ancient folk tradition. Unlike a canonical tradition, folk art could be changed at any junction of history, influenced even by a frivolous incident.

A change of patron, market demand, or political or religious influence could change a folk tradition. Jaynagar-Majilpur's Das family has gone through all these influences, evidently from the time of Manmathanath Das. A New Appreciation for Folk Art in post-colonial India encouraged many intellectuals and connoisseurs to write about various native folk traditions. Central government recognition of Manmathanath's dolls in 1986 attracted the eyes of connoisseurs towards this little-known family tradition. Many writings on the Das family clay dolls following that award helped build a popular identity for the clay dolls of Jaynagar-Majilpur. In the economic liberalised India, new consumers now look at the clay dolls of Jaynagar-Majilpur through their brand value. However, to a qualified eye, the structural aesthetics of these dolls still peep through their newly imposed auratic singularity and usher the eyes to the undulated painterly field of the dolls determined by the artisans' fingers and brushes.

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"Fractal as an approach to comprehend decorative pattern designs: A case of Humayun Tomb, India."

Neha Geeta Verma

ABSTRACT

Mathematical theories of fractal geometry have been extensively studied since 1975 to analyse complex works such as city planning, art, and architecture, focusing on self-similarity at various scales. Mughal art and architecture are recognised for the stunning formations created by patterns, geometry, and scaling, all of which maintain a consistent style. Yet, they do not explore the interpretation of pattern designs from a fractal perspective. Given this perspective, the paper explores how geometry serves as a central organising principle that ties together various aesthetic elements in Mughal art and architecture using a fractal methodology. This paper aims to examine the connection between fractal geometry and continuous decorations in Mughal art and architecture, using "Humayun's Tomb" as a case study. The paper discusses how fractal aesthetics in Mughal patterns embrace a distinct concept of self-similarity, integrating motifs at various scales within patterns. The religious beliefs about Paradise are intricately woven into the structure through its decorative elements and stylized expression. Utilising a literature review of historical texts and research papers, this paper delves into religious ontology and a fractal approach. It employs the box-counting method to perform a fractal-visual analysis of the

architectural structure and decorative components of the Humayun's Tomb and its Landscape. This study will suggest the geometric physical implications as a method to decode structural designs and their metaphysical meanings, offering a fresh outlook on Mughal art by utilising "Fractal Geometry" as an interpretive tool.

Keywords: ***Mughal-Architecture &Fractal, Humayun's Tomb, Box-Counting Method.***

Geometry plays a substantial role in Mughal Art's spatial and ornamental systems. Geometry is used as an ordering paradigm and unifier of all aesthetic schemes in Mughal architecture. The structural order of intricately balanced symmetry ordered repetition, and rhythmic patterns, are the remarkable attributes of Mughal architecture. The spectacular formations choreographed by patterns and scaling follow a singular unity of style, manifesting progressive refinement of the stylistic ideals. Most Mughal architectural expressions (religious/non-religious) are ordered from religious symbolism and adorned with pattern designs. These together manifest exceptional decorative creations of outstanding exhibit value. Mughal art and architecture in India is a cultural culmination of the Islamic tradition with regional traditions of India. This assimilation and internalization of every regional and local tradition led to the formation of a unique cultural expression while keeping its religious underpinnings intact. The researcher's opinions that it became possible as the attributes of fractal geometry and Islamic theological concepts shared few similar characteristics. The patterns and building designs in global Islamic counterparts, the fractal components were retained even after adaptation to regional and local designs.

Fractal geometry elucidates intricate structures and patterns that were previously unexplainable. Fractal geometry has been used in city planning, abstract art, and architecture since 1975 to analyze complex works for self-similarity at different scales. Fractal is not used to explore Indian Mughal art and architectural ornamental pattern designs. Also, when religious symbolism is combined with style, this research seeks to understand the relationship between fractal geometry and continuous colorful, symbolic manifestations in Mughal art and architecture. The study explores Mughal patterns' fractal aesthetics, which incorporate motifs at many, often infinite scales to achieve self-similarity. The study examines Mughal art's ordered repetition, radiating structures, and generic patterns. The paper uses fractal as a conceptual framework and tool to examine and decipher geometrical manifestations, addressing the metaphysical connotations of structure designs. Through "Fractal Geometry." the method will experimentally analyse and understand Mughal art.

The examination and identification of Mughals art's fundamental geometrical forms and beautiful symbolic expressions can help identify and associate fractal structures across architectural material expressions. The ubiquitous'self-similarity' of Mughal architecture's aesthetic quality makes the researcher cautiously believe that fractal geometry serving the same attribute can be used to study Mughal art and architecture from a new perspective.

Fractal geometry is a theoretical framework that defines forms and patterns previously considered too complex to describe. Since 1975, mathematical theories of fractal geometry have been widely adopted and explored in fields of city planning, abstract art, and architecture to facilitate an analysis of complex works with an eye for self-similarity at different scales. The application of fractal is not attempted to study decorative pattern designs in general and

specific to Indian Mughal art and architecture. That too when the religious symbolism is married to stylistic expressions. In this backdrop, the present research attempts to study and shed more light on the nature of the relationship between fractal geometry and continuous decorative symbolic expressions of Mughal art and architecture. The study aims to dwell into the fractal aesthetics of Mughal patterns that pursue a unique notion of self-similarity, simultaneously incorporating motifs at multiple—often, infinite scales within patterns. The study is trying to dive into the distinguishing features of Mughal art's ordered repetition, radiating structures, and generic patterns. The paper explores and deciphers geometrical manifestations simultaneously using fractal as a conceptual framework and a method, considering the possible alignment between structural designs and their metaphysical connotations. The method will provide an experimental perspective to approach, analyze and understand Mughal art through the lens of "Fractal Geometry."

The analysis and identification of Mughals art's primary geometrical forms and decorative symbolic expressions will enable identifying and associating a set of fractal structures across material expressions in architecture. Considering the ubiquitous 'self-similarity', an essential part of the Mughal architecture's aesthetic quality, the researcher cautiously considers that the fractal geometry serving the same attribute can be an effective method to study Mughal art and architecture providing a new architecture perspective.

A GLANCE INTO RELATED LITERATURE:

Geometry as a concept has been widely used and always attributed as an essential element in different art forms. However, the challenge was to understand the chaotic geometrical shapes

overlaid with multiple geometrical elements. The fractal is a theoretical framework that defines united forms and patterns previously considered too complex to describe. 'The fractal geometry of nature, a book by 'Benoit B. Mandelbrot,' brought the revolution opening a new era of geometry-based study in diverse areas of sciences, philosophy, and art. It promotes a mathematical and philosophical synthesis. (Mandelbrot). From 1975 onwards, fractal geometry has deeply influenced landscape perception, architecture, and technology (Agnès Patuano & M. Francisca Lima) along stimulating development in several fields such as architecture, urban planning, biology, medicines, art, and literature through enabling understanding of chaos. Mandelbrot cautions us, "Fractals will make you see everything differently....You risk the loss of your childhood vision of clouds, forests, galaxies, leaves, flowers, rocks, mountains, torrents of water, carpets, bricks, and much else besides (Mandelbrot)". Antonio Di Ieva, considered it a universal pattern language as the form it describes can be found in every living thing (Ieva). Fractal Geometry, a mathematical innovation, explores the concept of infinite scale by utilizing digital simulations. It has progressively integrated pictures from other fields, such as Art and Science. Specific theories in fractal properties, such as Iterated Function Systems (IFS), talk about the aesthetic properties regarding proportion, rhythm, and symmetry. The representation of fractality is not only limited to one specific art form, but one can also see the attempt to create order through the chaos of the forms throughout the human past in human creations, from ancient Hindu temples to the interior of the central dome of the Selimiye Mosque in Turkey, to Australian aboriginal artworks dating back tens of thousands of years. The depiction of fractal forms can be analyzed in various historical architecture.

The geometry used fits well in the theological ontology of Islam. The Persian gardens and Charbagh share as a concept symbolizing the importance of sharing water and the concept of heaven (Agnès Patuano & M. Francisca Lima) Therefore, fractal geometry has been a key utility for ornamentation and composition throughout the Islamic expressions. The concept of infinity, which signifies the existence of fractals, is prominently featured in nearly all forms of Islamic art as a crucial element, including beautiful symbolic representations. Fractal Geometry is founded on the concept of the "principle of repetition" of geometric shapes, which allows an item to retain and reproduce its shape when magnified at any level. The proposal presents the concept of "Infinity" in a systematic yet non-continuous manner, referring to the same pre-existing "forms". Hence, it becomes evident that nature demonstrates its artistic expression through a consistent yet unpredictable pattern. The scale invariance qualities of self-similarity imply that the object's irregularity remains the same at different sizes of creation and perception. This revised Geometry provides a clearer representation of the correlation between the object and the observer's "scaled position". Within a fractal structure, the presence of "hidden symmetry" is not limited to just one aspect. Hidden within the virtue of self-similarity lies a new idea of "symmetry and harmony" that expands upon the classical Greek doctrine of "harmony and proportions." Architecture exhibits a multitude of recurring patterns. "The presence of fractal geometry in fine arts and city planning can be demonstrated by identifying fractal characteristics in paintings and cities"(Agnès Patuano & M. Francisca Lima). In the books "Fractals and Fractal Architecture" (Lorenz) and "Fractal Geometry in Architecture and Design" (Bovill), the Box-counting dimension method has been suggested to analyze the level of fractality in architectural forms.

The paper focuses on a theoretical approach to integrate multiple geometry components to provide a theoretical framework. It will contribute to analyzing the aesthetical and compositional characteristics of the continuous symbolic representation of patterns in Mughal art and architecture. A compositional fractal analysis encompasses two methods: visual fractal analysis and dimension fractal analysis. This study examines the coherence between many elements such as landscape plan, section, elevation, floor plan, and ornamental motif (M.Y. Shishin; Khalid J.Aldeen Ismail). A spatial fractal has been introduced to understand the high homogeneity and harmony in the façades of Islamic buildings, from the Mughal period. The approximation values of the fractal properties have been observed in this particular architecture (Asia Jabeen). Perhaps one of the well-recognized examples of Mughal architecture is the Taj Mahal. Throughout the monument, one can see 6-point, 8-point, 10-point,12-point, 16-point, and other complex patterns. The aerial view represents the tomb's octagonal cross-section structure that symbolizes the physical world and the path to heaven.

Mughal architects used fractal systems in numerous applications, reflecting the great importance of fractal methods and techniques within the architectural design process. It starts with tiny details, like mosaic ornaments and Arabesque carving, continued in entry gateways, doorways, arches, etc., to city planning in fractals, which are visible in the urban morphology, fabric, and context. The planning of the urban Mughal city is based on a hierarchal roads network and a set of residential clusters divided into a dense fabric of small residential buildings (Elgohary). It demonstrates the unity and diversity of the Islamic city, which appeared equivalent at any magnification.

Art is often regarded as a means of discovering the fundamental principles of beauty and harmony inherent in the natural world. Chaos and fractal geometry can be utilised to elucidate and substantiate the principles of beauty (Lorenz). The geometrical tools will further analyze Mughal art's decorative symbolic expression to provide a language for interpretation of aesthetics. Therefore, the symbolic expression of Mughal art has been formalized in endless repetition. This manifestation of religious ontology will be observed to analyze the relationship between the fractal principles and theology of stylized symbolism in Mughal art.

Art of geometry "Harmonious Infinity of designs in Mughal Architecture." Tomb architecture: a manifestation of the philosophy of Paradise (ontological perspective) Emanation is the key concept to reveal the fundamentals of Islamic Ontology. Emanation, from the Latin emanare meaning " to flow from " is the idea that all things are derived from the First Being, or Principle (Güney). The tomb architecture of Mughal's had been derived from the idea of "paradise." The concept of Paradise was originally established by the Persians, who associated it with a physical garden that symbolised the metaphysical idea of the afterlife. The term "pairidaēza" in Persian refers to a "walled garden" and was conceived as a physical enclosure that symbolises a heavenly location (Rosalyn D'Mello, "Return of the Tomb" Art Illustrated/24sep2020) The idea of gardens, Charbagh's architecture, and glorified decoration all together become a successful effort to create a heavenly atmosphere. Being a monotheistic religion, Islam discarded all other deities and avoided depicting realistic humans and Animal figures. Artisans in the Islamic world drew inspiration from the classical heritage of ancient Greek-Roman, Sasanian, and Iranian art. They

then developed a unique style of decorating using just a compass and ruler. Patterns are predominantly present in the majority of Mughal architecture and serve as a means to exalt God. These patterns exhibit symmetry and repetition, together with intricacy, allowing for limitless extension and creating visually appealing designs. The intricate patterns and vivid hues also attract the observer towards a state of serene boundlessness, evoking reflection and oneness.

The Mughals were the descendants of Timurids, and they have been heavily promoted with the aid of the Persian-fashion gardens found in imperative Asia. The style of architecture explicitly used in Mughal's architecture was borrowed from the Persian garden's architecture; however, modified in line with the characteristics and site topography of the newly conceived gardens. It is logical that the Persian architect Mīrak Mīrzā Ghiyās was hired in 1565 by Hamida Banu Begum, the widow of Humayun, the second Mughal emperor of India, to construct his mausoleum near the dargah and shrine of the Sufi saint, Chishti Shaikh Nizamuddin Auliya. He reproduced the concept of the "paradaida", providing the Indian subcontinent with its inaugural instance of a sophisticated garden mausoleum (D'Mello).

The significant role of religious symbolism in Mughal architecture is proven beyond doubt by many studies. Islam being an aniconistic[7] religion, non-figurative ornamentation has always been an inborn behavior throughout the Islam constructions. Mughal patrons and their artists and artisans abide the same, and geometric patterns are widely seen in their art and ornamentation (Güney). The universe's infinite nature is the common and essential characteristic of Islam's theology and the fractal. The

[7] aniconism, in religion, opposition to the use of icons or visual images to depict living creatures or religious figures

symbolic depiction of the 'infinite' in this Mughal architecture repeats itself forever and ever through beautifully ordered symmetry in all structural components. Every structural detail depicted something or other from the ontological aspect of the religion as a symbolic expression. It seems to serve the needs of aesthetics as well the religious symbolism impartially. In this sense, the aesthetics, fractal geometry, and religion together serve as corners of a triangle called Mughal Art and architecture. Considering this, the research adopted to build a fractal theoretical perspective for Mughal period art expressions through finding answers for the following research questions:

RQ1: Nature of relationship between fractal geometry and repetitive decorative symbolic expressions in Mughal architecture?

RQ2: How is the religious ontology integrated and epitomized into the structure through its decorative components and stylized expression?

In view of the research question, Firstly, some necessary notions of fractal geometry will be discussed, followed by a description regarding the creation of chahár-bágh gardens architecture with a particular example of the Humayun tomb plan. The application of fractal geometry in the Humayun tomb can help understand the philosophy of design fundamentals in symbolic decorative expressions of Mughal architecture. Through the elevation, geometric patterns in ornamentations will validate that fractal geometry also exists along with linear and Euclidian geometry.

METHODOLOGY:

The present study uses both qualitative and quantitative methods to examine both research questions. The literature review of historical texts and research papers is used to understand

religious ontology. Secondly, the box-counting method is used to conduct the fractal-visual analysis of the architectural structure and the decorative components of the Humayun's Tomb and its Landscape. The collected qualitative data will be documented and analyzed to understand fractal geometry proportions in the case study, thereby in the Mughal architecture.

BOX COUNTING METHOD:

The box-counting method is probably the most well-known approach in any discipline for determining an image's fractal dimension, which quantifies characteristic visual and structural complexity. Following the earlier work by (Asia Jabeen) and (M.Y. Shishin; Khalid J.Aldeen Ismail) this paper uses a image analysis software program - "Image J," which allows one to make a fractal analysis of projections of building.

The derivative value of the fractal dimension indicates the details in the form of the particular part of the architecture. The higher the fractal dimension value, the more details in the form. It shows that the fractal dimension of any form describes the progression of the details (Asia Jabeen). The Box Counting Method in Image j software follows this process

- **Select the form to measure the fractal dimension**
- **Convert the image into a binary image (Select the process- Binary)**
- **Analyses- Tools- Fractal Box Counting**
- **Select the box sizes**
- **Tabulate the results as per the table.**
- **The fractal dimension "D" will be determined**

What is Fractal?

Fractal is a component in any of the highly irregular shapes or curves for which any particular selected part is similar in shape to an existing larger or smaller part when its magnification is equalized at the same size. The fractal pattern is a kind of equation occurring all around us in nature, and these patterns find constancy in randomness, Therefore, a tree can be divided into parts, and each successive part is a very similar to the whole structure, sometimes identical or a similar copy of the whole structure. A fractal is a potentially never-ending pattern, created by repeating a simple process over and over again.

Fractal Dimension: Fractal shapes have many essential characteristics; one of them is the fractal dimension. This character explains that fractal dimension is not an integer but ranges between 1 and 2, whereas Euclidean geometry deals with the integers. Mandelbrot found that fractal shapes can be described through an actual number that has a value between 1 and 2, which explains the meander and complexity. It is termed as "Fractal Dimension" (Asia Jabeen) To check the level of fractality in architectural forms, "A box-counting" method has been proposed by W. Lorenze (2002) and C. Bovil (1996) in their research. Their work had proposed the idea of the box-counting method, which has often been used to calculate computer programs. In their work, W. Lorenze and C. Bovil have suggested the Box-counting dimension method to check the level of fractality in architectural forms.

Fractal in Mughal architecture:

Fractal geometry in architecture is not a recent phenomenon, but unconsciously, fractal components have been widely used in various traditional architecture for centuries. Over time, many

have analyzed that in architecture. The history of self-similarity in architecture can be dated back to the early Hindu temples and even before. However, the concept of fractal and self-similarity in the earlier examples of architecture are unconscious efforts. The influence of religious aniconism is a prominent element of most Mughal architecture and art.; however, in ornamentation, artists and artisans preferred geometric patterns due to the strong prohibition of idolatry in the religious beliefs. Though the Architectural forms are artificial and thus very much based in Euclidean geometry, but we can find some fractal components in the architecture, too (SALA). Within its foundation of abstract mathematics, fractal can be applied to aid in design. This comes in many layers; some of the most fundamental architectural forms (floor, wall, roof). If we compare the apparent aspect of architecture, fractal can be directly related to self-similarity, organization, and complexity. According to Nicoletta Sala, "We can divide the fractal analysis in architecture into the two categories, little scale analysis and large scale analysis. This can be utilized in the methods of aesthetic appeal or even to the point where it essentially becomes a technical integration such as structure.

Case of Humayun's Tomb, Delhi, India:

Humāyūn's Tomb, is one of the earliest extant examples of the garden tomb characteristic of Mughal architecture, situated in Delhi, India. This tomb architecture is the template for what Mughal architecture became later. It stands amidst a large square garden, covered with walls with the gateway to the south and west. The structure includes four ivans, the four-grand opening on four sides, four corners of the rooms, and a dome on top. This kind of plan is often discussed as a "Hasht Bihistt Plan"هشت بهشت -Eight Paradises. This plan is literally translated as eight Paradise, and there are several buildings in Isfahan and Shiraz that use a similar

planning principle. Where four rooms in four corners, four portals in the centers and then the space enclosed in the middle. The eight divisions and frequent octagonal forms of this plan represent the eight levels.

Humayun tomb is set on an enormous platform of great height. In the middle similarly like Babar's garden, there is also an arrangement of channels that divide the garden in to many quarters. The aerial view of Humayun's Tomb testifies to the conscious and extensive use of geometry. The large basement story on which the monument is kept, almost like a pedestal, is used to keep an object on it. It is one of the essential features of Mughal architecture.

The funneled-shaped gate was intentionally built to emancipate the sense of grandeur and infiniteness as narrow and crunched gate open to a huge crafted space playing an optical illusion on the visitor's minds. By making viewers funnel through relatively narrow gates, it surprises the viewer when they emerge on the other side. They suddenly see the canvas of their vision bursts open of its temporary confines and see the garden and the red sandstone mausoleum before them. Architecture symbolizes the ancient idea of the confrontation between light and darkness, the earth, and the cosmos' order in all the world's religions and philosophies.

Use of Fractal geometry in Humayun tomb:

Measurement of Fractal Dimension in Humayun's Tomb architecture will be applied on five different levels: landscape, elevation plan, building structure, ornaments, lattices patterns in two-dimensional spaces. Humayun's Tomb is the finest example of Mughal Architecture and expresses fractal geometry, a similar

"Charbagh" plan was followed in all later constructions of Mughal architectures.

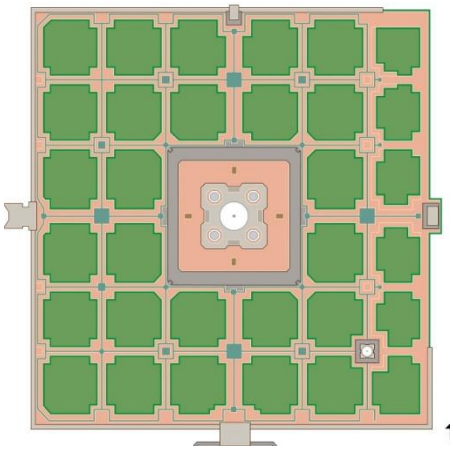

Table 1: Landscape: Level of fractal dimension in projections of the Humayun's Tomb

Grid Size	Number of Boxes
C 20	4363
C 40	1180
C 80	323
C 160	89
D	1.872

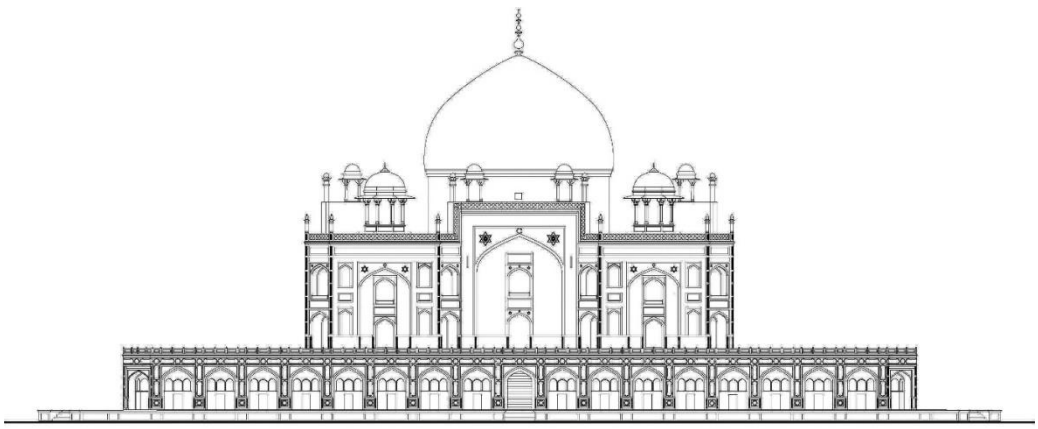

Table 2: Elevation: Level of fractal dimension in projections of the Humayun's Tomb

Grid Size	Number of boxes
C 20	2190
C 40	635
C 80	178
C 160	60
D	1.740

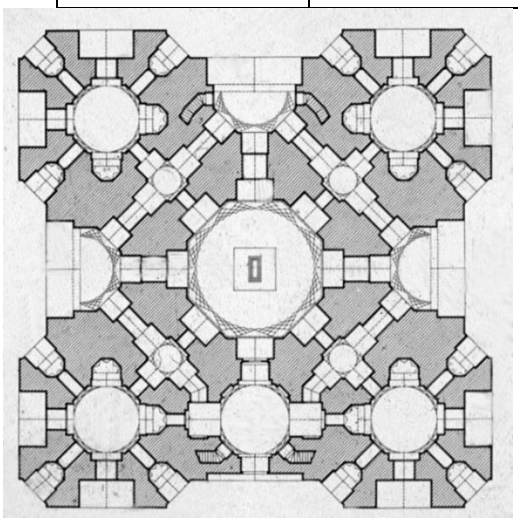

Table 3: Building:: Level of fractal dimension in projections of the Humayun's Tomb

Grid Size	Number of Boxes
C 20	1202
C 40	348
C 80	98
C 160	25
D	1.859

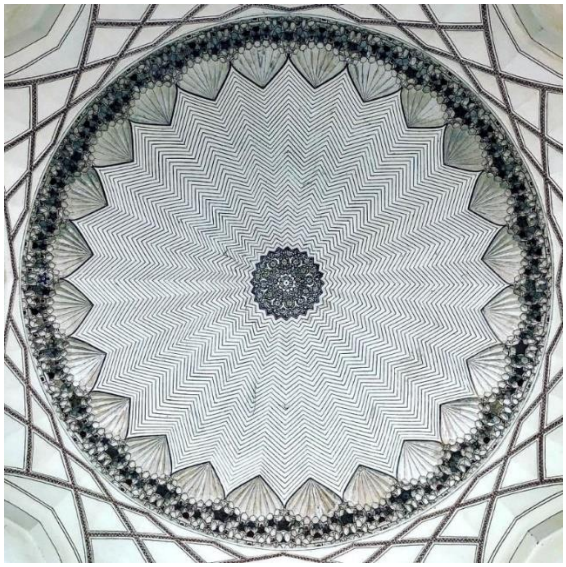

Table 4: Ornament: Level of fractal dimension in projections of the Humayun's Tomb

Grid Size	Number of Boxes
C 20	2206
C 40	571
C 80	144
C 160	36
D	1.980

For The jālis patterns:

The lattice screens, or 'jālis,' are an essential feature of this particular Mughal architecture. Filtering light through Jalis and the ambiance inside are the most elaborate design features, particularly in Mughal buildings. The interplay of light, shadow, and pattern has always been one of the primary structures based

on geometry. In articulating fractal geometry in Mughal architecture, these jālis patterns have an essential role.

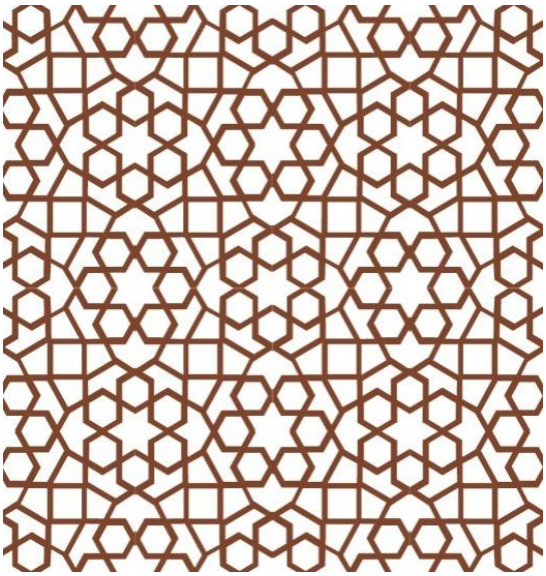

Image source:

https://commons.wikimedia.org/wiki/File:Portion_of_Pattern_of_Jali_from_Humayun%27s_Tomb.svg

Table 4: Ornament: Level of fractal dimension in projections of the Humayun's Tomb

Grid Size	Number of Boxes
C 20	739
C 40	196
C 80	49
C 160	16
D	1.859

The fractal dimension quantifies the degree of complexity and irregularity. The higher value of fractal dimension is a result of the

increased intricacy in the architectural structures. Buildings typically have a fractal dimension ranging from one to two. The design of Humayun's tomb clearly exhibits the presence of fractals in its horizontal spatial divisions, as evidenced by its characteristics.

The level of fractal intricacy affects the aesthetic values of the particular architectural component. The tenets of Islamic Ontology are based on the concept that God is the eternal and ultimate being. It believes that the existence of other beings is an illusion that came to reality by the emanation of God's supreme oneness. A fractal pattern is the one in many, and many in one as God and the creation is, according to Islamic Ontology. One staring at a fractal pattern can see how an archetype vitalizes the whole and how the whole reflects the archetype; this is the manifestation of Islamic ontology.

CONCLUSION :

This study briefly explores the connection between fractal theory and religious ontology in Mughal architecture. It aims to demonstrate the crucial importance of fractals in Mughal architecture. This study aimed to briefly discuss fractals and Mughal architecture. This inter-relationship has deepened our understanding of the vast structure, layer by layer. Each structural element of the tomb adheres to fractal forms. This paper is an attempt to emphasise them. Nevertheless, there is a significant opportunity to examine them more closely. In general, using fractals to understand decorative pattern designs, like those seen in the Humayun Tomb in India, provides a unique viewpoint that connects mathematics and aesthetics. Through examining the complex geometries and self-replicating structures found in these

patterns, researchers can uncover the inherent beauty and complexity that characterise these architectural masterpieces.

Mughal architecture offers a plethora of intricate details to captivate the observer. The structure's fractal characteristics highlight the intricate design of Humayun's Tomb as a well-organized and complex masterpiece. This specific Mughal architecture exemplifies a meticulous process of refinement to achieve its ultimate design. Hence, it serves as a remarkable illustration of architectural design rooted in fractal geometry, intertwining philosophical ideas of heaven, infinity, and related concepts.

Above, it is shown in the paper that the structure of Humayun's Tomb displays numerous variations due to its fractal features. The design highlights several fractal characteristics, including the emergence of an archetype form. The self-similar branched shapes, rhythm, and hierarchy of scaled spaces all point to fractal characteristics.

In future studies, researchers will explore fractal geometry on 3-D architectural forms, floor patterns, opening scales, ornament scales, and the subdivision of arches and windows.

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The Paradox of Identity for Art Teachers: Identity, Advocacy, and Transformation

Nikhil Sharma

Abstract

The support for art programmes and undervaluation of art teachers within the primary environment often restrict the subject's transformative potential. Due to limited resources and systemic constraints, art teachers may need help fully tap into their subject's transformative potential. Additionally, they may encounter undervaluation within the school environment, with their role sometimes perceived as primarily inclined to interior and stage decoration rather than encompassing the broader spectrum of artistic exploration and development. Drawing on interviews, classroom observations, and curriculum analysis, the study delves into how art teachers navigate these limitations, advocate for the importance of their subject, and creatively engage students in artistic learning.

This study explores the art educator's complex role in the school education landscape in India. Drawing on the unique perspective of the researcher and an art educator, with first-hand experience navigating the challenges and possibilities within the system, the researcher provides a critical pedagogy lens proposed by Henry Giroux (2015) -through which current practices are evaluated.

The study highlights the need for robust support structures and broader recognition of art education's crucial role in holistic learning by examining the paradox of identity of the artists and

traditional art educators within school education. It aims to contribute to a dialogue that empowers art teachers and fosters a deeper understanding of the multifaceted value of art education in India's evolving education system.

Key Words: ***Art Education, Art Teacher, Indian Art Education, Critical Pedagogy, School Education***

I. Introduction

While Art Educators ideally play a critical role in fostering creativity and artistic expression, the reality in India paints a different picture. This discrepancy stems from various factors, including a significant need for policies, norms, and practices related to art education. This deficiency encompasses curriculum formulation and execution, hindering the full potential of art education to serve its purposes.

Art practice enables reflection and provides unique perspectives on the internal and external world, broadening an individual's horizons. It achieves this, arguably, in a more captivating way than most other disciplines (Bube, 2020) .A comprehensive art education can significantly broaden a student's perspective by demonstrating the multitude of valid ways to express oneself, the diverse viewpoints that can illuminate the world, and the various routes that can lead to distinct conclusions. Art education can foster crucial skills like curiosity, creativity, critical thinking, experimentation, and self-reflection through play and enjoyment.

However, the current state of art education in India requires a revolutionary change , as evidenced by the historic integrated learning system implemented by the Central Board of Secondary

Education (CBSE) in 2020. To effectively adapt to this new model, the new art education must familiarise itself with its local community and establish a strong foundation from the grassroots level. This transformation also necessitates unlearning some traditional art education practices for teachers who wish to join this transformative journey. The true potential of art education in India can be realised by addressing these challenges and embracing effective practices.

Nevertheless, the reality of an art educator in India presents a stark contrast to the aforementioned ideal. Limited understanding of the subject by administrators coupled with parental expectations solely focused on crafting "beautiful" objects rather than fostering artistic expression significantly alter the role of the art teacher. This situation is further exacerbated by the country's lack of robust art education institutions, leading to a prevalent "identity paradox" among art educators. An ideal art teacher is someone who nurtures creativity, artistic ability, and critical thinking in students (Stokrocki, 1986). Yet, in practice, they are typically seen as decorators tasked with improving the school's visual attractiveness rather than focusing on providing students with substantial art education. This results in a discrepancy between their intended function and their actual experience.

Fresh graduates often find themselves drawn to art teaching due to limited job opportunities, with only 50% securing positions (Mathur, 2022). These individuals frequently find employment in non-government schools, offering a meagre income to support their artistic pursuits. Despite having some exposure to art exhibitions, they lack formal training in pedagogical art education methods, often resorting to "hit-and-try" techniques. This inevitably impacts the quality of art education received by

students. Many art educators in India need more specific training in art education pedagogy and project their beliefs in the students without realising the child's uniqueness. Without theoretical frameworks and methods, they resort to trial and error, experimenting with different activities and approaches to see what resonates with students.

Beyond these challenges, school administrations contribute to the exploitation of art educators. They often appoint fresh graduates at minimal wages without job security, taking advantage of their lack of awareness regarding employment rights. These educational institutions not only burden art teachers with the traditional responsibility of teaching art but also expect them to handle additional tasks like decorating display boards and maintaining the overall aesthetics of the school, often requiring them to work beyond regular hours without additional compensation. Moreover, school management often perceives art teachers as artisans rather than artists or educators, further contributing to their low self-esteem and sense of direction. The absence of exposure to established theoretical frameworks for teaching art adds to the confusion and directionlessness experienced by these educators. This paper seeks to delve deeper into this complex situation, exploring the factors contributing to the paradox faced by art educators in India and proposing potential solutions to bridge the gap between the ideal and the reality. This essay explores the identity paradox of art educators in India, examining how systemic undervaluation and exploitation hinder the transformative power of art education.

Let us understand through a case study.

Archana (42) (name changed) based in Gwalior, Madhya Pradesh, India, is a passionate art teacher. She dedicated 15 years

of her life to nurturing young minds through the vivid world of creativity. However, Archana's journey in the realm of education took an unexpected turn, evolving into a case study of exploitation and unmet promises.

Archana found herself employed at a prestigious CBSE school, where her days were meant to be filled with the joy of teaching art. Unfortunately, the reality was quite different. Instead of inspiring the young learners, Archana spent most of her time maintaining and adorning various corners of the school. The advent of social media had transformed her role, with schools prioritising picturesque decorations to keep their online feeds vibrant.

During her candid recount, Archana unveiled the disheartening truth that some colleagues were even tasked with decorating the management's homes during special events like Karwa Chauth and Diwali. The school's demands escalated during breaks, as Archana was handed the daunting task of producing 25 paintings without receiving any compensation for her efforts.

Despite promises of a monthly remuneration of Rs16000, Archana's account was credited with Rs 30000, a deceptive surplus that she was compelled to return in cash. Failure to comply resulted in a daily fine of Rs 50. This financial entanglement further intensified the strain on Archana, transforming her once-beloved job into a seemingly endless cycle of dissatisfaction.

Even the promise of teaching secondary classes once a week was short-lived, as Archana's creativity was diverted to endless art projects for the school's events. The insistence on grand rangolis at every gathering led to prolonged hours at the school, causing

secondary students to lose interest in art, resulting in absenteeism and diminished output.

Archana's woes were not solitary; her co-teacher, Latha, shared a similar fate. After the management promised a salary increase, Latha sought an appraisal. However, the school's bureaucracy proved unyielding, binding her to an unfulfilled contract. Seeking alternative opportunities, Latha's proactive job search led to an unexpected termination without any prior notice.

The unhealthy environment prevailing in many schools left Archana trapped, unable to escape the clutches of job insecurity and unemployment. The struggle to balance personal life amid exploitative conditions painted a bleak picture for dedicated educators like Archana, caught in the crossfire of unmet promises and a system that seemed to prioritize aesthetics over education.

Archana's story highlights the harsh realities faced by many educators in India, particularly those in the arts. The lack of job security and the prevalence of exploitative practices create a toxic environment that stifles creativity and hinders effective art education between teachers and students.

This case serves as a call to action, urging educational institutions to prioritise the well-being of their educators, foster an environment conducive to learning, and recognise the invaluable role of art in shaping young minds.

Let us take the theoretical framework proposed by Henry Giroux to understand the issue better. Critical pedagogy is an approach to education that emphasizes the importance of critical thinking, but it goes beyond just questioning ideas. It encourages teachers and students to actively work towards creating a more just and equitable society. This approach is particularly relevant in

universities, where the ideas and actions of today shape the world of tomorrow.

Henry Giroux (2015) , a key figure in critical pedagogy, believes that educators are responsible for using their position as intellectuals to reshape education. They shouldn't simply accept the status quo; they should be empowered to challenge traditional ways of thinking and teaching. Giroux argues that everything we use in the classroom, from textbooks to images, carries a history and reflects certain viewpoints. Critical pedagogy encourages us to think deeply about these materials, uncovering the biases they might contain. Additionally, Giroux promotes breaking down the artificial boundaries between subjects in education. True understanding often means connecting different fields of knowledge to get a bigger picture.

Findings

- **Archana, a passionate art teacher with 15 years of experience, faced exploitation at a prestigious CBSE school in Gwalior, Madhya Pradesh, India.**
- **Instead of teaching art , she was primarily tasked with decorating the school and the management's homes for various events, exceeding her job description.**
- **Despite promises of a salary , she received a deceptive surplus that she was forced to return, along with facing financial penalties for non-compliance.**
- **The promised secondary classes were replaced with endless art projects for events, leading to student disengagement and absenteeism.**

- **Archana's colleague, Latha , faced a similar situation with unfulfilled salary raise promises and unexpected termination after seeking better opportunities.**
- **The focus on aesthetics over education in schools creates a toxic environment that hinders creativity and harms both teachers and students.**

Call to Action:

- **Educational institutions need to prioritize the well-being of educators, especially art teachers.**
- **Schools should foster environments conducive to learning and value the invaluable role of art education in shaping young minds.**

Discussion:

Archana, an experienced and dedicated art teacher with 15 years under her belt, unfortunately, faced unfair treatment at a well-regarded CBSE school. Even after dedicating significant years to art education, she is still vulnerable to exploitation from the school administration. She could not enjoy the employment benefits from the employer remains in the constant threat of termination. This reflects various forms of exploitation, such as unfair wages, excessive workload, lack of benefits, or even harassment.

This shifted Archana's professional focus from pedagogy (teaching methods) to aesthetics (visual appeal). This imposed a significant time constraint on her ability to deliver effective art instruction.

The disparity between her designated role and assigned tasks created confusion, leading to feelings of professional inadequacy.

The administration's lack of understanding regarding art education likely prevented them from optimising Archana's pedagogical expertise. Instead, they capitalised on her artistic skills primarily for non-instructional purposes. This misalignment between expectations and utilisation suggests a potential misuse of Archana's professional experience and artistic talent.

This situation could lead to detrimental consequences for various stakeholders. Archana might experience job insecurity and professional dissatisfaction. Students could be deprived of a comprehensive art education, potentially hindering their artistic development. Additionally, the school might miss the opportunity to foster a culture of creativity and aesthetic appreciation within its student body.

The private unaided schools do not receive public money or have public ownership. To be acknowledged, they need to fulfil particular requirements for hiring principals and teachers, uphold an adequate student-teacher ratio, and ensure their financial stability. The school has complete autonomy over hiring processes and teacher salaries. They independently determine their admissions procedures and tuition fees. These schools are growing rapidly, generating additional revenue similar to small or medium-sized enterprises, however they need to compensate teachers more.

Private schools are currently not subject to local political policies or initiatives aimed at addressing teachers' issues. Educators who are perceived as going against private interests can be dismissed

without facing additional repercussions. The government has minimal involvement in regulating the educational policies of individual states (Sindhi, 2012) . There is a significant amount of cultural, political, and social variety among the states. These schools are experiencing growth in student numbers and income similar to small or medium-sized businesses, however they are failing to remunerate their teachers adequately.

To combat teacher exploitation, the government has mandated a minimum wage. However, some educational institutions circumvent this regulation due to a lack of teacher unions and high unemployment. They distribute salaries in accordance with government guidelines, but then demand those funds back from their employees. This unethical practice leaves many teachers vulnerable. These institutions exploit their position of power to manipulate policies in their favour. Additionally, the government's Provident Fund (PF) scheme, intended to provide financial security for employees, is often poorly understood by teachers, making them further susceptible to exploitation.

Teachers typically believe that their pay are lesser compared to other professionals. This impacts teachers' motivation to educate, leading to the departure of competent teachers from the profession and dissuading high-achieving students from pursuing an education major in college. These would result in adverse impacts on pupils' learning. Enhancing the quality of education requires focusing on teachers and enacting policies to attract, inspire, and retain highly skilled persons in the field.

In an era marked by ubiquitous access to information, traditional educational models that prioritize rote memorization and assessment based solely on recall are insufficient. To prepare

students for the dynamic challenges and opportunities of the future, we must cultivate 21st-century skills in our learners. Art education is uniquely positioned to foster these essential competencies.

Art education doesn't just produce beautiful objects; it nurtures the "fresh perspectives and innovative thinking" (Sheridan-Rabideau, 2010) essential for India's future problem-solvers. Yet, when art teachers are constrained to decorative tasks, we rob students of the chance to develop these crucial 21st-century skills through key skills that emphasise problem-solving, flexible thinking, investigation, creative risk-taking, perseverance, close observation, collaboration, and which art education effectively nurtures. While other subjects can contribute to developing these skills, the arts are particularly potent due to their emphasis on divergent thinking, which contrasts with the convergent thinking often demanded in other disciplines.

Neglecting the potential of art education means missing a vital opportunity to develop a generation of competent individuals equipped to secure and create meaningful employment in the evolving job market. A transformative shift within our educational system is crucial. We need a system dedicated to actively nurturing such individuals and providing environments where their 21st-century skills can flourish.

As we can see in the case of Latha, Private schools often operate with recruitment and compensation structures that diverge significantly from those found in government-funded institutions. A common practice involves forcing teachers to sign restrictive bonds or agreements, preventing them from resigning for extended periods. Should they decide to leave, these schools

frequently withhold significant portions of the teachers' earned salaries as a penalty. Unfortunately, such exploitative practices extend to some larger, well-established schools, even in urban centres.

These private schools frequently hire educators who lack formal teaching qualifications and compensate them at rates far below those paid in government schools. However, they often need to maintain smaller class sizes due to the more significant number of teachers hired. School administrators in these private institutions exercise high authority over hiring and firing practices. This allows them to enforce stricter control over the teaching workforce, resulting in higher attendance rates and the retention of only effective instructors.

Fagbasmiye (2012) found that widespread dissatisfaction exists among teachers, and this negatively impacts their attitude towards their profession. He argues that a teacher's happiness and well-being directly correlate with their effectiveness and productivity. This connection stems from the fundamental principles of human psychology: positive mental states and motivation are essential to sustain high performance over an extended period.

Furthermore, Smilansky's (1984) research explored factors contributing to teacher satisfaction and work-related stress within English elementary schools. Interestingly, the study revealed that teachers' overall satisfaction and stress levels were primarily influenced by classroom experiences (including student relationships, teaching dynamics, and student behavior) rather than administrative policies or structural factors such as work autonomy and leadership relationships. Numerous studies

underscore teacher stress's detrimental impact on physical and mental well-being. Common manifestations include lowered morale, negative self-perception, disillusionment with personal values as they relate to the teaching profession, and an increased susceptibility to illness (Bertoch, Nielsen, Curley, & Borg, 1989) . In more severe cases, teachers experiencing high levels of burnout report elevated anxiety, depression, decreased sexual drive, and increased occurrence of both psychological and psychosomatic symptoms (Agyapong, Obuobi, Burback, & Wei, 2022).

Schools striving for a polished image, characterized by pristine facilities, uniforms, and meticulously planned events, can inadvertently create a paradox within their art education programs. While a clean and organized environment is valuable, prioritizing visually appealing and pre-defined artistic outcomes can stifle genuine self-expression and creativity amongst students. This emphasis on external aesthetics can demotivate intrinsically creative students, favoring those skilled in mere imitation.

This prioritisation of mimicry over personal expression contradicts the established value of self-discovery in art education, championed by scholars like Victor Lowenfeld (1957) Notably, this approach presents a significant concern, as it undermines the core purpose of integrating art into the curriculum.

Furthermore, this copy-centric approach to art education fosters detrimental consequences. It cultivates a mindset focused on duplication rather than encouraging original thought and innovative problem-solving, hindering crucial cognitive development (Bartel, 2008). Additionally, it can contribute to

students seeking external validation for their work, hindering the intrinsic motivation and self-confidence necessary for artistic growth.

Addressing this issue requires a multifaceted approach. While art teachers play a crucial role in fostering creativity through their pedagogy, experience, and empathy, further support is needed. This includes advocating for art education to be taken seriously at all levels, alongside the potential establishment of specialised institutions dedicated to providing effective and empowering art education practices.

Conclusion

The "identity paradox" faced by art educators in India highlights a critical issue in the country's education system. Art teachers, who hold immense potential to nurture creativity and critical thinking in students, often find themselves relegated to the role of mere decorators. This discrepancy between their ideal role and the exploitative reality they face stems from a confluence of factors.

Limited understanding of the true value of art education amongst administrators and parents often reduces art teachers to visual beautifiers. Schools prioritize aesthetics over artistic exploration, focusing on creating an impressive facade rather than fostering genuine artistic development. This not only demotivates students but also diminishes the sense of purpose and professional identity of art educators.

Furthermore, the lack of adequate compensation and job security creates a toxic environment. Exploitative practices by schools, such as demanding excessive non-teaching tasks and

unreasonable working hours without proper compensation, leave art educators feeling undervalued and dissatisfied. This negatively impacts their motivation and well-being, hindering their ability to effectively create a nurturing learning environment for their students.

To bridge this gap and unlock the true potential of art education in India, a multi-pronged approach is necessary. Firstly, empowering art teachers is crucial. This involves providing them with adequate training in effective art education pedagogy, ensuring fair compensation, and offering professional development opportunities. Additionally, raising awareness and appreciation for art education amongst administrators, parents, and society at large is essential. Recognizing the subject's role in fostering holistic development and equipping students with crucial 21st-century skills like critical thinking, problem-solving, and communication will lead to a greater understanding of its importance. Finally, advocating for policy changes that protect art teachers' rights and ensure their well-being is paramount. This may involve implementing regulations mandating fair compensation, reasonable working hours, and job security for art educators.

By addressing the "identity paradox" faced by art educators and implementing these critical measures, India can pave the way for a transformative shift in its education system, one that fosters creativity, empowers individuals, and equips them for the challenges of the future.

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Speaking through Objects

How weavers remembered and recollected their everyday narratives at Suraiya Hasan Bose's Workshop in Hyderabad

Somedutta Mallik

Abstract

My ethnographic study at textile entrepreneur late Suraiya Hasan Bose's weaving workshop in Hyderabad, between 2016 and 2017, entailed observing the weavers at work and listening to their narratives related to the workshop, which were, more often than not, fragmented and inconsistent in nature. *House of Kalamkari and Durries*, as the weaving unit was named, was a house not only of female weavers, apprentices and master weaver Omer Sahab, but also of a number of handlooms, tools used in weaving and spinning, cotton, silk and zari yarn and several old fabric pieces of himroo, mushroo and jamawar weave that served as reference for new designs. The human entities spent their time in the workshop in connection to the material objects and the former developed a complex, layered relationship with the latter over the years, which is the focus of my study in this paper. Some of the concerns I will address here are: How do the sensory engagements with the objects and tools develop the material understanding in the weavers and gradually create their material memory? In which ways are objects with collective or personal attachments instrumental in evoking specific memories and bridging the gaps between fragmented narrations? Drawing on anthropologist Alfred

Gell's idea of agency of artworks and oral historian Aanchal Malhotra's proposition on the connection between material memory and senses, I will explore the above-mentioned issues and questions in my essay.

Key words: ***Material memory, objects, sensory experience, weaving, narratives.***

Introduction

Sitting under the architectural grids of the draw looms, surrounded by the spools of cotton and silk yarns, while the rhythmic beats of the reeds filled the otherwise noiseless room, I started my journey as an ethnographic researcher of artisanal practices in Hyderabad.[8] This was in August 2016, in the Durgah locale in Hyderabad, when the weaving workshop of the *House of Kalamkari and Durries*, run by textile revivalist and entrepreneur late Suraiya Hasan Bose[9] (or Suraiya Apa as she was fondly called), was still a must-go place for every textile enthusiast visiting the city. Beginning from 2016 to 2017 and later from 2018 to 2021, until the last days of the workshop, I visited that place time and again in short intervals and conversed with the different stakeholders there, initially as a student-researcher and later as an old acquaintance. My study entailed observing the weavers at

[8] I did this ethnographic study as part of the MFA programme (2015-2017) at the University of Hyderabad under the guidance of Dr. Baishali Ghosh.

[9] Suraiya Hasan Bose was born in an elite family in Hyderabad in 1928 to Badrul Hasan and Kubra Begum. Her father and uncles were greatly influenced by Mahatma Gandhi's ideas of self-sufficiency and joined the Khadi movement. Cottage Industries Emporium in Hyderabad was established by Badrul Hasan where Suraiya Apa later started her career in sales. During her time in Delhi, she closely worked with personalities like Pupul Jayakar. In 1970s, Suraiya Apa's uncle Abid Hasan Safrani, who was a diplomat and close confidant of Netaji Subhas Chandra Bose, bought a vast land in Hyderabad and invited his niece to join him. Suraiya Apa then moved back to Hyderabad and started agriculture and a few years later an export business of Kalamkari textile and durries. Gradually, her love for handloom weaving directed her into textile revivalism.

work and listening to their narratives related to the workshop, which were more often than not fragmented and inconsistent in nature. *House of Kalamkari and Durrie*s was a house not only of female weavers, apprentices and master weaver Syed Omer[10] (or Omer Sahab), but also of a number of handlooms, tools used in weaving and spinning, cotton, silk and zari yarn and several old fabric pieces of himroo, mashru and jamawar weave that served as the reference for new designs. The human entities spent their time in the workshop in connection to the material objects and the former developed a complex, layered relationship with the latter over the years, which is the focus of my study in this paper. Some of the concerns I will address here are: How do the sensory engagements with the objects and tools develop the material understanding in the weavers and gradually create their material memory? In which ways are objects with collective or personal attachments instrumental in evoking specific memories and bridging the gaps between fragmented narrations? Drawing on anthropologist Alfred Gell's idea of agency of artworks and oral historian Aanchal Malhotra's proposition on the connection between material memory and senses, I will address these questions in this essay.

A house for people, a house for things

Coming from a family that followed Gandhian ideologies and actively took part in the Indian nationalist movements, Suraiya Apa was always an advocate of handloom weaving. The enriching experience of working with legendary figures such as Pupul

[10] Syed Omer was a master weaver of himroo weave, who learned the craft as a young boy from the weavers from Aurangabad and practiced throughout his long career of nearly six decades. His expertise was recognised by the Government of India when he was awarded the National Award for Master Craftspersons and Weavers in 2005 and Sant Kabir Award in 2009.
Syed Omer, Master weaver, interview by the author, Hyderabad, August, 2017.

Jayakar and Martand Singh shaped her career in textiles. In the mid 1980s, Suraiya Apa, alongside her successful business of kalamkari fabrics and durries, set up a weaving workshop in the Dargah locality near Golconda, Hyderabad. This allowed her to revive the weaving traditions of handwoven Indo-Persian textiles like himroo, mashru, paithani and jamawar in her workshop. Starting with a few paithani and himroo looms Suraiya Apa invited Abdul Qadir, Munaf, Ajmal and Omer Sahab, the skilled himroo weavers to work at her workshop and take charge of training the girls and women of humble background from the neighbouring locality. Over the years, more looms were installed, many women joined the workshop, and the old masters retired as their advanced age did not allow them to continue the tedious practice of weaving. When I first visited the weaving unit back in 2016, uncertainty about the future of the space and the business was looming over already. Most of my interactions during that time were with experienced weavers like Nasrin Begum (or Nasrin Apa), Sheshamma, Hashmat Begum (or Hashmat Apa), D. Shobha (or Shobha Aunty), Jasmine, the young apprentice, and Omer Sahab, the old master weaver who was trying hard to outdo his age and keep the weaving unit alive by guiding the weavers with his decades-long experience.

Fig. 1 Nasrin Apa and Shobha Aunty work on a draw loom, November 2016, Hyderabad, photographed by the author.

The workshop that welcomed the textile enthusiasts, researchers, connoisseurs and students alike was an intriguing space for making, learning and sharing knowledge. The imposing wooden structures of the looms used to partially conceal the figures of the weavers engaged in weaving, warping and spinning (Fig. 1). With their vertical and horizontal wooden poles and planks the looms appeared to be small structures that quite literally and metaphorically sheltered the weavers by offering them a respectable and modest livelihood. The weaving instruments and tools in the workshop, therefore, became a part of these weavers' professional life and practice. During one of my many recorded conversations with Nasrin Apa, I inquired about the history of a draw loom lying idle next to hers and her recollection of that himroo loom, which previously served as a jamawar loom, was full of technical details and her material

Fig. 2 Omer Sahab in front of the collection of old fabrics in the workshop, March 2017, Hyderabad, photographed by the author.

engagement.[11] For instance, she considered that the main difference between a himroo and jamawar weave was that in the previous technique, the pressure was shifted from one pedal to another by pressing it with toe only after the cotton weft passed through the warps, while in case of the latter, the pedals are pressed after passing the silk yarn, used for design, as well as after throwing the shuttle of the cotton weft. This penchant of craftspeople to remember and articulate things through their material engagement is what historian of Science Pamela H. Smith termed as "material language". "[A]rtisans might see reality as intimately related to material objects and the manipulation of material, which could be thought about and understood as a "material language"."[12] These sort of narratives with material specifications were very common while the weavers at Suraiya Apa's workshop told their stories. Another weaver Sheshamma shared her journey: from growing up in a weaver's family, learning to weave *pattu* (silk) saree as a girl and then joining Suraiya Apa's weaving unit and getting trained in himroo weave (made with cotton and silk yarn) and finally trying her

[11] Nasrin Begum, interview by the author, Hyderabad, April, 2017.

[12] Smith, The Body of the Artisan, 8.

hands in weaving cotton durries when the durrie loom was installed in the workshop.[13]

Objects that speak While the women weavers and apprentices were busy in different phases of the weaving process, Omer Sahab, the national awardee master weaver, would be seen sitting at a small wooden frame and engrossed in making *jala* (graph for the designs). Then in his 70s, Omer Sahab was always surrounded by the old fabric pieces, which he used to refer to for developing new designs. Most of these old himroo, mashru and jamawar sherwani, pajama among other costumes and fabric pieces were collected by Suriya Apa and Omer Sahab from old markets of Hyderabad, and aristocrats acquainted with Suraiya Apa (Fig. 2).[14] Some pieces also came with Omer Sahab as he collected them from his earlier workplace at the Furnishing and Allied Fabrics Industrial Co-operative Work Centre Ltd. (henceforth Centre) in Amberpet, Hyderabad. Every conversation with him at some point led to picking up certain old pieces, running fingers on the tattered threads and discussing their designs, colours or history. In Fig. 3 Omer Sahab can be seen holding a himroo sherwani and his right index finger points to the small woven motifs of the fabric. Both the sides (inside and outside) of the piece are visible in the photograph, which gives a precise idea about the technique of extra weft weaving of himroo fabrics. Omer Sahab had the habit of going back to his collection of historical pieces and old designs whenever asked about the techniques, designs or the source of the collection. Even while sharing his journey from being a young apprentice to a master weaver or any other personal narratives, he would often refer to certain pieces to recollect the chronology of events. In the middle of one such conversation he picked up a himroo fabric, which, he informed me, was woven for Zhou Enlai,

[13] Sheshamma, interview by the author, Hyderabad, April, 2017.
[14] Syed Omer, interview by the author, Hyderabad, November, 2016.

the Premiere of the People's Republic of China.[15] During his visit to India before the Sino-Indian War (1962) this fabric was presented to him. Exclusively woven for this foreign dignitary in the Centre, Omer Sahab recollected the enthusiasm with which it was collectively designed and made in his former workplace and how he managed to save a piece of that special fabric with him all these years. For a moment I am not considering the factual history of this event, rather considering it as an anecdote. Fig. 4 shows the remaining piece of the himroo textile. It had a repetitive motif grouped with a Latin 'C' and a crown flanking a tree. In some cases, the 'C' appears in its mirror-image. The border is also visible in the photograph which looks like a mesh pattern with red dots at the crossing points. Though Omer Sahab mentioned that the piece was woven with the threads of seven different colours of the sky (he might have meant VIBGYOR of the rainbow) I could only see six colours including the white of the base. This particular conversation with Omer Sahab shows how individuals often create narratives around objects, and the biographies of the latter merge with those of the former. Philosopher Elizabeth V. Spelman writes in "Repair and the Scaffold of Memory", a chapter from the book *What is a City?*

Fig. 3 Omer Sahab holds an old himroo textile, March 2017, Hyderabad, photographed by the author.

[15] Syed Omer, interview by the author, Hyderabad, August, 2017.

Rethinking the Urban After Hurricane Katrina **edited by Phil Steinberg and Robert Shields, "Objects provide a scaffold for memory, in the sense that they provide a kind of platform through which memories are reached for guiding structure through which the past is recalled...".[16] And thus, they hold certain power or agency. The reason why anthropologist Alfred Gell considered the artefacts or objects as secondary agents "Art objects are not 'self-sufficient' agents, but only 'secondary' agents in conjunction with certain specific (human) associates."[17]**

Fig. 4 The himroo fabric that was exclusively designed and woven for Zhou Enlai, October 2016, Hyderabad, photographed by the author.

While Spelman acknowledges an object's ability to trigger memories and create narratives of the past, oral historian and author Aanchal Malhotra takes a step further and considers the physicality and the sensory experience of an object as a catalyst

[16] **Spelman, "Repair and the Scaffold of Memory", 145.**

[17] **Gell, *Art and Agency*, 17.**

for forgotten events. In her debut book *Remnants of a Separation: A history of the Partition through Material Memory*, Malhotra writes, "Thus we see that as the years have passed, memory has settled into objects in such a way that they have become the only physical evidences of belonging to a certain place at a certain time. The object expands to transcend its own physicality, creating a tangible link to an intangible place or state of being."[18] Omer Sahab's way of using the textile pieces as tools in his storytelling not only connected these objects to his biography or the workshop's history of nearly four decades, but also put them in a much broader context of the history of these Indo-Persian weave.

Conclusion

After Omer Sahab's and Suraiya Apa's demise, now that the workshop ceases to exist, these stories shared by the weavers about the workshop appear more significant in order to remember and recollect the history of the *House of Kalamkari and Durries* as well as Suraiya Apa's immense contribution to the revivalist project of Indo-Persian textiles. The old looms, tools used in weaving and spinning, spool of yarn and other objects have been sold and distributed, which makes it impossible to reconstruct the past through tangible objects. But the stories and photographs that I collected over the years can still provide an idea about the character of the workshop, and the complex relationship between the human agents and the objects in the setting of the weaving unit.

[18] ***Malhotra, Remnants of a Separation, 27.***

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Letter from the Chairman's Desk By Sunil Bhatia PhD

What I was discussing in a previous editorial about products guides the users and this editorial is a continuation of the earlier one with a difference by adding a new element of use of weakness for exploiting for meeting the purpose of it is designed. It is an ancient practice and our ancestors used this concept to make their struggle for food easy.

All the traps for prey designed by our ancestors were directed by products designed to use users' weaknesses. Modern designers focus on one side of exploiting users for what they have capability rather than never thinking of exploiting the weakness of users for products that guide the users.

One day I was sitting on the bank of a river and a person was trying to catch the fish by using a fishing rod. I found his preparation before allowing the metallic hook to submerge in the water he attached a small amount of food and the design of the hook was marvelous as someone tried to eat that food the exposed bent end hook in the shape of a U inserted and fixes in the nose of the fish and the trap never comes out. They use strong thread for attaching a thin sharp hook to one end and the other end attached tied with thread that has a light material straw to some distance of the thread what level of the hook should go deep into the water to attract fish. As someone tries to eat the hook's

food the floating straw gets disturbed on the surface alerting the users that the trap is eating. This fishing technique is an ancient practice and the product is designed for the weakness of prey of eating the food attached to the hook. The design of the fishing rod guides the users in perfecting the art of catching fish.

I was living in an area where people prefer to eat river fish rather than sea. Sea fish have been caught with a large net that has attached material all around heavier than water for submerging toward the bottom as they throw the net on the sea surface. People trapped large numbers of fish by pulling the attached string. The drawback of the design of the net gap from it traps small as well as large fish. My suggestion is that the net gap should be that large from where small trapped fish should be able to escape but prevent large fishes into the sea and allow them to grow big for a good amount of size for human consumption. This net trap is not where the product guides the users and exploits weaknesses. Placing a stem of papaya close to the bank in the river water where fish come for hatching in search of a safe place is used as a kind of trap to exploit the weakness of fish. I have noticed in a rural area that people catch by exploiting the weakness of the fish in search of deeper water for a better life for trapping. A unique characteristic of fish is that it jumps in the opposite direction of a waterfall in the hope of getting deeper water and believes the other side of fall water has deeper depth. That weakness guides the fishes jump opposite to falling water and a man-designed artificial trap by placing the long cloth to allow for the trap of failing who could not cross.

Bird trap is uniquely designed where the anatomy of birds is beautifully used for trapping them by using their weakness. Bird catchers spread some grain in the area and over it spread the net.

Net has that much gap as they try to fly their claws are trapped by a net. They have a mechanism for flying their claws squeeze and their leg bend backward as about to fly. It is the product that guides the users to come close to the trap by seeing food grains.
Monkey has a habit of not opening his hand if something comes under his hold. It is the weakness and man uses a long neck pitcher filled with food grains that is fixed by burying it in the ground. That mouth has enough space to enter the hand of the monkey but does not have that space to come out clenched holding food grains. Monkey never thinks of releasing the food that his hand holds and comes under the trap. Some people make the sound of a female bird to attract the male bird as she is inviting them for mating. Once the bird is seen the catcher overpowers the bird physically.

Pollination in nature is where flowers devise a technique for trapping specific insects for attracting by releasing their weakness. Human has limited physical strength but mental strength is beyond imagination. They devised products and tools to overcome this physical strength by using mental capability. Mental strength betrays and is not designed for repetitive jobs. Man's weakness is repetitive jobs invite boredom and the chances of committing errors are high so machines are the best tools to eliminate both.

Ancient people understood in the early years of their lives that honey bees were scared of smoke. They used smoke torches close to their hives to allow bees to vacate out of fear of death by suffocation and it is easy for a person to take out their stored honey. The idea of fencing guides the intruder if crosses it will hurt. These techniques of ancient people indicate that focus on

weaknesses for designing the product that guides the users was considered.

Sometimes people make others weak. In war strategy, they devised encirclement where they cut the supply from outside and waited for their weakness to surface because of the absence of food it is to conquer. At the individual level, they found a person survived by breathing and cut the supply of air for breathing by strangulating needed a few moments to kill. During the Second World War, they used the same concept for mass killing by placing them in mustard gas chambers. Product guides humans and others exploit weaknesses.

Cooking makes the vegetables easy to digest and free from external harmful elements and cutting increases the surface area of the vegetables helps in quick and even cooking. Peeling removes the hard portion that usually takes longer time than the peeled vegetables. It is a product with some strong harmful character and is not easy to digest. Our ancient people devised techniques to make it by boiling, roasting, and frying it to lower the harmful elements in it and easy to digest. These techniques not only enhance the shelf life of the product but overcome the weaknesses of lowering the taxing of the body for digestion. Much later in civilization, the role of presentation of serving food was noticed to guide the users for enjoying and relishing the food. It was not that well-cooked food was sufficient for guiding the users but adding the element of presentation enhanced the guidance for users to enjoy food and the body comes to action the moment visually it appeals to the users and helps in the secretion of digestive juices. It was noted the smell guides the users in releasing the digestive hormones.

Sometimes reasons for weakness guide the users in designing new products. I observed when my mother used to bake bread in a heated earthen oven (Tandoor) she was wrapping her hand with long cloth for protection from burn from heat while placing rolled bread for cooking around a round surface. It was the weakness of human skin that got burned with high heat oven and that made her wrap her hand with cloth not to burn.

The attraction to the opposite sex is a biological process and our hormones help in achieving the purpose of living in nature. The male's best attraction feature is physical strength which attracts the female. Once a male-female produces offspring under the guidance of internal hormones after copulation, nature succeeds in getting out of both what nature is designed for the propagation of life and after that male-female prove irrelevant. As humans become no more fertile considered irrelevant to nature. Whether you die just now or live a longer life is immaterial to nature. Nature has devised various ways for attraction and the lower level of animal attraction in males like coak is decorative and attractive compared to counterpart female hens. In the man's case, the female has an attractive part of the breast and wide hips that help in drawing the attraction of the male. In this case, the male is the product that guides the users female and vice versa and invented various techniques of attractions. Some people are attracted by their achievements in social hierarchy and some are attracted because of mental intelligence. People get attracted by noticing specific body language or dress. Dress is a tool devised by humans for attractions that guide others on what they are indicating by wearing a dress. A revealing dress attracts the opposite and a covered dress gives different guidance to a person who is watching in different manners. Everyone has inborn characteristics to look different from others and the basis of this is

to guide the users of specific choices for mating for nature has devised for us. Once you produce offspring nature does not bother whether you live or die. Nature has guided you to meet its purpose of propagation of nature for its survival in a balanced manner.

The entire fashion and make-up industries are based on the exploitation of the human weakness of humans to represent different for others for notice by opposite. He uses the tool of physical by visiting the gym to tone his body, wearing stylish dresses, and using makeup and other accessories that best/she can afford to guide the users in what they wish.

It is not that what we do is directed toward guiding for attraction of others. Once I was walking wearing shoes, and I did not notice that my shoe's laces were untied. After walking a few steps, my one step was on the side of the loose lace end and I was tripped on the ground I was saved because quick reflex actions saved me from hurt. The design of shoes is to make life less trouble. The ancient people understood that our soles are delicate and while walking on earth uneven surfaces and sharp pebbles or some vegetation have sharp pinpricks that hurt the walker realized this weakness can be overcome by designing a shoe that protects the feet from hurt from unwanted surfaces. Initially, they tied the dried skin of the prey that was left over after eating the flesh of the animal suitable for protecting feet. It was the weakness of humans hurting while walking that made the direction for designing the product. It is hypothesized that they used rectangular pieces of leather for tying with feet but while walking it was helping in tripping the users with the strike of extra leather that was beyond the sole of the feet. After experimentation, they found the size of the shoe sole should not be more than it and will prevent hurt by tripping while walking or running.

Our ancestors lived on trees, and took millions of years for the confidence to live safely on earth to leave the abode of the tree. As long as living on the tree there was no issue of designing tools for plucking the fruits. As he started living on earth he found fruits at heights and feared climbing trees might prove the reason for his death by falling. He designed the tools standing on the ground for plucking by using the weakness of the fruits.

Nature has its mechanisms for guiding the users with the element of weakness. In the case of plants as they bear unripe fruits they work not to be noticed by carriers for seeds and hide under the color of the leaves. As seeds within the fruits are capable of propagating new life they change color to be noticed by carriers. They use the weakness of hunger and carrier wishes to satisfy themselves by plucking from trees to eat the sweet pulp consider the seed as waste and throw it somewhere on the ground. Humans in early civilization learned the art of plucking fruits from trees by breaking the stem that is the weakest attachment of the fruit to the tree. In the case of mango, it is attached to the tree with a fragile stem and to break it they used an inverted Y-like design of dry branch for the mango plucker- a long strong dry bamboo pole fitted with shear at the distal end and a advanced design is a cloth bag underneath is attached to use to collect it. The distance of inverted Y at the end and the size of the mango prevent not from coming out while pulling and that force helps in plucking. This tool is designed with the help of the weakness of mangoes that direct the users to design plucker. Later on, they controlled falling mangoes that were damaged by striking the ground by placing them underneath the bag for collecting and preventing falls. Over-ripened fruits release some chemicals and the scent of it attracts the carries is the last attempt for

disperation of seeds. My mother found any mango damaged in a basket by smell and segregated it from the rest so as not to spoil mangoes. Nature has the mechanism to spoil by giving signals to other mangoes in the basket for ripeness and releasing the gases collected from the spoiled mangoes for notice by carriers at distances. My mother picked the spoiled one and separated it from the basket. She picked spoiled not to spoil others mangoes of the basket.

I was watching the game of football on my TV and realized this game's basic structure is designed on the uncertainty of rolling off the ball. Each player's actions in the field are guided by the movement of the ball where the result of the game is declared on which team has weaknesses by scoring the highest goals. The audience is not to come to watch for enjoyment but rather the ball that keeps rolling and players are guided to follow for control for exploiting the weaknesses of the opponent by striking for goals. Ludo is a game that does not need a skill or sharp mind and physical action of users and the level of participation is limited to what the game is guiding just follow. It is designed as the dice guiding the users to win the game. This game is designed to rely on the weakness of faith as a matter of chance.

I am thankful to Prof Shatpura Thakurata Roy of IITK for accepting our invitation for Guest Editor.

Lambert Academic publication for celebration of the 150th special issue by publishing a book by compiling editorials "Design For All, Drivers of Design" in two sets Drivers of Design Drivers of Design Volume-II was translated into eight different languages from ENGLISH to French, German, Italian, Russian, Dutch, and Portuguese. Kindly click the following link for the book.

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Enjoy reading, be happy, and work for the betterment of society.

With Regards
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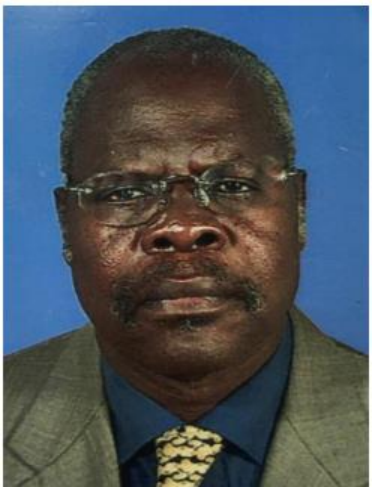

Prof JP Odoch Pido

Prof Odoch Pido is a design educator and professional designer. He is an Associate Professor of Design at the Department of Design and Creative Media, the Technical University of Kenya. He has served on numerous administrative positions, boards and committees, setting curricula and judging Kenyan art and design projects and competitions. He has been a strong force in the preparation and development of more than five generations of Kenyan designers as they make their first halting steps and then flourish as professionals. His many professional credits include

exhibition designs, graphic design and product development. Odoch's many publications include papers and chapters in books, conference presentations and journal articles focusing on the deep analysis of culture in relation to design, emerging trends in cultural expression, health and development. He has concentrated on issues in design education but the closest to his heart has been alternative communication techniques for controlling HIV-AIDS, especially for orphans and vulnerable children in rural Kenya. Together with other scholars he is examining groundswell as a cultural revolution in weddings and connecting African thought system with mainstream philosophy, design and related disciplines. Odoch's photography of abstract forms in nature is his way of expressing his sensitive vision by focusing on small scale natural beauty that might otherwise go unnoticed.

June 2024 Vol-19 No-6

Per-OlofHedvall*works as Director of Certec, Department of Design Sciences, Lund University, Sweden. His research deals with accessibility, participation, and universal design, with a particular interest in the interplay between people and technology. Working closely with the disability movement, he focuses on people's lived perspectives and how human and artefactual aspects of products, services, and environments can be designed to support people in fulfilling their needs, wishes, and dreams. Hedvall has a background in computer engineering and has a particular interest*

in people's empowerment and opportunities for participation in their lives.

Per-OlofHedvall often bases his work on Cultural-Historical Activity Theory. In 2009, Hedvall defended his doctoral dissertation in Rehabilitation Engineering and Design, "The Activity Diamond – Modelling an Enhanced Accessibility", where he developed a model for planned, lived, and long-term aspects of accessibility, as a prerequisite for participation.

July 2024 Vol-19 No-7

Dr. George Vikiru ***is a Lecturer in the Department of Fine Art and Design, School of Law, Arts and Social Studies, Kenyatta University, Nairobi, Kenya.***

His areas of specialization are Textiles and Graphic Design with an emphasis on the utilization of the New Media Arts for Effective Communication and Social Transformation. His other areas of interest are in Indigenous Knowledge, gender, technology and media studies. Dr. Vikiru has had over twenty five years teaching experience at University where he has also carried out research, published widely and gained managerial experience.

ISSN: 2582-8304

August 2024 Vol-19 No-8

Dr. Bijaya K. Shrestha ***received Doctoral in Urban Engineering from the University of Tokyo, Japan (1995-'98), Master in Urban Design from the University of Hong Kong, Hong Kong (1993-'95) and Bachelor in Architecture from the University of Roorkee (now Indian Institute of Technology), India (1983-'88). Dr. Shrestha has got working experiences of more than two decades. He had already served to the Department of Housing and Urban Development, Ministry of Housing and Physical Planning, Government of Nepal, United Nations Centre for Regional Development (UNCRD), Japan and various architectural schools in Nepal before taking the present job at Town Development Fund (TDF). He has initiated a new master program in Urban Design and Conservation at Khwopa Engineering College, Purbanchal University, where he served two years as Head of Post-graduate Department of Urban Design and Conservation.***

Dr. Shrestha is the recipient of numerous gold medals for his excellent academic performance and decorated by 'Calcutta Convention National Award 2006' by Indian Society for Technical Education for his best paper at the 35th ISTE Annual convention and National Seminar on Disaster – Prediction, Prevention and Management. He is also member of numerous professional bodies

and life member of various alumni associations. He has already contributed more than five dozen of papers, published in various forms: book chapter, international journals, conference proceedings, local magazines and journals including in local newspapers. Moreover, he has been invited in numerous international conferences for presentation of his research findings. Finally, his field of expertise includes sustainable urban development, disaster management, housing, local government capacity building and development control. He will focus on universal design concept on Nepal

September 2024 Vol-19 No-9

Steinar Valade-Amland.

He is market economist, and after more than 30 years of professional practice, I have accumulated extensive and valuable experience from a wide range of industries and manegerial roles within marketing and sales, communication, PR and advocacy - leading to the design industry as an account director and later CEO of one of Denmark's leading brand design agencies, culminating in the role of spokesperson for the Danish design community, heading Danish Designers - parallel with holding numerous honorary positions.

My primary role today is helping organisations and management teams to establish the best possible baseline for business development and change processes - through stakeholder engagement and moderated processes, through organisational learning and co-creation. I'm rather agnostic when it comes to models and methods, but design thinking and processes inspired by design methodologies are part of my DNA after 30 years in and closely connected to the industry.

He ***authored numerous articles and book contributions, amongst others with 15 articles to the Bloomsbury Encyclopaedia of Design, out in 2015.***

His latest book, DESIGN: A BUSINESS CASE - Thinking, Leading, and Managing by Design written together with Brigitte Borja de Mozota, is now out in English, Hindi and Korean.

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New Books

https://www.morebooks.shop/shop-ui/shop/book-launch-offer/74414a1df61c3d2ea8bf46ae7e3c0cf31769f261

LAP LAMBERT Academic Publishing

ISBN 978-613-9-83306-1

Sunil Bhatia

Design for All

Drivers of Design

Expression of gratitude to unknown, unsung, u nacknowledged, unmotivated and selfless millions of heroes who have contributed immensely in making our society worth living, their design of comb, kite, fireworks, glass, mirror even thread concept have revolutionized the thought process of human minds and prepared blueprint of future. Modern people may take for granted but its beyond imagination the hardships and how these innovative ideas could strike their minds. Discovery of fire was possible because of its presence in nature but management of fire through manmade designs was a significant attempt of thinking beyond survival and no doubt this contributed in establishing our supremacy over other living beings. Somewhere in journey of progress we lost the legacy of ancestors in shaping minds of future generations and completely ignored their philosophy and established a society that was beyond their imagination. I picked up such drivers that have contributed in our progress and continue guiding but we failed to recognize its role and functions. Even tears, confusion in designing products was marvelous attempt and design of ladder and many more helped in sustainable, inclusive growth.

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it is available on www.morebooks.de one of the largest online bookstores. Here's the link to it: https://www.morebooks.de/store/gb/book/design-for-all/isbn/978-613-9-83306-1

The Ultimate Resource for Aging in Place With Dignity and Grace!

Are you looking for housing options that are safer and more accommodating for independently aging in place? Do you want to enjoy comfort, accessibility, safety and peace of mind – despite your disabilities, limitations and health challenges? The help you need is available in the Universal Design Toolkit: Time-saving ideas, resources, solutions, and guidance for making homes accessible.

This is the ultimate resource for individuals and professionals who want to save time, money and energy when designing, building, remodeling or downsizing a home. The Universal Design Toolkit will help you take the steps to design homes for your clients or yourself while eliminating the costly trial and error challenges you'd inevitably encounter if faced with this learning curve on your own.

Rosemarie Rossetti, Ph.D., teamed with her husband Mark Leder in creating this unique Toolkit. They bring ten years of research, design and building expertise by serving as the general contractors for their home, the Universal Design Living Laboratory– which is the highest rated universal design home in North America.

Within the Toolkit's 200 richly illustrated pages, you'll find: Insights that distinguish *essential* products, services and resources from the *unnecessary*.

Proven, realistic tips for finding the right home.

Home features you need to look for. Nothing is assumed or left out.

Handy home checklists and assessments.

Interview questions to help you hire industry professionals with knowledge and experience. Photographs that provide a frame of reference to inspire, clarify and illuminate features andbenefits.

Valuable resources to save you time, money and energy.

Helpful sources of funding.

Space planning dimensions for access using assistive devices such as wheelchairs andwalkers.

And so much more!

If you want useful, dependable advice and easy to implement ideas from respected experts who know the ropes, you'll love Rossetti and Leder's perspective. As a speaker, author and consultant who uses a wheelchair, Rossetti has helped hundreds of people design their ideal homes. Now her comprehensive Toolkit is available to help and support you! Get the Universal Design Toolkit now to start your project!

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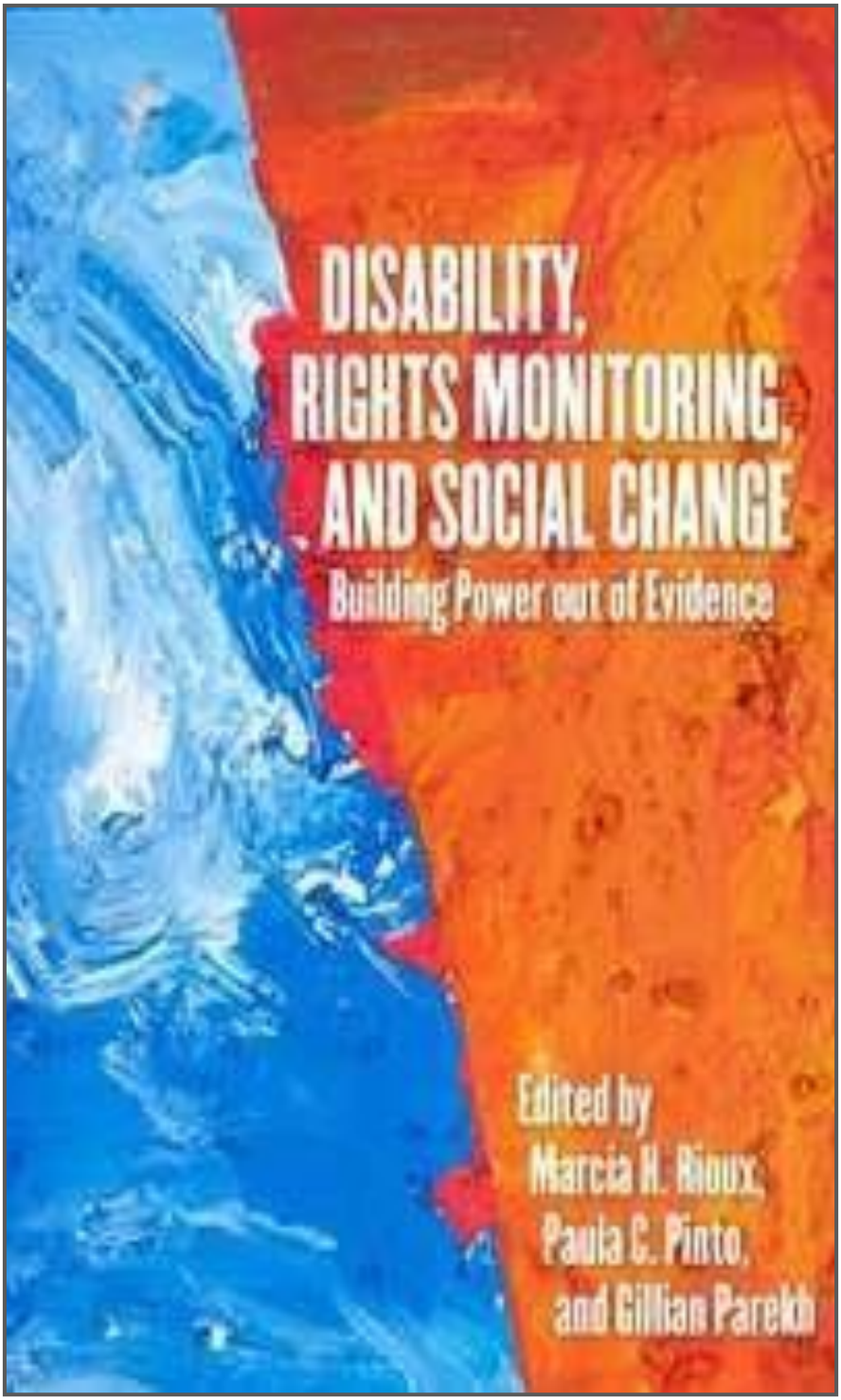
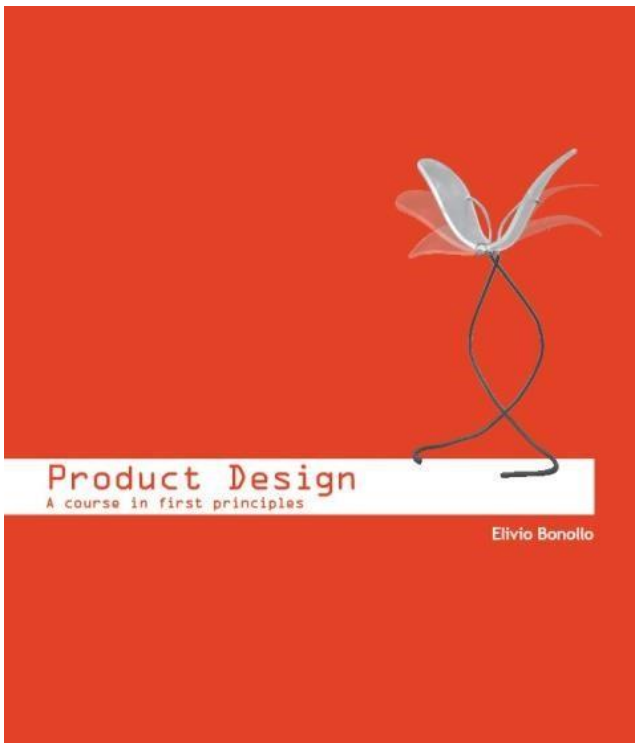
Disability, Rights Monitoring and Social Change:



New Update: ELIVIO BONOLLO (2015/16) PRODUCT DESIGN: A COURSE IN FIRST PRINCIPLES



Available as a paperback (320 pages), in black and white and full colour versions (book reviewed in Design and Technology Education: An International Journal 17.3, and on amazon.com).
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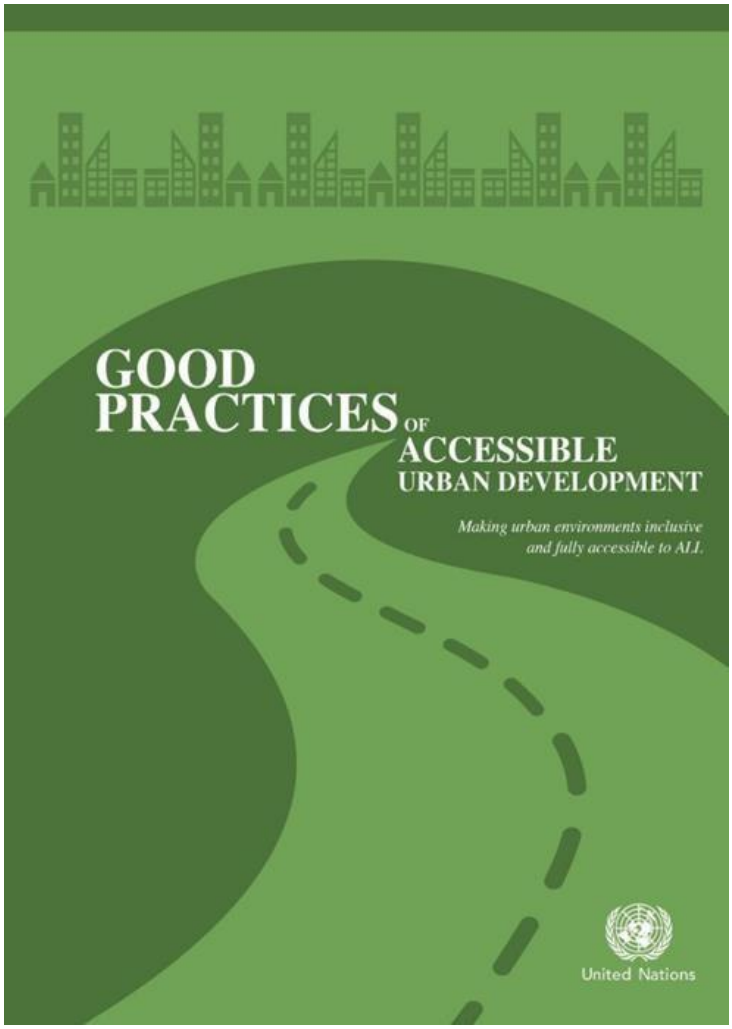
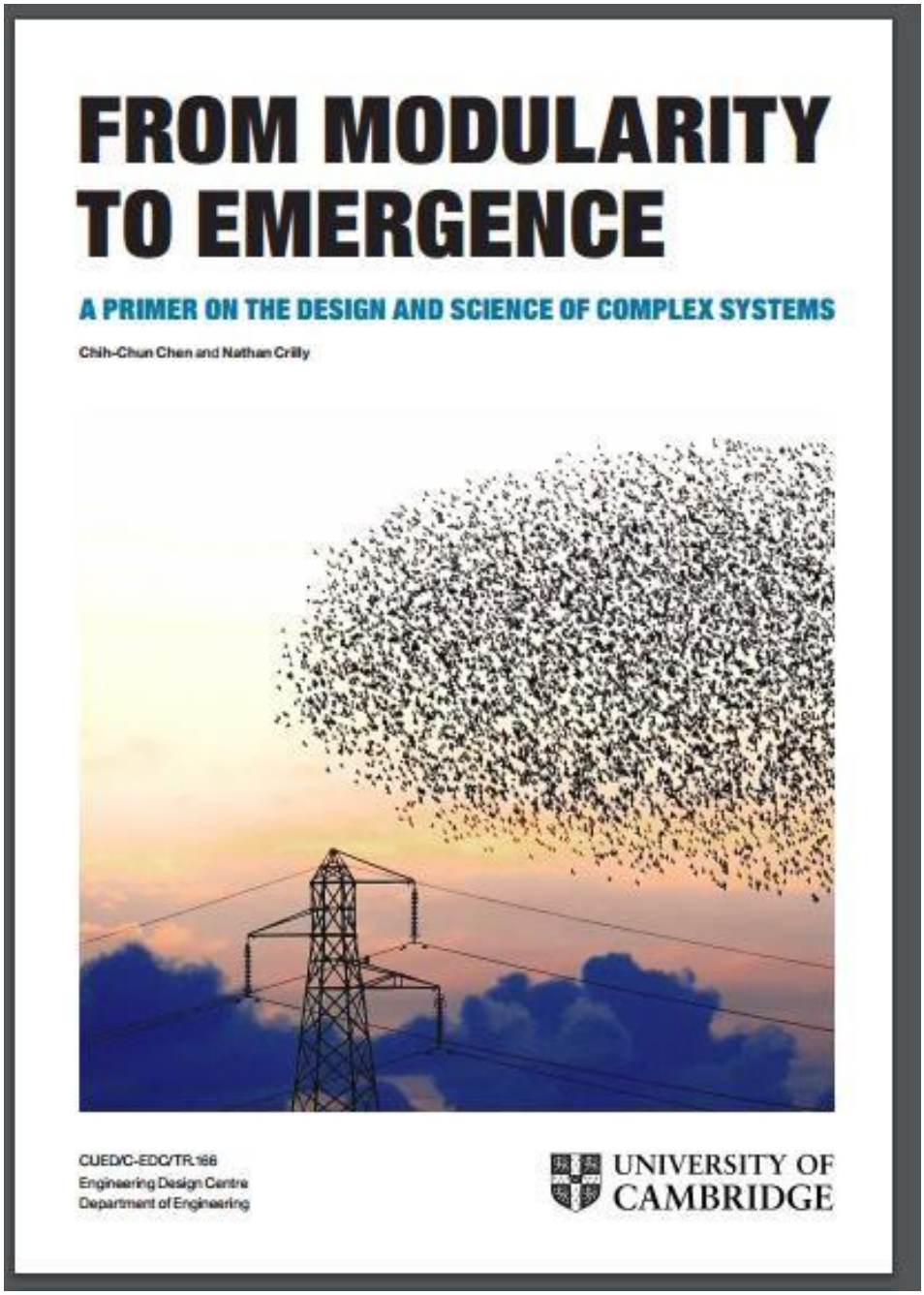


In light of the forthcoming United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) and the imminent launch of the New Urban Agenda, DESA in collaboration with the Essl Foundation (Zero Project) and others have prepared a new publication entitled: "Good practices of accessible urban development".

The publication provides case studies of innovative practices and policies in housing and built environments, as well as transportation, public spaces and public services, including information and communication technology (ICT) based services.

The publication concludes with strategies and innovations for promoting accessible urban development. The advance unedited text is available at:http://www.un.org/disabilities/documents/desa/good_practices_urban_dev.pdf



Dr Chih-Chun Chen and Dr Nathan Crilly of the Cambridge University Engineering Design Centre Design Practice Group have released a free, downloadable book, _A Primer on the Design and Science of Complex Systems_.

This project is funded by the UK Engineering and Physical Sciences Research Council (EP/K008196/1).

The book is available at URL: http://complexityprimer.eng.cam.ac.uk

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Changing Paradigms: Designing for a Sustainable Future

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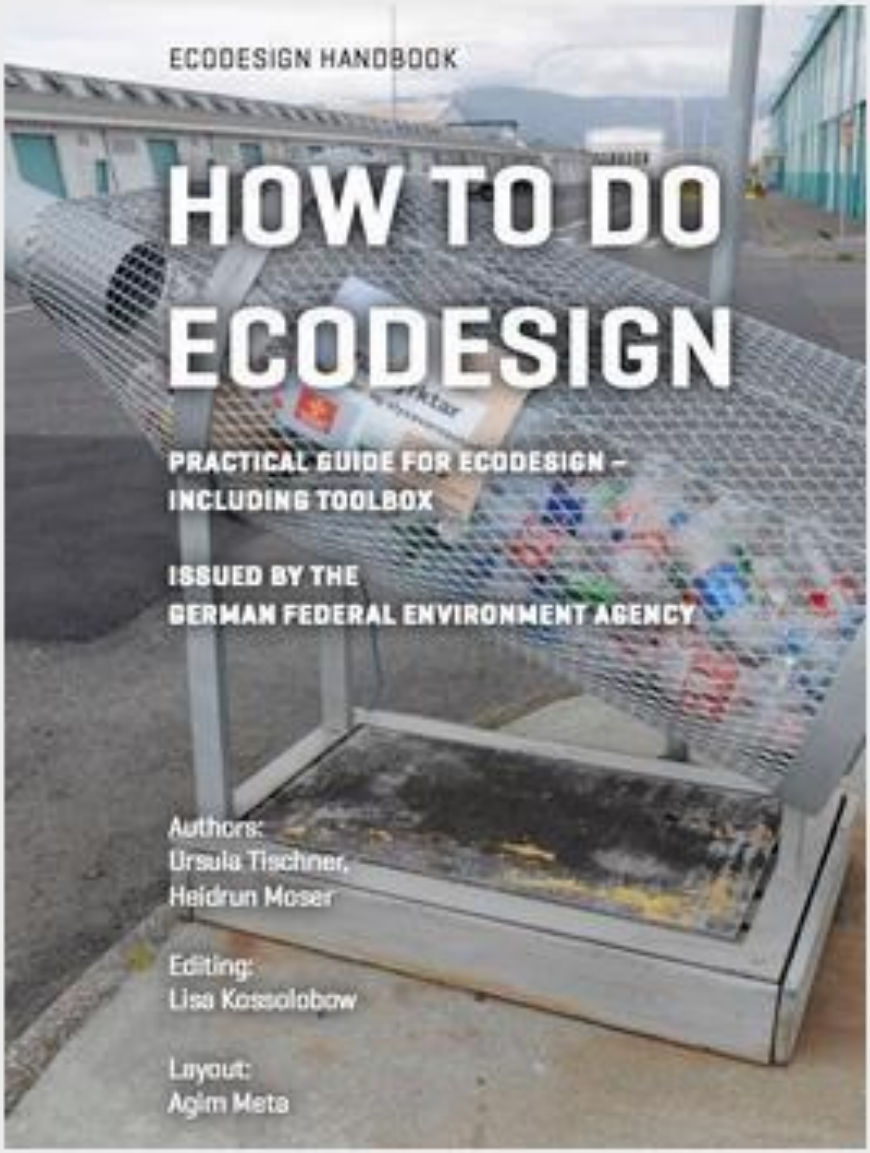
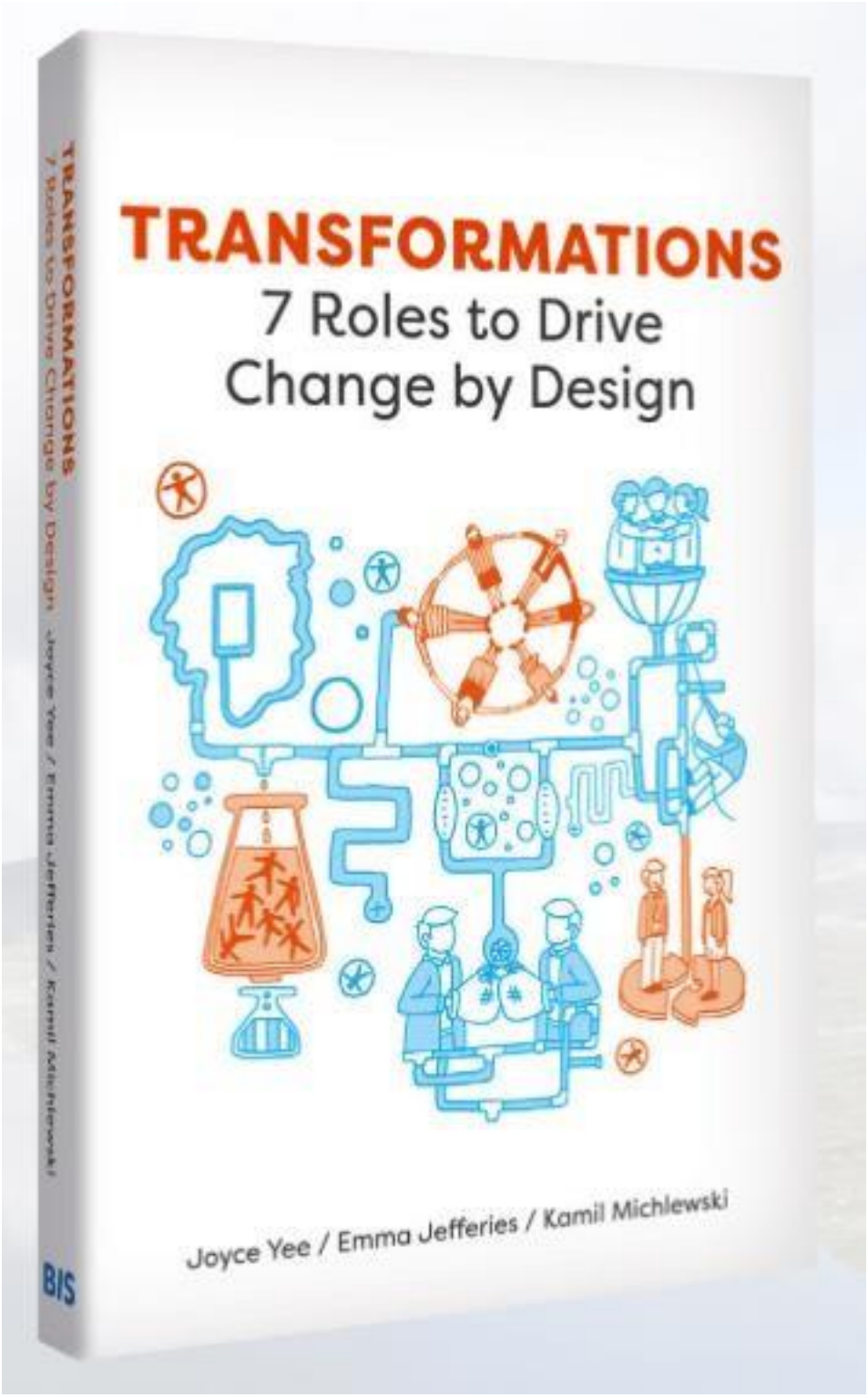
New iBook / ebook:
HOW TO DO ECODESIGN



Practical Guide for Ecodesign – Including a Toolbox
Author: Ursula Tischner

ISSN: 2582-8304



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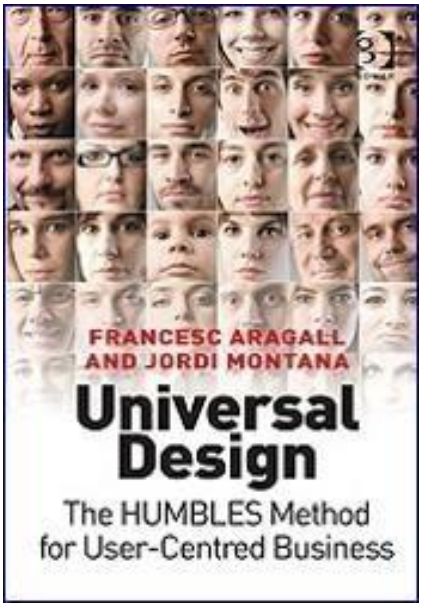
Universal Design: The HUMBLES Method for User-Centred Business



"Universal Design: The HUMBLES Method for User-Centred Business", written by FrancescAragall and Jordi Montaña and published by Gower, provides an innovative method to support businesses wishing to increase the number of satisfied users and clients and enhance their reputation by adapting their products and services to the diversity of their actual and potential customers, taking into account their needs, wishes and expectations.

The HUMBLES method (© Aragall) consists of a progressive, seven-phase approach for implementing Design for All within a business. By incorporating the user's point of view, it enables companies to evaluate their business strategies in order to improve provide an improved, more customer-oriented experience, and there by gain a competitive advantage in the marketplace. As well as a comprehensive guide to the method, the book provides case studies of multinational business which have successfully incorporated Design for All into their working practices.

According to Sandro Rossell, President of FC Barcelona, who in company with other leading business professionals endorsed the publication, it is "required reading for those who wish to understand how universal design is the only way to connect a brand to the widest possible public, increasing client loyalty and enhancing company prestige". To purchase the book, visit either the Design for All Foundation website

Nina Foundation's latest E Book has been Published on following online platforms. Now you have more options to download and read
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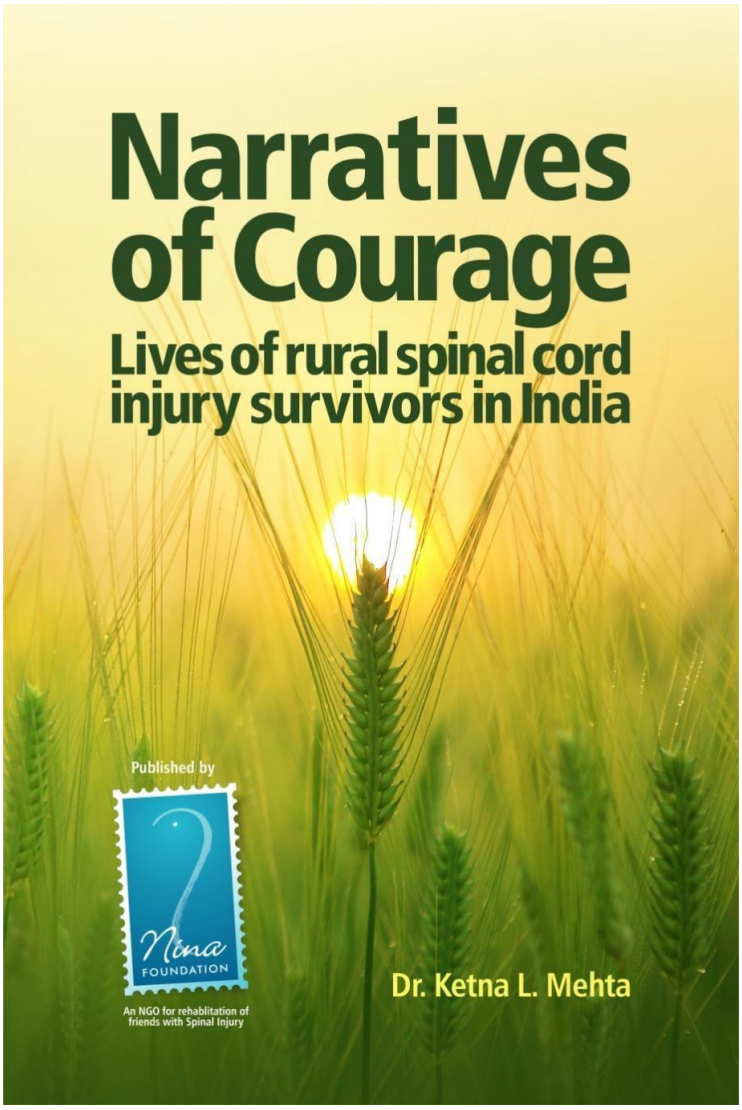


NOW AVAILABLE
Case Studies in Applied Behavior Analysis for Individuals with Disabilities (Second Edition)
Keith Storey, Ph.D., BCBA-D
Linda Haymes, Ph.D., BCBA-D
This book responds to a critical need for highly qualified personnel who will become exemplary professionals because of their advanced knowledge, skills, and experiences in working with students and adults that have varying disabilities, including Autism Spectrum Disorders (ASD). Since Board Certification for behavior analysts was introduced, there has been an expansion of training programs in Applied Behavior Analysis to meet the demands from school districts, health insurers, and families. In spite of these developments, a case studies book has not been available that uses the Behavior Analyst Certification Board Task List, Fifth Edition (BACB) guidelines for educating individuals receiving their BCBA, or for those in the field such as teachers, and service providers. The goal of this book is to fill that need. In this newly revised second edition, eighteen case studies are provided—case studies with complete analysis, case studies with partial analysis, and case studies without analysis. The format, readability, and detailed description of instructional methodology makes this text a valued resource for instructors and behavior analysts responsible for improving the skills of people with disabilities.
Charles C Thomas, Publishing is proud to announce the release of this second edition.
For more information, or to order your copy, scan the QR code below!
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Contents
Preface
Overview of Applied Behavior Analysis for Individuals with Disabilities
Components of Applied Behavior Analysis
Seven Basic Principles of Applied Behavior Analysis
Applied Behavior Analysis and People with Disabilities
Self-Determination, Self-Advocacy, and Person-Centered Planning
Quality of Life
Executive Skills
Consultation Skills
Multiculturalism and Diversity Applications in Applied Behavior Analysis
Referencing/review of Case Studies
Fifth Edition Task List
Matrix of Case Studies by Age and Disability
Terminology in Text
References
Case Study Eleven: Wyclef
Case Study Twelve: Cameron
SECTION THREE — Case Studies Without Analysis
Case Study Thirteen: Pats
Case Study Fourteen: Easter
Case Study Fifteen: Lucas
Case Study Sixteen: Angelina
Case Study Seventeen: Ian
Case Study Eighteen: Jolene
Appendix: Resources Regarding Applied Behavior Analysis and People with Disabilities
Name Index
Subject Index
Case Studies in Applied

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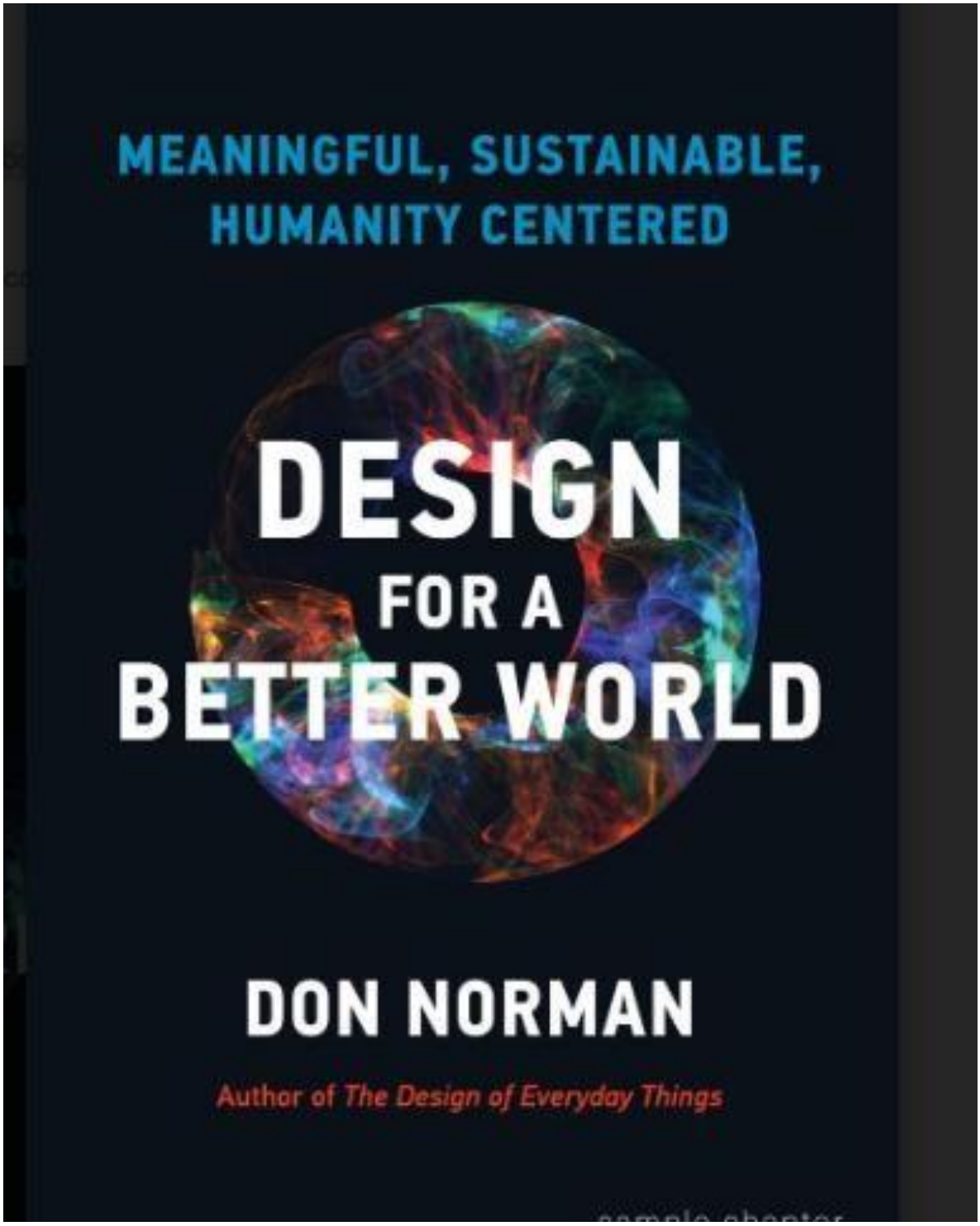

ISSN: 2582-8304

News

1

MillerKnoll Honored with Disability Matters Award

MillerKnoll, a collective of dynamic design brands, received the 2024 Disability Matters North America Award. Presented annually by Springboard Consulting LLC, the award honors companies for their innovative programs and successful strategies related to outreach, recruitment, engagement, and retention of candidates, employees, and customers with disabilities. Previous winners of this award include Guardian Life Insurance, Colgate-Palmolive Company, and Kohl's.

Rebecca Greier Horton, Senior Strategist and Global ENABLED Business Resource Group Lead, MillerKnoll, accepting Disability Matters Award

This is MillerKnoll's first time receiving this recognition. The company was honored for its work in increasing awareness of disability issues both internally and through its work with clients.

This award underscores MillerKnoll's Diversity, Equity, Inclusion, and Belonging (DEIB) efforts and the work of the associate-led Business Resource Group (BRG), ENABLED, which advocates for accessibility and inclusion.

Cheryl Kern, Vice President, Global Diversity, Equity, Inclusion and Belonging, MillerKnoll commented, "Disability Matters is a

renowned diversity thought leader, and a forerunner in elevating the needs of the disabled community. We are proud to see our commitment to increasing equity and access acknowledged across our organization and in partnership with our clients. As an industry leader, MillerKnoll remains committed to leveraging best practices and policies, to better address the needs of our associates and stakeholders."

Disability Matters also recognized MillerKnoll's work with clients, specifically the company's role in supporting the design of The Harkin Institute for Public Policy and Citizen Engagement at Drake University. The Institute's new progressive facility was imagined using inclusive design principles, providing an equitable experience for all people.

Led by renowned architectural firm BNIM, in collaboration with the Harkin Institute and MillerKnoll, four guiding principles were developed for the Harkin Center's building and site design: generous space, equitable experiences, clear path, and individual empowerment. MillerKnoll applied those tenets to its furniture strategy, contributing to a site that goes beyond universal design to be truly inclusive. Local to Des Moines, Iowa where the Harkin Institute is located, dealer Pigott also collaborated on every stage of the project.

Jason Rosenblatt, Senior Design Strategist, MillerKnoll added, "A significant portion of the design process (for the Harkin Institute) occurred during the COVID-19 pandemic, and this passionate team was challenged to drive forward by shifting to an entirely virtual design and advisory process. We are incredibly proud of the outcome and look forward to our continued work as an advocate for more Inclusive Design led practices and policies around the globe."

(SOURCE MillerKnoll/ PRNEWSwire)

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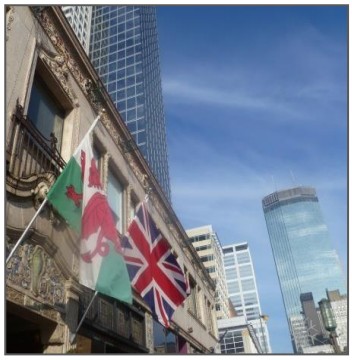

Programme and Events

Call for Entries to the ASLA 2024 Professional Awards Program Now Open

ASLA 2023 Student Collaboration Award of Excellence. On the Edge: A Climate Adaptive Park fo the Battleship NC Memorial. Wilmington, North Carolina. Marguerite Kroening, Student ASLA; Stella Wang, Student ASLA; Faculty Advisors: Andrew Fox, FASLA; David Hill. North Carolina State University / Marguerite Kroening

ASLA is now accepting submissions for its 2024 Student Award Program.

Registration deadline: Friday, May 3, 2024
Submission deadline: Friday, May 24, 2024

All participants must indicate their intent to submit a final project by "Following the Competition" via HeroX Platform by March 29, 2024.

We welcome submissions from both researches and practictioners for the 7th International Conference on Universal Design, UD2024. Log on to EasyChair and send us a 500 word abstract on your project before April 7th. We look forward to reading your submissions.

Hessian State Prize
for Universal Design

The HSUD is advertised nationwide. You can register here until July 26, 2024.

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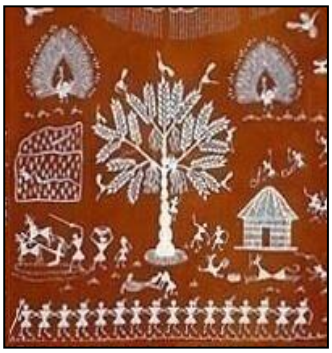

Job Openings

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