

**A STUDY ON VISUAL CHARACTERISTICS OF RURAL
MURAL ART FORMS OF EASTERN JHARKHAND**

A thesis submitted in partial fulfilment of the requirement for the Degree

of

Doctor of Philosophy

In Design

By

Pallavi Rani

Roll no- 146105006

Under the supervision of

Dr. D. Udaya Kumar



Department of Design

Indian Institute of Technology Guwahati

Guwahati 781039, Assam, India



Department of Design
Indian Institute of Technology Guwahati
Guwahati- 781039, Assam
India



DECLARATION

I hereby declare that the work contained in this thesis entitled “A study on visual characteristics of rural mural art forms of eastern Jharkhand” is my own work done under the supervision of Associate Professor D. Udaya Kumar, at the Department of Design, Indian Institute of Technology Guwahati, Assam, India. I hereby declare that to the best of my knowledge, it contains no materials previously published or written by another person, or a substantial proportion of material, which have been accepted for the award of any other degree or diploma at IIT Guwahati or any other educational institute, except where the due acknowledgement is made in this thesis. Any contribution made to the research made by others, with whom I have worked at IIT Guwahati or elsewhere, is explicitly acknowledged in this thesis. I also hereby declare that the intellectual content of this thesis is the product of my work, and as per general norms of reporting research findings, due acknowledgement has been made wherever the result findings of other researcher have been cited in this thesis.

Pallavi Rani

(Roll no: 146105006)

Place: IIT Guwahati

Department of Design,

Date:

Indian Institute of Technology Guwahati

Guwahati-781039, Assam, India



Department of Design
Indian Institute of Technology Guwahati
Guwahati- 781039, Assam
India



CERTIFICATE

This is to certify that the thesis work presented herein by Pallavi Rani was undertaken under my guidance and supervision. The volume of work presented here, for the award of Doctor of Philosophy (PhD) in Design of Indian Institute of Technology Guwahati, was not submitted by her earlier for any other degree.

She has undergone five specified/suggested courses and fulfilled all the requirements of rules and regulations as mentioned in PhD ordinance for submitting the thesis for PhD degree of IIT Guwahati.

Dr. D. Udaya Kumar

(Associate Professor)

Place: IIT Guwahati

Department of Design,

Date:

Indian Institute of Technology Guwahati

Guwahati-781039, Assam, India





Dedicated to

Painters of eastern rural Jharkhand



Contents

Acknowledgement

Abstract.....	1
Thesis organization	3
List of tables	5
List of figures.....	7
1 Introduction	13
1.1 Introduction.....	13
1.2 Defining mural art.....	13
1.3 Rural mural art form of eastern Jharkhand.....	15
1.4 Defining visual characteristics.....	17
1.5 Motivation for the study.....	17
1.6 Research problem.....	18
1.7 Research objectives	18
1.8 Research Methodology.....	19
1.9 Conclusion.....	19
2 Mural art: Literature review.....	21
2.1 Indian Mural art.....	22
2.1.1 Indian Rural mural art forms.....	30
2.1.2 Overview of eastern Jharkhand.....	42
2.1.3 Rural mural art forms	47
2.2 Insight from the literature	54
2.3 Aim and Objectives	55
3 Methodology.....	57
3.1 Data collection methods.....	58
3.1.1 Ethnographic study	59

3.2	Visual analysis.....	65
3.2.1	New formal analysis	65
4	Ethnographic study.....	67
4.1	Origin of Mural making tradition.....	77
4.2	Mural art forms and its subjects & purposes	79
4.2.1	Likhan Gadhan	83
4.2.2	Rong baha	86
4.2.3	Jaunara baha/phul	88
4.2.4	Jadopatia.....	89
4.2.5	Guruj baha.....	90
4.3	Inspirations of visual forms.....	94
4.3.1	<i>Baha</i>	94
4.3.2	<i>Jan Janwar</i> (Animal & bird).....	103
4.3.3	<i>Hor</i> (Human).....	111
5	Visual analysis	115
5.1	Nature of visual forms	116
5.1.1	Direction.....	116
5.1.2	Order of form	117
5.1.3	Orientation of visual forms.....	120
5.2	Representation of visual form	122
5.2.1	Shape execution.....	123
5.2.2	Association & Combination	124
5.2.3	Views.....	127
5.3	Organization of visual form	128
5.3.1	Form organization	128
5.3.2	Shape and colour organization	135
5.3.3	Placement of visual forms on the wall.....	137

5.4	Discussion.....	143
5.5	Expert reviews.....	148
5.6	Findings.....	150
6	Discussion & Conclusion.....	155
6.1	Conclusion.....	178
6.2	Major contribution.....	181
6.3	Limitation.....	181
6.4	Future scopes.....	181
7	Bibliography.....	183
	Appendix A.....	205
	Appendix B.....	207
	Appendix C.....	209
	Appendix D.....	211
	Appendix E.....	213
	Appendix F.....	217
	Appendix G.....	221
	Appendix H.....	223
	Appendix I.....	225
	Appendix J.....	235
	Appendix K.....	241
	Appendix L.....	245
	Appendix M.....	247
	Appendix N.....	251
	Appendix O.....	259
	Appendix P.....	261
	Glossary.....	263



ACKNOWLEDGEMENT

This thesis is a result of five years of meticulous research work. It was a long journey, which provided a better understanding of research practice in graphic design through extensive reading, writing, and discussion with domain experts. I am grateful to my teachers, friends and family members for their continuous support, love, and encouragement throughout the work.

It is a great pleasure to acknowledge my deepest thanks and gratitude to my supervisor Dr. D. Udaya Kumar, Associate Professor and Head of the Department of Design, IIT Guwahati. His continuous guidance and support helped me to understand the weakness and how to overcome it. I am grateful that I have such a wonderful, supportive and kind supervisor during the most important phase of my life. I would like to express my sincerest thanks to my doctoral committee members, Professor Ravi Mokashi Puneekar, Dr. Prasad Bokil, Dr. Sukanya Sharma, and Dr. Sougata Karmakar for their guidance, periodic evaluation and feedbacks, which helped in the shaping of this thesis.

I would like to acknowledge, the artists and academics who were able to devote some of their time for this research work. I am thankful to contemporary artist R. B. Bhaskaran, R. M. Palaniappan and Kirti Chandak for taking time from their busy schedule and providing expert reviews. I am grateful to the Professors of Government College of Fine Arts, Thrissur, National Institute of Fashion Technology, Chennai, Department of painting Sree Sankaracharya University of Sanskrit, Kalady and Faculty of Visual Arts, Banaras Hindu University, Varanasi for sparing their precious time evaluating my work. I am grateful to P. K. Manoj, Saji Kumar, V. R. Karthikeyarayan, Susa Suresh, Thomas Samul, A. P. Sunil Kumar, M. P. Nishad, Saju Thuruthil, K. P. Soman, Dr. T. G. Jyothilal, Sri Suresh K. Nair and Pranam Singh for their support. Their feedback and suggestions helped a lot in the research. I am thankful to Bulu Imam and Amitabh Panday for their guidance.

I want to express my deepest thanks to Dr. Aditya Prasad Sinha who has provided many published and unpublished literature resources (which are not available online) relevant to my area of interest.

I would like to acknowledge *Museum of Santhal Culture* Bishnubati, West Bengal, *Dalma Wildlife Sanctuary* Jamshedpur, Jharkhand and *Kala Mandir* (rural tourism development centre) Jamshedpur, Jharkhand for allowing me collect relevant data for my research work.

This thesis would not have been possible without the kind assistance and support of the painters of Santhal Pargana, North Chotanagpur, and Kolhan region. I am thankful to each of

the villagers for their participation and arranging a comfortable stay, food, and transportation during my field study. My special thank to Maidash Manjhi, Mahabir Shami, Shahib Ram Tudu and Baidyanath Murmur who accompanied me on many of my field visit in the eastern Jharkhand region. Due to their extensive knowledge of local communities, I had access to different villages and personally met several rural mural artists.

I also extend my gratitude to all my beloved friends at the Ph.D. Enclave and Ergonomics Lab Department of Design. They have been around to provide healthy companionship and created the right research environment. Last but not least, I would like to express my gratitude to my family, especially my husband *Gautam Kumar* for his continues support, dedicated help and patience.



ABSTRACT

Rural India is known for various folk and tribal art forms like floor art, wall art, textile, sculpture, pottery, and painting. These art forms are mainly made for rituals, superstition and decoration purpose before and during the festivals and ceremonies. In different parts of India, various communities like *Saura* from Uttar Pradesh, *Pithora* and *Gond* from Madhya Pradesh, *Dusad* and *Brahmin* from Bihar, *Warli* from Maharashtra, *Bhumij*, and *Kurmi* from Jharkhand are involved in showcasing their artistic skill on their mud houses. In Jharkhand region, the villages of Hazaribagh district are internationally known for *Sohrai* and *Khobar* art. The rural communities (Bhumij and Kurmi) paint their mud houses with various motifs before the *Sohrai* and *Diwali* festivals. Following these art forms (Sohrai and Khobar), an investigation was done in the eastern part of Jharkhand in three administrative divisions; Santhal Pargana, North Chhotanagpur, and Kolhan. It is found that there are five kinds of mural art forms such as *Likhan gadhan*, *Rong baha*, *Jaunra baha/phul*, *Jadapatia* and *Guruj baha* are being practiced by the rural communities of eastern Jharkhand. These art forms have hardly been documented or got scholars attention for research investigation. To study in-depth of these art forms, field visit was conducted in 11 districts (Deoghar, Dumka, Godda, Jamtara, Pakur, Shahibganj, Bokaro, Dhanbad, Giridih, Saraikela-Kharsawan and Purbi Singhbhum) of eastern Jharkhand and it was noticed that these art forms are parallel to the *Sohrai* and *Khobar* art but contain different styles, forms, and features. In eastern Jharkhand, Santhal, Lohra, Kurmi, Kumhar and Ho communities, paints various visual forms (e.g., Baha, Jan janwar, and Hor) on the external and internal wall of the houses.

There are few relevant pieces of literature on rural mural art forms of Jharkhand in the form of inquiry into the painted mud houses by ethnographer *Daniel J. Rycroft* (2010), social activist *Bulu Imam* (2011) and architect & research scholar *Gauri Bharat* (2015). These relevant literatures provide information about the aesthetic, narration, material and methods of mural art forms of Jharkhand. However, not many resources or documentation is found on the rural mural art forms of eastern Jharkhand, and there is a need for a detailed investigation of physical or visual aspects of these art forms. This lacuna provides a tremendous scope and opportunity to do an in-depth study on the mural art forms of eastern Jharkhand. For the detailed understanding of the art form, this study aimed to identify its visual characteristics. The main objectives of this research work are,

1. To identify the visual characteristics of the rural mural art form of eastern Jharkhand.
2. To document the rural mural art forms of eastern Jharkhand.
3. To understand the rural lifestyle of eastern Jharkhand

The study follows qualitative research techniques, and the methodology of this study divided in two phases; A. Data collection B. Visual analysis.

Photo documentation and the *ethnographic study* was adopted to collect the data. In *Photo documentation*, Photography was used as a key visual method for documentation. In *Ethnography*, interview, observation, and photo-interview was adopted for the data collection. To analyse the physical characteristics of the art forms visualization, *New formal analysis* model was followed. The analysis was done in two steps; first was the analysis of the *individual visual form* and second was the analysis of *visual form with the wall*. Number of visual characteristics were identified after the visual analysis. To validate the extracted visual characteristics, expert reviews with artist and designers were conducted in different cities of India. Combining both visual characteristics (identified through visual analysis and through visual arts experts' review), key visual characteristics of *Likhan gadhan*, *Rong baha*, *Jaunara baha*, *Jadopatia* and *Guruj Baha* art form were established.



THESIS ORGANIZATION

The thesis has been organized into six chapters.

- Chapter one outlines a brief introduction to mural art, a motivation for the study, research area and research problem. The research plan with the methodological approach has been discussed briefly in this chapter.
- The second chapter covers a literature review on mural art forms. It gives an overview of mural art in context of Western and Indian mural art form. This chapter also explains rural mural art forms of India and give an overview of eastern Jharkhand. It summarises the aim and objectives along with the research questions.
- The third chapter provides detailed information about the research methodology adopted. The methodology is divided into two parts following the objectives of the study. One is the data collection method and the second is visual analysis method. Detail information of the research sites; Santhal Pargana, North Chotanagpur, and Kolhan divisions are elaborated. The data collection method includes Photo Documentation and Ethnographic research done in selected regions of eastern rural Jharkhand.
- Chapter four elaborates on the ethnographic study focused on people lifestyle, myths and mural making tradition. An inquiry of visual forms with local names is provided in this chapter. The chapter also partly addresses the third research question proposed in this study.
- Chapter five highlights visual analysis methods. For visual analysis followed *New formal analysis* model. Expert review and finding of the study have been provided in this chapter and addresses the first research question proposed in this study.
- Chapter six includes the summary and conclusion of the study. Discussions are mainly focused on the role and appearance of the visual characteristic in the mural art form of eastern rural Jharkhand. The conclusion summarises the thesis with significant contributions, limitations, and scopes for future work.



LIST OF TABLES

Table 1 Objectives and Research questions	55
Table 2 Local names of visual forms and its categorization	80
Table 3 List of documented <i>Baha(1)</i> vegetative visual forms with the purpose of execution on the wall	98
Table 4 List of documented <i>Chene</i> (bird) visual forms with the purpose of execution on the wall	108
Table 5 List of documented janwar visual forms with the purpose of execution on the wall	109
Table 6 Direction of visual forms.....	117
Table 7 Elements of <i>Baha(1)</i> visual form	118
Table 8 Elements of <i>Baha(2)</i> visual form	118
Table 9 Elements of <i>Jan janwar</i> visual form	119
Table 10 Order of visual form	120
Table 11 Rotational symmetry of single visual form	121
Table 12 Rotational symmetry of group visual form	122
Table 13 List of art forms, used material and tools	123
Table 14 Shape execution in art form.....	124
Table 15 Tip and Joinery of visual form	124
Table 16 Representation of visual forms	125
Table 17 Visual forms and its composition	126
Table 18 Multiple views in visual form	128
Table 19 Reflectional symmetry of group visual form.....	132
Table 20 Layers of disk	136
Table 21 Arrangement of petals and layers of petals	136
Table 22 Branch arrangement and branch direction.....	136
Table 23 Leaf arrangement with stem and leaf arrangement with branch	137
Table 24 Visual characteristics of <i>Likhan gadhan</i> (Mud mural).....	150
Table 25 Visual characteristics of <i>Rong baha</i> (Paint mural).....	151
Table 26 Visual characteristics of <i>Jaunara baha</i> (Rice paste mural).....	152
Table 27 Visual characteristics of <i>Jadopatia</i> (Cow dung mural).....	153
Table 28 Visual characteristics of <i>Guruj baha</i> (Cow dung mural)	154
Table 29 Major results from this thesis	178
Table 30 Locations of rural mural art forms of eastern Jharkhand.....	205
Table 31 List of Santhal festivals	223
Table 32 Shapes used in flower plant.....	247
Table 33 Shapes used in Non-flower plant and Plant seedling	248

Table 34 Shapes used in Religious symbol.....	248
Table 35 Shapes used in Border and Band	249
Table 36 Shapes used in Janwar (Animal).....	250
Table 37 Shapes used in Chena (Bird).....	250
Table 38 Shape and colour organization in flower plant	251
Table 39 Shape and colour organization in Non-flower plant and Plant seedling.....	252
Table 40 Shape and colour organization in Creeper	252
Table 41 Shape and colour organization in Band & Border	253
Table 42 Shape and colour organization in Religious symbol.....	254
Table 43 Shape and colour organization in Bird.....	255
Table 44 Shape and colour organization in Animal.....	256
Table 45 Shape and colour organization in Human.....	257



LIST OF FIGURES

Fig. 1 Rural mural art forms of eastern Jharkhand	
a. Likhan gadhan b. Jaunra baha/phul c. Rong baha d. Guruj baha e. Jadopatia.....	16
Fig. 2 Vijayanagar paintings at Lepakshi temple Source: http://www.indusscrolls.com	24
Fig. 3 Two group of soldiers march towards each other, Virupaksha Temple, Hampi	
Source: (Cooper, 1997)	24
Fig. 4 Kerala mural painting.....	25
Fig. 5 Kamgari mural painting 18 th century Source: (Goswamy & Dallapiccola, 1978)	26
Fig. 6 Shekhawati mural painting Source: https://lepassagetoindia.com	27
Fig. 7 <i>Padmapani</i> (left) and <i>Vajrapani</i> (right) cave 1 Ajanta mural Aurangabad, Maharashtra	
Source: https://www.inditales.com	28
Fig. 8 Kali Badi (black house) Santiniketan, Visva Bharati University, Bolpur, West Bengal	
Source: http://www.ghumakkar.com/photoblog-glimpses-of-santiniketan	29
Fig. 9 Locations of Rural Mural art form of India.....	30
Fig. 10 Madhubani painting, Bihar Source: http://www.edgyminds.com/madhubani-wall-murals-in-jharkhand-depict-everyday-struggle-of-villagers/ (Thakur M. , 2017).....	31
Fig. 11 Ganga Devi, <i>Naina-Yogini</i> , 1988-89 Source: https://www.thebetterindia.com	32
Fig. 12 Osakothi mural mural, Odisha Source: https://blogvirasatehind.com/2018/10/29/osakothi-rituals-in-ganjam-an-anthropological-journey/ (Mishra, 2018).....	34
Fig. 13 Pithora mural painting, Gujarat Source: https://www.sahapedia.org/pithora-painting (Patel H. H., 2017).....	35
Fig. 14 Warli mural painting, Maharashtra Source: https://medium.com/@anandvilhat75/the-history-and-origin-of-warli-painting-9f6e9ae182f2 (Vilhat, 2019).....	36
Fig. 15 Lippan kam mural art, Kutch, Gujrat Source: dsource.in	38
Fig. 16 Gond painting on paper Source: http://gaatha.com/gond-painting/	39
Fig. 17 Khobar painting.....	40
Fig. 18 Sohrai painting, Hazaribag, Jharkhand Source: tribalartofhazaribagh	41
Fig. 19 Graphical representation of four making techniques of eastern rural Jharkhand	47
Fig. 20 Mud mural making technique	48
Fig. 21 <i>Likhan gadhan</i> mural made by mud, Dhanbad	49
Fig. 22 Bangle mural making technique.....	49
Fig. 23 <i>Churi baha</i> mural made by bangle, Dumka	50
Fig. 24 Paint mural making technique.....	51
Fig. 25 <i>Rong baha</i> mural made by paint, Purbi Singbhum	51
Fig. 26 <i>Arasi baha</i> mural made by pasting mirror pieces	52
Fig. 27 Rice-paste mural making technique	52

Fig. 28 Jaunara baha mural made by rice-paste	53
Fig. 29 Cow-dung mural making technique.....	53
Fig. 30 <i>Jadopatia</i> mural made by cow-dung	54
Fig. 31 <i>Guruj baha</i> mural made by cow dung	54
Fig. 32 Selected administrative divisions and districts for data collection	57
Fig. 33 A click of field visit, taking participants detail.....	60
Fig. 34 Participatory research, learning mural making technique	61
Fig. 35 Participatory research, celebrating Baha festival in sacred grove	61
Fig. 36 Personal interview, Santhal Pargana region	62
Fig. 37 Group interview, Kolhan region.....	62
Fig. 38 Photo interview, Identification of visual forms	63
Fig. 39 Group Photo interview, understanding the visual aspects of rural people.....	64
Fig. 40 Personal Photo interview, understanding the interpretation of the artist.....	65
Fig. 41 New formal analysis model	66
Fig. 42 House organization	67
Fig. 43 <i>Baha-duar</i>	68
Fig. 44 Use of courtyard	68
Fig. 45 Daytime activities	69
Fig. 46 Household works by rural people	70
Fig. 47 Use of hand pump (left) and women in group (right).....	70
Fig. 48 Hair & body decoration (left and middle) and dressing style (right).....	71
Fig. 49 Sacred grove	72
Fig. 50 Baha festival celebration.....	74
Fig. 51 Bonga worshipping by Santhal in sacred grove (left) and in village (right).....	76
Fig. 52 Role of manjhi (headman) in sacred performances	77
Fig. 53 Jhanti: (left) Kumbha: (right) Santhal earliest house structure.....	78
Fig. 54 Mud house of Santhal in Kolhan region	79
Fig. 55 Wall art traditions in eastern rural Jharkhand. See details in Fig. a. b. c. d. and e.	81
Fig. 56 Graphical representation of three administrative division, visual forms and communities	82
Fig. 57 Painted peacock on the wall, Dhanbad	83
Fig. 58 Painted <i>Baha-duar</i> , Godda and Dumka.....	84
Fig. 59 Painted <i>Jan janwar</i> and <i>Baha</i> , Godda	85
Fig. 60 Religious symbols of Christianity is executed on the wall, Dumka	85
Fig. 61 <i>Baha-duar</i> , Saraikela Kharsawan	86
Fig. 62 <i>Sagun johar</i> (welcome) written on the <i>Baha-duar</i>	87
Fig. 63 Resemblance of textile pattern, Purbi Singbhum.....	87
Fig. 64 Patterns on the wall, Giridih	88

Fig. 65 Painted Karam plant on the wall, Giridih.....	89
Fig. 66 Shiva with Trisul (left) figure in salutation gesture (right), Deoghar	89
Fig. 67 Evil eye protection gestures, Deoghar.....	90
Fig. 68 Dancing postures of human figure, Bokaro	91
Fig. 69 Purpose of mural art form 1. Decoration, 2. Salutation, 3. Documentation, 4. Protection, 5. Identity.....	92
Fig. 70 Graphical representation of visual arts purpose (combining all four visual art forms).....	93
Fig. 71 Correlation between the purposes of mural making tradition	94
Fig. 72 Graphical representation of <i>Baha(1)</i> visual forms and the inspirations	100
Fig. 73 Graphical representation of <i>Baha(2)</i> border & band visual forms and its inspiration	101
Fig. 74 Graphical representation of gamala visual forms and the inspirations	103
Fig. 75 Graphical representation of <i>Chene</i> (bird) visual forms and the inspirations.....	110
Fig. 76 Graphical representation of <i>Janwar</i> (animal) visual forms and the inspirations.....	111
Fig. 77 Graphical representation of <i>Hor</i> (human) visual forms and the inspirations	112
Fig. 78 New formal analysis model.....	115
Fig. 79 Tip and Joinery of execute shape	124
Fig. 80 Analysis of view of the artist	127
Fig. 81 Drawing by the rural artist on the paper.....	129
Fig. 82 Organization of single visual form; 1. Flower, 2. Leaf with stem, 3. Pot, 4. Bud.....	129
Fig. 83 Double layer repetition in vertical creeper	130
Fig. 84 Single layer repetition in vertical creeper	130
Fig. 85 Double layer repetition in horizontal creeper.....	131
Fig. 86 Single layer repetition on border.....	131
Fig. 87 Organization of visual form	134
Fig. 88 Organization of visual form	135
Fig. 89 Parts of flower plant.....	135
Fig. 90 Segmentation of flower plant.....	135
Fig. 91 Colour coding of visual forms.....	137
Fig. 92 Analysis of layout of the mural art form.....	138
Fig. 93 Layout of front wall of the house, Upper and middle-lower division of the wall.....	139
Fig. 94 Graphical representation of layouts of mural art forms	139
Fig. 95 Explaining physical space	140
Fig. 96 Explaining physical space; A. Space within the architectural elements B. Space created by architectural elements.....	141
Fig. 97 Proportion of form.....	144
Fig. 98 Expert review	148
Fig. 99 Representation of lotus in various views in mural art form of eastern Jharkhand	155

Fig. 100 Lotus flower at ceiling and Lotus flower in the hand of Padmapani, Ajanta Source: https://in.pinterest.com	156
Fig. 101 Representation of lotus in <i>Sujni art</i> and in <i>Kond</i> (floor) art	156
Fig. 102 Representation of Rose flower in mural art form of eastern Jharkhand	156
Fig. 103 Four petal flowers in mural art form of eastern Jharkhand.....	157
Fig. 104 Representation of pot in mural art form of eastern Jharkhand.....	158
Fig. 105 Placement of pot near the doorway	158
Fig. 106 Use of pot in kitchen.....	159
Fig. 107 Use of pot Making pigeon's home and in rituals.....	159
Fig. 108 Use of pot in making pillers.....	159
Fig. 109 Use of various eyeview in Pre Mugal and Egyptian painting.....	160
Fig. 110 Painted <i>Baha-bhitt</i> , getting viewwer's attention.....	162
Fig. 111 Painting on the wall in sitting and standing posture	162
Fig. 112 Overhanging roof and space in front of the <i>Baha bhitt</i> (front wall)	163
Fig. 113 Use of <i>Racha</i> (courtyard).....	164
Fig. 114 Placement of visual form and use of <i>Ota</i> (sitting platform) and upper elevation of the wall, Dumka.....	164
Fig. 115 Placement of visual form and use of <i>Ota</i> (sitting platform), Pakur	165
Fig. 116 Use of upper elevation of the wall, Saraikela Kharsawn	166
Fig. 117 Use of lower portion of the wall.....	166
Fig. 118 Placement of visual form and use of <i>Ota</i> (sitting platform), Giridih.....	167
Fig. 119 Placement of visual form at everage human hight, Deoghar	167
Fig. 120 Placement of visual form and use of lower portion of the wall, Bokaro	168
Fig. 121 Interior part of the house.....	168
Fig. 122 Placement of bird, fish and animal on the wall.....	169
Fig. 123 Triangle and circular pot execution	170
Fig. 124 Decorated temple doorway with creeper and Ganga Yamuna Source: https://www.sahapedia.org	171
Fig. 125 Chawdali Ol floor art.....	172
Fig. 126 Hanged Sal leaf and fish at the doorway	173
Fig. 127 Wooden horse head at the doorway.....	173
Fig. 128 Likhan gadhan, placement of visual form following the concept of expanse.....	174
Fig. 129 Jadopatia, placement of visual form following the concept of expanse	174
Fig. 130 Shooting Scripts.....	211
Fig. 131 Participants detail, Kolhan.....	213
Fig. 132 Participants detail, North Chotanagpur.....	214
Fig. 133 Participants detail, Santhal Pargana.....	215

Fig. 134 Photographs marked with numbers	221
Fig. 135 Scan copy of the list of visual forms identified by rural people.....	221
Fig. 136 Places of celebration of festivals tribal festival.....	223
Fig. 137 Agricultural cycle and the festivals of tribals.....	224
Fig. 138 Levels of celebration of tribal festivals in India.....	224
Fig. 139 <i>Baha</i> (flower plant, non-flower plant and tree), Santhal Pargana.....	225
Fig. 140 <i>Baha</i> (flower plant, non-flower plant and tree), North Chonanagpur.....	225
Fig. 141 <i>Baha</i> (flower plant, non-flower plant and tree), Kolhan.....	226
Fig. 142 <i>Baha</i> (bird with plant), Santhal Pargana.....	226
Fig. 143 <i>Baha</i> (bird with plant), North Chonanagpur.....	227
Fig. 144 <i>Baha</i> (Vertical creeper), Santhal Pargana.....	228
Fig. 145 <i>Baha</i> (Vertical creeper), North Chotanagpur.....	228
Fig. 146 <i>Baha</i> (Vertical creeper), Kolhan.....	228
Fig. 147 <i>Baha</i> (Horizontal creeper), Santhal Pargana.....	229
Fig. 148 <i>Baha</i> (Horizontal creeper), North Chotanagpur.....	229
Fig. 149 <i>Baha</i> (Horizontal creeper), Kolhan.....	230
Fig. 150 <i>Baha</i> (Bands and Borders), Kolhan.....	231
Fig. 151 <i>Baha</i> (Border), Santhal Pargana.....	232
Fig. 152 <i>Baha</i> (Border), North Chotanagpur.....	232
Fig. 153 <i>Baha</i> (religious symbol), Santhal Pargana.....	233
Fig. 154 <i>Baha</i> (Salutation words), Santhal pargana, North Chotanagpur and kolhan.....	233
Fig. 155 Pot visual form, Santhal Pargana, North Chotanagpur and kolhan.....	234
Fig. 156 <i>Hati or Marang hor</i> (Elephant).....	235
Fig. 157 <i>Jeel</i> (Deer).....	235
Fig. 158 <i>Murum jeel</i> (Blue bull).....	235
Fig. 159 <i>Gai</i> (Cow) and <i>Dangara</i> (Ox).....	235
Fig. 160 <i>Seta</i> (Dog).....	235
Fig. 161 <i>Merong</i> (She goat).....	236
Fig. 162 <i>Kulay</i> (Rabbit).....	236
Fig. 163 <i>Sukari</i> (Pig).....	236
Fig. 164 <i>Unt</i> (Camel).....	236
Fig. 165 Unknown.....	236
Fig. 166 <i>Rote</i> (Frog).....	236
Fig. 167 <i>Hanku</i> (Fish).....	237
Fig. 168 <i>Chetara</i> (Tiger) and <i>Jeel</i> (deer).....	237
Fig. 169 Unknown.....	237
Fig. 170 Tiger eating food.....	237

Fig. 171 <i>Bir merong</i> (Goat which found in forest), Marang hor (Elephant) and Gai (Cow)	237
Fig. 172 <i>Marah</i> (Peacock) and <i>Martu marah</i> (Peahen)	238
Fig. 173 <i>Sim</i> (Cock and Hen).....	238
Fig. 174 <i>Miru</i> (Parrot).....	238
Fig. 175 <i>Potam or Parva</i> Pigeon	239
Fig. 176 <i>Gede</i> (Duck)	239
Fig. 177 <i>Koh</i> (Heron).....	239
Fig. 178 Unknown	239
Fig. 179 <i>Haas</i> (Goose).....	239
Fig. 180 <i>Pipirhiyarg</i> (Butterfly).....	239
Fig. 181 <i>Hor</i> (Human) visual form, North Chotanagpur	242
Fig. 182 <i>Hor</i> (Human) visual form, Santhal Pargana	244
Fig. 183 Expert review; Kirti Chandak Artist & Curator.....	259
Fig. 184 Expert appreciation	260
Fig. 185 Expert comment.....	260



1 INTRODUCTION

1.1 Introduction

Rural India is known for various folk and tribal art forms like floor art, wall art, textile, sculpture, pottery, and painting. These art forms are made for multiple purposes like rituals, superstitions, and decorations before and during the festivals and ceremonies. In Indian villages, various communities like *Saura* from Uttar Pradesh, *Pithora* and *Gond* from Madhya Pradesh, *Dusad* and *Brahmin* from Bihar, *Warli* from Maharashtra, *Bhumij*, and *Kurmi* from Jharkhand are involved in displaying their artistic skill on their mud houses. In Jharkhand region, the villages of Hazaribagh district are internationally known for *Sohrai* and *Khobar* art. The rural communities (Bhumij and Kurmi) paint their mud houses with various motifs before the *Sohrai* and *Diwali* festivals. Inspired by the *Sohrai* and *Khobar* art forms, this research attempts to identify the art forms of the eastern part of the Jharkhand. In order to study these art forms understanding the definition of mural art is necessary.

1.2 Defining mural art

In the history of art, the visual arts are broadly divided into the two-dimensional and three-dimensional object (Knobler, 1980). Three-dimensional art forms like sculpture and architecture have actual weight and substance, and they occupy real space. Two-dimensional art like painting, drawing, and printmaking requires actual materials like paper, cloth and other surfaces. According to the Wallace S. Baldinger et al. (1960), in the two-dimensional art field, painting is mainly introduced in two utilitarian branches; easel or studio painting and wall/ mural painting. He states that mural painting is a second utilitarian branch of painting. It associates with architecture and serves the compositional needs of architecture like picture making on the wall, ceiling, and floors. A painting done by a painter in a studio has a different quality as compared to a mural painting. In easel (studio) painting, the artist tends to prioritise and reflect only their personal view in the art piece. This is termed as a personal art form whereas the mural art is known as a public art form. In mural, the key responsibility of the painter is to prioritise two significant aspects of this art form one is the expanse of wall and another the viewers' attention. The painter avoids focussing a dominant centre of interest. They provide each part with follow-through in motive and organization to draw the viewer's attention to the next part of the artwork. It increases the display capability of artwork in different sizes or scales. According to Eugen Neuhaus, the reconsideration of mural painting has to be taken into account as it has functional and representational aspects as well. In Italy, wall painting involves many preliminary studies, physical and mechanical labour in a huge space. Many painters, decorators employ large numbers of trained men, apprentices, and independent artists, to assist in the execution of their commission (Neuhaus, 1915). The artist in different period introduced several methods of preparing the

ground for painting. In Egyptian tomb (around 3150 BCE), Minoan palace (1700-1600 BCE), Pompeii (100 BCE-79 CE), Ajanta (200 BCE to about 480 CE) many ancient murals have been found in traditional techniques like fresco, tempera, graffito, and mosaic. Each of these mediums has its technical demands at the pre- and post-execution process. Therefore, Wallace S. Baldinger et al. (1960) mentions that a muralist has to be a master artist, as well as a master technician jointly in the field. It is not enough that his work only fulfils and satisfy a certain standard of aesthetic judgement; it is necessary that the work itself should be long lasting and durable. Mural grows out of the wall affecting many other factors like architectural space (interior & exterior), aesthetical, financial and environmental (moisture, sun, rain protection) and all these aspects are interconnected with each other. The decision of selecting any medium of mural execution always affect other factors like architectural space, financial and environmental issues.

In visual arts there is always an ambiguity regarding the mural painting/art terms. In ancient and medieval art history it was known as wall painting. In western modern art history in the 20th century, the term mural painting was first used for the painted walls in the Mexican mural revolution (Campbell B. , 2003). After the introduction of this term in visual arts other mediums like textile, pottery, relief, which were executed on the wall were accepted as mural art. In ancient and medieval history, relief or carved artwork was only part of a sculpture, but in modern art history, the execution of relief art work on the wall was known as relief mural. Consequently, a multidisciplinary approach (two and three dimensions) has been noticed in mural execution in this era.

In modern art history, several art movements and technological invention affected this visual art branch and modified its definition. After Dadaism¹, the term public art, street art, site specific art, installation came into existence. The invention of the camera, computer and other technology (e.g., airbrush, frescography) has provided a new dimension to this area. In the present scenario, to recognize the core identity of mural, there is a need to modify the definition of this art form. As Wallace S. Baldinger (1960) explains, 'mural associated with architecture, evokes a mood that synchronizes and blends with the building character, whether the building is a tomb, a church, an auditorium or other types of architecture.' Bokodi Peter (2014) mentions that 'mural painting is a fundamental visual medium in which the specificities of the material core were interlinked with liturgical function and questions of display.' Jayanta Chakrabarti et al. (1995) states that 'mural grows out of the wall in painted and applied form, with a mutual relation to the architecture and environment'. Summarising the literature, mural can be defined as follows:

¹Dadaism was an art movement of the European avant-garde in the early 20th century developed in reaction to World War I. In this art movement artist began to experiment with radically new artistic practices and idea and in result of that new media and mixed media art emerged (Tribe, Jana, & Grosenick, 2006).

Any art work or design intentionally executed on the wall, floor, ceiling or other architectural elements in mobile or stable form with a mutual relation to the architecture or environment is known as mural art". [There are no constraints of medium, style, and size in the execution of mural].

In this research content, the term *rural mural art form* is used to refer the traditional artwork done by the rural communities of eastern rural Jharkhand on their mud houses. The *rural* word does not specify any communities like schedule tribe or schedule cast of eastern Jharkhand.

1.3 Rural mural art form of eastern Jharkhand

Jharkhand is located in the eastern part of India. It is enclosed by Bihar to the northern side, Chhattisgarh and Uttar Pradesh to the western side, Odisha the southern part and West Bengal to the eastern part. Most of the portion of Jharkhand lies on the Chotanagpur plateau. The state extends between 23.35°N 85.33°E. It has an area of 79,710 km². Jharkhand is a newly formed state (2000) in eastern India that belongs to Empowered Action Group (EAG). Jharkhand has 5 Divisions, 24 districts, 260 blocks, and 32,620 villages. This state has a population of 32.96 million, and around 75.95 percent population live in the villages of rural areas. This state has a total of thirty-two (32) Scheduled Tribes (primarily rural) and 91.7% of them reside in villages. Average literacy rate in Jharkhand for rural areas was 61.11 percent. Total literates in rural areas were 12,643,078². *Hinduism* is the majority religion in the state of Jharkhand. *Christianity* is followed by 4.30 %, and around 12.84 % stated *Other Religion*³. The Santhal, Oroan (Kurukh), Munda, Kharia and Ho are the principal indigenous groups, and together they create the great majority of the total tribal population, and 91 % of them reside in the villages (2011). The natural vegetation is the deciduous forest. *Sal* (*Shorea robusta*) and *Mahua* (*Madhuca longifolia*) is commonly found in this area.

Department of Art & Culture of Jharkhand⁴ and Jharkhand Tourism⁵ provide precise information about the rich cultural heritage of the state in the form of visual, audio and performing art approaching the rural art forms. The repository of ethnic cultures of Jharkhand can be trace through folk songs like Ekhariya Damckach, Orjapi, Jhumar, Fagua, Veer seren, Jhika, Philsanjha, Adhratiya or bhinsariya, Doad, Asadi, Jhumti, or Dhuria folk dance like Paika, Chhau, Santhal, Karma dance and visual art forms like floor art, clay art, sujani art, weaving, chhou mask, puppetry (Chador Badoni), scroll painting (Jadopotia and Pytkar) etc.

² <https://www.census2011.co.in/census/state/jharkhand.html>

³ <https://www.census2011.co.in/census/state/jharkhand.html>

⁴ jharkhand.gov.in/art

⁵ jharkhand.gov.in/tourism

This study mainly focuses on North Chotanagpur, Kolhan and Santhal Pargana administrative divisions of Jharkhand, which spans over the most significant part of Chotanagpur plateau. In three administrative divisions (Santhal Pargana, North Chotanagpur and Kolhan) eastern rural Jharkhand, five kinds of mural art forms such as *Likhan gadhan*, *Jaunra baha/phul*, *Rong baha*, *Guruj baha* and *Jadopatia* are practiced by *Santhal*, *Lohra*, *Kurmi*, *Kumhar* and *Ho* communities (Fig. 1).



Fig. 1 Rural mural art forms of eastern Jharkhand

a. *Likhan gadhan* b. *Jaunra baha/phul* c. *Rong baha* d. *Guruj baha* e. *Jadopatia*

Rural communities paint their mud houses annually or once in 2-3 years in various medium like mud, paint, rice paste and cow dung. They paint and execute various vegetative, figurative and manmade visual forms (e.g., flowers, animals, human forms, pot, religious symbol, band, border

etc.) on the mud wall with different execution technique, representation, and theme. These visual forms are locally known as *Baha* (plant, creeper, tree, plant seedling, band and border), *Jan janwar* (bird and animal) and *Hor* (human). *Baha* is the most common visual form that is painted on the wall. This research attempts to understand the visual characteristics that identify these art forms.

1.4 Defining visual characteristics

Visual characteristic is a term that is a combination of the two words 'Visual' and 'Characteristics.' Oxford dictionary defines the word *Visual* as seeing or sight. Means a Visual is something that can be seen using the human eye. *Characteristics*⁶ has been defined as a feature or quality belonging typically to a person, place, or thing and serving to identify them. In order to form a certain definition & establish the term 'Visual characteristics' is a feature or attribute of living or non-living thing, which can be served as a visual identity.

In other words, the *characteristics of any living or non-living thing when identified visually is known as Visual characteristics.*

1.5 Motivation for the study

I am an artist and my keen interest is in folk art form. I am an admirer of Paul Gauguin (French post-Impressionist artist), Henri Matisse (Painter, Printmaker, Sculptor, and Muralist), A. Ramachandran (Indian painter and muralist) and Satish Gujral (Indian painter, sculptor, and muralist) since my fine arts training (BFA and MFA degree). I read Paul Gauguin's visit to *Tahiti* (Gauguin, 1985) (Knapp, 1989) which attracted me and made me curious to know about the lifestyle of indigenous people. Influence of Primitivism on Matisse art work (Oriente & Matisse, 1972) and influence of the tribal community of Rajasthan on the painted figures of A. Ramachandran always motivated me. The vibrant ethos of their art work gripped my imagination.

In 2013 as an art motivator, I was posted in DAV (Dayanand Anglo Vedic) school in Simdega (one district of southern Jharkhand). I was staying there in a semi rural area where most of the population were from Munda, Oroan, and Bengali community. This was the first time, I got an opportunity to know more about the indigenous people of India and stay with them. Their ideologies regarding nature and humanity, modernity & development are different from us. The same year I have visited Birbhum, where I interacted with the Santhal community and saw their art works. I realised that in a country like India, tradition, rituals, and culture still hold significant value and importance. In 2014, I have visited Hazaribagh with the INTACH Hazaribagh Chapter (Imam, 2014). Here the first rock art of Jharkhand, and subsequently over dozen rock art site in

⁶Characteristics/attribute are terms that seem to have been used interchangeably as synonyms of each other.

the North Karanpura Valley has been discovered. In 1993, Bulu Imam brought light to the *Khobar* (marriage) art, and then the *Sohrai* (harvest) murals painted on the walls of the mud houses of the Hazaribagh villages. As a muralist, I became passionate about their murals on mud houses, which were painted with various visual motifs. The desire to know more about the other wall art forms of Jharkhand continued. My keen interest in folk and indigenous art forms, several visits to art work sites and interaction with different communities are the genesis of this research work.

1.6 Research problem

The research in mural art field mainly focusses on art history, painting expertise, methods and technique (Wallert, Hermens, & Peek, 1995) and most of them are done by the art historians, conservation scientists, and artists. Thus, their research makes valuable information about the painting techniques of an individual artist, a school, or a historical period of art or art movement. Apart from these studies, some study on visual narrative and visual art principles has been studied by various scholars. Some of these visual research includes a study on the murals of Potharam temple in Nadoon district, Thailand (Hannapha & Thonglert, 2011), study on visual narrative of Burmese wall paintings (codifies the fundamental narratives and visual arrangement of painted motifs) (Green, 2018). The Swiss scholar Heinrich Wölfflin (1864-1945) has proposed a theory of form and style known as *formal analysis*. Formal analysis is a visual analysis method which is used to analyse the physical or formal quality of the artwork. The formal qualities of a work of art imply the interplay of colour, tone, line, space and mass, shape, texture, surface, scale, and composition (Fishman, 1963) (D'Alleva, 2010).

There are few relevant works of literature on rural mural art forms of Jharkhand found in the form of inquiry on painted mud houses by ethnographer *Daniel J. Rycroft* (2010), social activist *Bulu Imam* (2011) and architect & research scholar *Gauri Bharat* (2015). These relevant literatures provide information about aesthetic, narration and material and methods of the mural art form of Jharkhand. However, not many resources or documentations are found on the rural mural art forms of eastern Jharkhand, and there is a lack of investigation on physical or visual aspects of these art forms. As mentioned earlier these five kinds of mural art forms *Likhan gadhan*, *Rong baha*, *Jaunra baha/phul*, *Jadopatia* and *Guruj baha* that are not yet investigated comprehensively. This provides a tremendous scope and opportunity to do an in-depth study on the mural art forms of eastern Jharkhand.

1.7 Research objectives

For the detailed understanding of rural mural art form and its visual characteristics, this study aims to identify the visual characteristics of the mural art form. The main objectives of this research work are;

1. To identify the visual characteristics of mural art form of eastern rural Jharkhand.
2. To document the rural mural art forms of eastern Jharkhand.
3. To understand the rural lifestyle of eastern Jharkhand.

1.8 Research Methodology

The study follows qualitative research techniques, and the methodology of this study follows two phases; A. Data collection B. Visual analysis.

Photo documentation and the ethnographic study was adopted to collect the data. In *Photo documentation*, Photography was used as a key visual method for documentation.

In *Ethnography*, interview, observation, and photo-interview was adopted for the data collection. To analyse the physical characteristics of the art forms, *New formal analysis* model was followed. The analysis was done in two steps; first was the analysis of the *individual visual form* and second was the analysis of *visual form with the wall*. Number of visual characteristics were identified after the visual analysis. To validate the visual characteristics expert reviews with artists and designers were conducted. Combining both visual characteristics (identified through visual analysis and through visual arts experts review), key visual characteristics of *Likhan gadhan*, *Rong baha*, *Jaunara baha*, *Jadopatia* and *Guruj Baha* art form were established.

1.9 Conclusion

The chapter gives a brief overview of the research work of this thesis. The chapter introduces where the background of this research, research area and research problem. The study explores the visual characteristics of rural mural art forms of eastern Jharkhand. The research plan with the methodological approach has been discussed briefly in this chapter.

In the next chapter, detailed literature has been reviewed to understand the other rural mural art form in India and its research.



This page is intentionally left blank

2 MURAL ART: LITERATURE REVIEW

At first, the wall art forms were found in caves, done by the Homo sapience and Neanderthal (Leroi-Gourhan, 1967) (Günter Berghaus, 2004). By seeing their artwork, it can be assumed that the wall was always their favorite workplace to draw and paint. With time, the paintings and drawings on the wall became a part of the human's lifestyle in the form of tradition and culture. It prospered in various types such as court art, folk art, and ritual art and is appreciated not only by artists and patrons but also by the communities.

In ancient and medieval art history, painted artwork on the wall was known as wall painting. In western modern art history in the 20th century, at first, the term *mural painting* was used approaching the painted walls in the Mexican mural revolution (Campbell B. , 2003). After the introduction of this term in visual arts, other mediums like textile, pottery, relief, which were executed on the wall, were accepted as *mural art*. In ancient and medieval history, relief or carved artwork was only part of the sculpture but in modern art history, the execution of relief artwork on the wall known as relief mural. Consequently, a multidisciplinary approach (two and three dimensions) has been noticed in mural execution in this era. The meaning and implication of the term *mural* came in focus during the renaissance period of Indian art history (Chakrabarti, Kumar, & Nag, 1995).

In visual arts, various mediums are approached for visual dialogue and mural art is one of them. Murals are executed in decorative and pictorial form in public places or personal houses as a utilitarian branch of visual communication (Baldinger & Green, 1960). Helena Elias (2015) mentions, artists, symbolize and codify the intended messages in social, historical, political and cultural context and at the same time allow the spectator or viewer to decode and interpret the hidden messages or meanings in their artwork. In times of conflict among communities based on religious, social and ethnic contexts, murals have played their role as a means of communication. The visual effects are an enticement to attract public attention to social issues. It creates an illusionary and dramatic impact on the viewer. It is a relatively useful tool for social emancipation or achieving a political goal.

In recent years, murals have become a substantial part of the public art display in the cities with a wide range of subjects like landscapes, animals, sports, rituals, boats, battles, technological and digital inventions. At present, many villages and towns create murals for tourist attractions to boost economic income. Mural has become a part of interior decoration and serves as commission work for artists who paint them in schools, hospitals, and retirement homes to achieve a pleasing and welcoming atmosphere. Therefore, a mural is not only a tool of recorded human history but

also a medium of conveying meaning of the stories, emotions, feelings, inner world symbolically or in a hidden mode.

2.1 Indian Mural art

The meaning and implication of the term mural came in focus during the renaissance period of Indian art history. In this period, Shantiniketan (1995) played a significant role in reviving the mural activities in modern India. The early efforts in Shantiniketan, have been made to relate art to architecture and environment, and various traditional and innovative methods of mural making like Tempura⁷, Fresco⁸, Mosaic⁹, Sgraffito¹⁰, Terracotta, Glass, Mud mural, etc.

In ancient India, Indian Shilpa texts (scriptures) mention words like Bhatti, Bumi, Manibhumi, Chitra-vpusa or Kudya to indicate both the carrier and the ground (plaster) of wall painting (Agrawal B. , 1991). The paintings on the plaster are mentioned as *bhittichitra*. Literature shows that, after the Aryans arrived in India, wall art flourished under patronage in the form of court art. Their wall painting was executed in palaces and chitrashala¹¹. In ancient time painting was known as the most excellent form of art, which gives all kinds of merits, wealth, desires and deliverance to life (Stella, 1928). In Chitrasutram¹² (Vishnudharmotra), Avilasarthchintamani¹³,

⁷ Tempura is a fast-drying painting medium. In Tempura, colored pigments mixed with a water-soluble glue for vehicle and binder. The adhesive may be animal (milk, cheese) or vegetable (cherry tree, gum Arabic) and glutinous material egg yolk (Laurie, 1967) (Pallavi, 2013).

⁸ Fresco is a technique of mural art, executed on lime plaster (wet and dry). The execution of fresco done in two ways; Buon-Fresco and Fresco-Secco. In Buon-Fresco, the pigments mixed with water are painted on the wet plaster of sand and lime. In fresco-secco, pigments mixed with an organic binder and applied onto a dry plaster (Laurie, 1967).

⁹ Mosaic is a medium of mural making in which picture is made by inserting the tesserae into cement bed. Tesserae is a square piece or cube of solid material like small pieces of colored glass, stone, glazed or unglazed potsherd, marble, enameled or gilded glass (Wallert, Hermens, & Peek, 1995).

¹⁰ Graffito consists of starching through a design onto a ground of various colored layers of plaster (Jayanta Chakrabarti, 1995)

¹¹ Early references to Chitrasalas occur in the Ramayana and the Mahabharata. Three types of Chitrasalas are known, those in the palace, the public art galleries and private houses. The first category belongs to the sayanachitrasalas (sleeping-apartments) and abhishekachitrasalikas (bathing apartments). Painting in the bedroom was accounted for by the fact that, looking at an auspicious object on waking up was considered a good omen. In second categories houses of courtesans and other places of activities were considered (Sivaramamurti, 1970).

¹² The Citrasutra refers to all the texts related to chitras. *Chitrasutra* is that part of the *Vishnudharmottara*. It deals with the art of painting such as classifications of pictures, painting materials, merits, suggestion, and rules for the painters.

¹³ The Abhilashitarthachintamani written by king Somesvara in the 12th century. In this book, painting is described in the context of the decoration of the natyamandapa. The preparation of wall, preparing of vajralepa, number of colours, the brushes, their variations and other art materials like tulika, lekhini, vartika are mentioned. Varieties of painting like rasikachitra, dhulichitra, bhavachitra, viddhachitra and aviddachitra are all discussed in this text.

Shilpratna¹⁴, Samarangana- Sutradhara¹⁵ Naradasilpa and Mansollasa (Shrigondekar, 1925) of King Someshwara explains the preparation of ground and colours of this technique in detail (Agrawal B. , 1991) (Sivaramamurti, 1970) (Sharma N. , 1966).

In the medieval period, the mural painting flourished under the patronage in different states of India. South India displays an abounding tradition of mural paintings dating back to 9th to 12th centuries. Most of the exquisite paintings are found in their grandest monument in Brihadeswarar temple under the royal patronage of the Cholas during the 11th century. These paintings were found on the inner wall, over the pilasters and ceilings and on the inner side of the outer wall in Fresco Buon (Theodor, 2007). In 17th to 19th centuries, Maratha Nayak ruled this territory and they added various shrines and gopuras in temples. During their time, the temple came to be known as Brihadisvaram and temple-city known as Thanjavur. The Virabhadra Temple at Lepakshi was built in the mid-16th century in the regime of King Achuta Deva Raya. It contains some of the most exquisite sculpture of the period and has the earliest preserved mural paintings in the Vijayanagara style (Fig. 2).

¹⁴ The Silparatna written Srikumara in 16th-century. It gives a threefold classification of chitra into *chitra* (sculpture), *ardhachitra* (relief) and *chitrabhasa* (painting). In this book, white, yellow, red, black and blue, are recognised as five primary colours. Varieties of vartikas or brushes, varieties of pose, modes of light and shade, mixing of colours, application of gold and its burnishing are also explained in detail. This text gives a classification of pictures into rasachitra and dhulichitra.

¹⁵ The Samaranganasutradhara written by the Paramara king Bhoja. The central theme of this book is architecture. It contains a small section on painting, especially from the point of view of rasas to be portrayed in pictures.



Fig. 2 Vijayanagar paintings at Lepakshi temple Source: <http://www.indusscrolls.com>

The ceiling of Virupaksh temple also covered with the Vijayanagar paintings at Hampi, and the themes of the murals are generally religious and political (Fig. 3) (Cooper, 1997).



Fig. 3 Two group of soldiers march towards each other, Virupaksha Temple, Hampi
Source: (Cooper, 1997)

Kerala has a rich tradition of mural paintings (Fig. 4) on temple and church walls. The state holds the second place in India in having the most extensive collection of archaeologically significant mural sites (11 districts of Kerala), the first being Rajasthan. The oldest murals in Kerala were discovered in the rock-cut cave temple of Thirunandikkara (9th and 10th centuries AD) which is

now in the Kanyakumari District of Tamil Nadu. Kerala mural painting mainly carries illustrate with rich Hindu mythology as well as the famous epics Ramayana and Mahabharata in yellowish red, white, black, green, and bluish shades (Hauser, 2006) (Mini, 2016).



Fig. 4 Kerala mural painting

In north India, after the 16th century many murals were painted in Rajasthan and Gujarat under the governance of royal patronage. In Kutch, Kamangari¹⁶mural was developed during the time of Lakhaji II. Kamangari mural (Fig. 5) decorations are preserved in the Ayna Palace in Bhuj, bungalow of Mac Murdo in Anjar, Bhandara of Doramnath at Moti Rayan, in the Akhada of Jangi at Dhrang and Bhuj Museum (Patel G. D., 1071) (Goswamy & Dallapiccola, 1978).

¹⁶ Kamangari mural done by the kamangar community. This community was known as maker of Kaman (bow). They were also professional carpenters and housebuilders (Qasim, 1997).



Fig. 5 Kamgari mural painting 18th century Source: (Goswamy & Dallapiccola, 1978)

The region of Shekhawati in Rajasthan is known as the first mural city of India. In this region, mural paintings embellish the walls of many buildings, including Havelis (Fig. 6). The wet process fresco (Jaipuri fresco) has been practiced in this region and is known by various names such as *arayash*, *alagila* or *morakasi* (Singh N. , 2015). This technique was mostly practiced in Amer-Jaipur, Shekhawati, Alwar, Udaipur, Jodhpur, Bikaner, Nagaur, Kota, Bundi and Uniara and other places (Chaitanya, History of Indian Painting: Rajasthani Traditions, 1982).

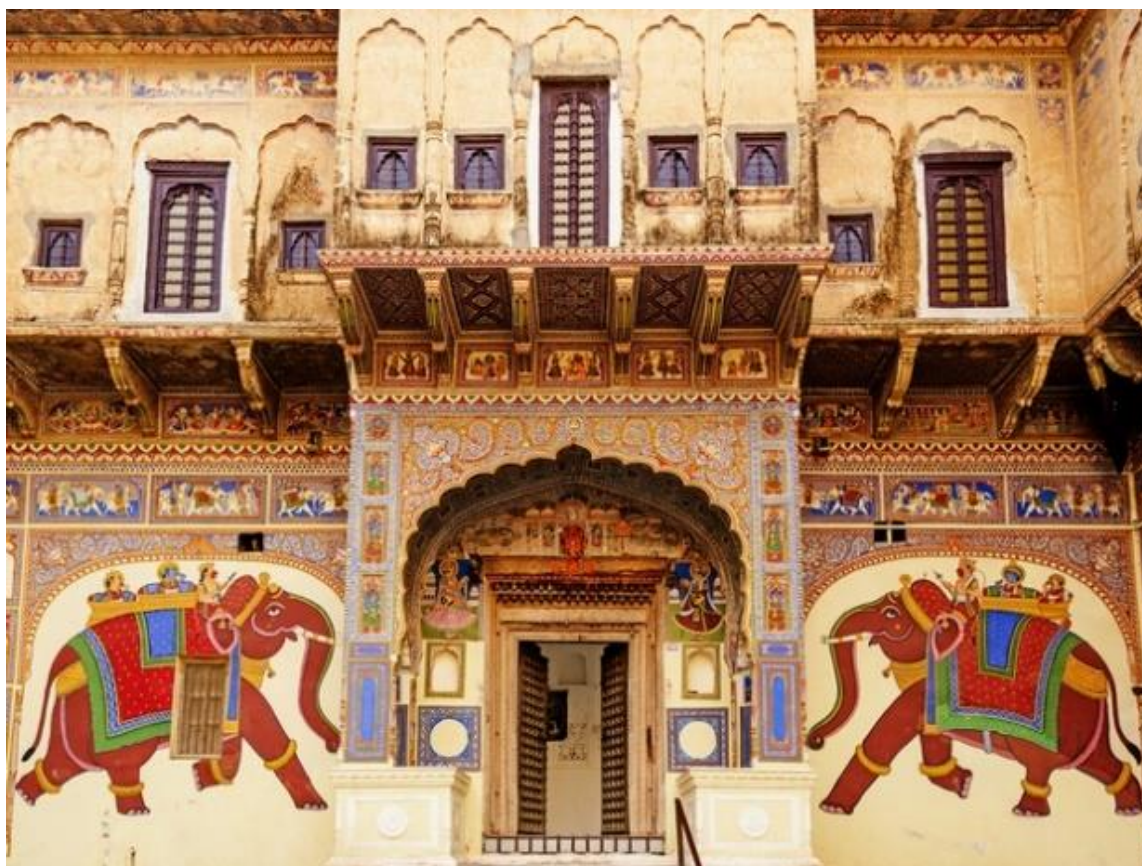


Fig. 6 Shekhawati mural painting Source: <https://lepassagetointia.com>

Jayanta Chakrawarti et al. (1995) states that Christian missionaries bought the fresco technique from Italy during the reign of Akbar and Jahangir. In contrary to that, Kripal Singh (an expert in Buon fresco, Jaipur) stated that Buno fresco technique is not imported from abroad. In Bagh cave (6th century), figure of Bodhisatwa is painted on thick plaster. This painting is totally ruined, but he considers it proof of Buon fresco in ancient India (Nardi, 2007).

In western India, Ajanta caves are the greatest examples of mural paintings in the form of cave art. This cave painting dates from 2nd century AD Vakatak period to Gupta period 9-10th century AD. The murals of Ajanta caves predominantly narrate the Jataka tales¹⁷. Cave 1 contains the Sibi, Sankhapala, Mahajanaka, Mahaummagga and Champeyya Jataka tales. In the same cave two over-life-size figures *Padmapani* and *Vajrapani* painted. *Padmapani* holding the Padma or a lotus flower in his hand. *Padmapani* and *Vajrapani* both shown in the half-closed eye and wearing various ornaments. Ajanta cave-paintings also show the temptation of Mara, the miracle of Sravasti where the Buddha simultaneously manifests in many forms, the story of Nanda, and the

¹⁷ The Jataka tales are mainly incarnation stories of Budhha. In these stories hundred times he reborn as an animal or human (Spink W. M., 2006).

story of Siddhartha and Yasodhara. (Spink W. M., 2006) (Spink W. M., 2009) (Herringham, 1998). *Padmapani* and *Vajrapani* is shown in Fig. 7.



Fig. 7 *Padmapani* (left) and *Vajrapani* (right) cave 1 Ajanta mural Aurangabad, Maharashtra

Source: <https://www.inditales.com>

From the 16th through the 19th century was a period of diversity in Indian art. After losing the support of patronages, the focus on the rich tradition and heritage of mural paintings of which India was once proud of diminished. Painting shifted from wall to paper, cloth, and known as court art. Court painting was divided into four significant traditions those milieus are defined in terms of religion, polity and geography: the Muslim kingdom of the Mughals (centered in Delhi), The Daccani Sultan (on the central plateau) and Hindu Rajput kingdom in Rajasthan (on the plain) and Panjab hills. The Rajasthani kingdoms brought within the Mughal orbit as a feudatory state through treatise of various kinds, and the Rajas become subject of an emperor, ruling by his donation (Kossak, 1997). During the 16th and the 17th centuries painting received liberal patronage from the Islamic courts of the Deccan. Paintings were done under the support of the courts of Ahmednagar, Bijapur, and Golkonda. The inspiration and mood of the art of these Islamic courts were different from those of the local art forms. Due to the availability of paper miniature painting and manuscript painting gained popularity (Chavan, 1999) and artists of the Garhwal, Kangra, Basohli, Rajasthan, Deccan and Mughal School used handmade water colours and thick tinted paper, prepared by pasting two or more sheets together.

In addition of that Milo Cleveland Beach (1992) states that before the medieval period Indian paintings (Ajanta, Chola mural) evoke the three-dimensional volume like Indian sculpture. By the 16th century, the sculpture tradition in India had declined and painter no longer obliged to create a sculptural effect. At the same time, the Indian climate has not been kind to the wall painting. These situations brought a variation in painting tradition of India and in a result of that, the vast majority of the painting remaining to us today made on paper.

During the colonial era, Western influences started to make an impact on Indian art. Some artists (Raja Ravi Verma, Gagnendra Nath Tagore, etc.) developed a style that used Western ideas of composition, perspective, and realism to illustrate Indian themes. The Bengal school (Rahman, 2009) tried to rejuvenate India's traditional art within a nationalistic format as Company painting. Rabindranath Tagore established the visionary university of Santiniketan, a university focussed on the preservation and upliftment of Indian culture, values, and heritage. It included an art school "Kala Bhavan" founded in 1920–21. The loss of dying tradition was revitalized, and a new meaning and dimension were introduced in Shantiniketan. A large number of experimental mural works (Fig. 8) were executed in the classrooms, hostels and the campus with the efforts of masters like Nandlal Bose, Binod Behari Mukherjee, and Ramkinkar Baij.

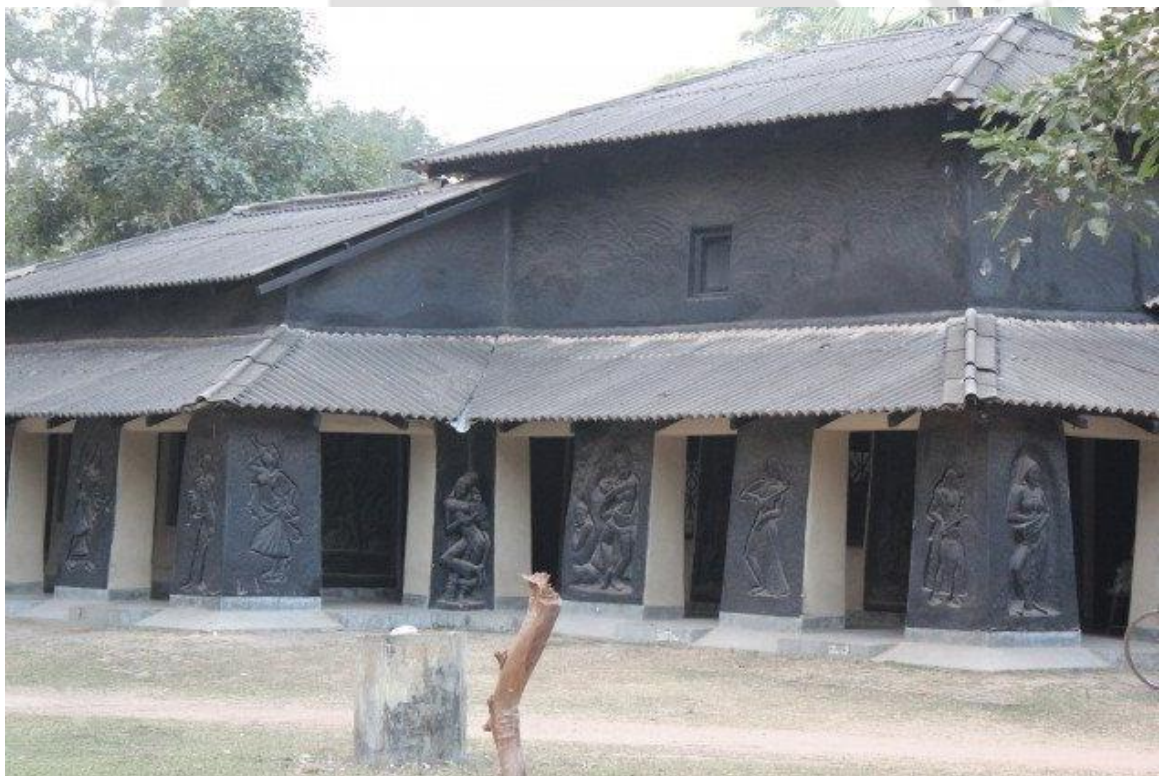


Fig. 8 Kali Badi (black house) Santiniketan, Visva Bharati University, Bolpur, West Bengal

Source: <http://www.ghumakkar.com/photoblog-glimpses-of-santiniketan>

2.1.1 Indian Rural mural art forms

The walls of village homes are often decorated to invoke the blessings of gods and goddesses at weddings, births, and the harvest season or on religious festival days (Jaitly, 2018). In early age, kutias (huts) of sadhu & saint decorated with some border pattern & motifs. In rural India, different communities are still decorating the mud houses with visual forms. In different parts of India, various communities like Saura from Uttar Pradesh, Pithora and Gond from Madhya Pradesh, Dusad and Brahmin from Bihar, Warli from Maharashtra, Bhumij, and Kurmi from Jharkhand are involved in displaying their artistic skill on their mud houses Fig. 9. These Indian rural art forms are discussed below.



Fig. 9 Locations of Rural Mural art form of India

Madhubani Painting: Madhubani painting (Fig. 10) originated from Madhubani district of Mithila region of Bihar. Mithila is bordered on the south by the Ganges, in the west by the Gandaki River, in the east by the Kosi River and in the north by the Churia (Siwalik) range of hills in southern Nepal (Jha M. , 1997) (Ishii, 1993).



Fig. 10 Madhubani painting, Bihar Source: <http://www.edgyminds.com/madhubani-wall-murals-in-jharkhand-depict-everyday-struggle-of-villagers/> (Thakur M. , 2017)

This art form is traditionally and mainly practised in Jitwarpur, Ranti, Rasidpur, Bacchi, Rajangarh villages of north Bihar by the women. The villages of Madhubani, Darbhanga, Saharasa or Purnea, the paintings are done on the mud walls in three places; *Gosai ghar* (the room of the family goddess or deity), *Khobar ghar* (the honeymoon room for the newlywed couple) and *Kohbarghar-ka- koniyan* (the verandah outside the kohbar ghar used as a sitting room for the friends of bridegroom). *Khobar* painting is popular subject in Madhubani painting. *Kohbar* indicates a specially decorated room with elaborate paintings on the walls where the married couple enter for their first meeting after marriage. Only a few of the women who are experts can make *Khobar*. In *Khobar*, the figures of four women are painted in the four corners of the room. These figures are popularly known as *Nayana Yogini* (Fig. 11); it carries one basket on her head. It is believed that Naina yogin, protects the bride from the evil eye of witches and attempts to bring the unknown groom under the magical control of the bride (Heinz, 2006). On the one wall bamboo bush painted with birds, lotus plants and human face depicting the moon. Here bamboo symbolises male and lotus as female. In veranda, outside the *Kohbar* room illustrated scenes from rural life of Mithila, dancing peacock, Ram-Sita marriage, Krishna's life activities are painted.



Fig. 11 Ganga Devi, *Naina-Yogini*, 1988-89 Source: <https://www.thebetterindia.com>

Upendra Thakur (2003) in his book *Madhubani painting* has given a detailed description of the origin and development of Mithila art. The tradition of making mural has passed on from generation to generation. Every girl learns this art from her mother or grandmother at her early age and practiced it in Samskaras and vratas (ritual). For making the smooth mud surface, mud walls are plastered with cow dung, and after drying, it is whitewashed. After preparing the flat mud surface, painting is done with fingers, twigs, brushes, and matchsticks. Colours are prepared using natural dyes and pigments. Black colour is prepared from burnt Jowar (barley seed) or by mixing lamp soot with bel kernel and cow dung, yellow from turmeric or from Chuna (lime) mixed with milk of bada (banyan) tree or leaf milk, orange from plas (*Butea monosperma*) flower red from the juice of kusuma flower and green from leaf of bell tree. Nowadays most of the colours are bought as powder and mixed up with goat's milk.

Nibedita Das (2013) and Upendra Thakur (2003) explain the characteristics of Madhubani painting. They state, in Madhubani painting bold natural and artificial colours are used. In deep colour red, green, blue, black is preferred and in the light colour yellow, pink and lemon are favored by the artists. Double line border with simple geometric designs or with ornate floral patterns is used. Human figures are drawn abstract and linear in form, animals are usually naturalistic and are invariably depicted in profile. Figures have large bulging eyes and a jolting nose emerging out of the forehead. Bharni, Katchni, Tantrik, Godna, and Kohbar are five distinct styles of painting.

Osakothi Mural: Osakothi is a folk mural painting, is practiced in the southern parts of Orisha by men from time immemorial. In Ganjam district, various group of painters are involved in painting of this art form. The chitrakara community of painters consists of professionals, priest groups (Brahmins and Mali), bauri painters (literate farmers or members of low-income groups) and professional painters.

Eberhard Fisher et al. (1996) explains that Osakothi is an annual ritual to paint and worship the god and goddesses. The term Osakothi is made from two words, Osa and kothi. 'Osa' means 'to remain fasting' and 'kothi' means sacred space, granary or a house/bungalow. Hence, Osakothi represents the shrine or community house where Osa rituals take place. The term Osakothi also denote the square or rectangular diagrams made, to perform Osa rituals. These rituals generally start in Ashwin Shuklaastami (September or October) around Durga (goddess) festival.

Jitu Mishra mentions that the Osakothi shrine is always a temporary structure. Seven or nine days before Dussehra an appropriate site is found within the village for the osakothi season. Usually, the same place is utilized year. Apart from this, Osakothi murals are executed on inside the kothaghara community house, outside the community house, on temple wall, at the residence of the Adhikari (organizer) of Osakothi rituals and in an isolated structure in an open space. Usually, the mural is of a rectangular horizontal format, and occasionally a square or rectangular. It is split horizontally into four, five, seven or nine tiers, which are roughly divided. These divided compartments/chambers are called kothi, place, or ghara, house and represent the dwelling of deities. The larger section becomes the space for important goddesses; the smaller ones are for the minor ones (Mishra, *Osakothi Rituals in Ganjam – An Anthropological Journey*, 2018).

In mural, the entire family of the goddess painted with sons, daughters, and vehicles with full entourage, regalia and pomp forming the great family. The Thakurani (Adimata) consider as the creation mother. In most cases, Shiva is an only male deity to appear on Osakothi paintings in large size depictions, and sometimes he occupies the central position of the mural. Besides Shiva, Ardhnarishwara, Nataraja, Shiva's family members Ganesha and Kartikeya are painted. Kali also the central figure of the painting. She is depicted as a black skinned naked goddess, dancing violently on prostrate Shiva. The other goddess Gauri (Shiva's wife), Saraswati (goddess of learning), Ganga and Yamuna (sacred rivers), Manikeshwari (Golden goddess) are also painted. In minor legendary characters Hadi Hadiani (the sweeper and his wife), Dhoba dhobini (washerman and his wife) and Gauda gauduni (the milkman and his wife). Bote and Ajgara sarpa (large snake) is painted as a supportive motif. Bagha venta (tiger hunting), Bhalukuni (bear), Jamaluli alasua (blackberry), Pardeshi (foreign living person), a man on a ladder, horse, elephant, and bicycle are painted as filling-in motifs (Fig. 12)



Fig. 12 Osakothi mural mural, Odisha Source: <https://blogvirasatehind.com/2018/10/29/osakothi-rituals-in-ganjam-an-anthropological-journey/> (Mishra, 2018)

Apart from the wall, Osakothi is also painted on paper or cloth and can be put up on the wall. The painting mainly includes the images of gods and goddesses, mythological characters from Ramayana and Mahabharata, poetry, scenes of festivals but nowadays it also depicts the contemporary aspects of village life, culture, war, symbols, poetry, dance forms, etc. Artists use bright organic colours made from leaves, flowers, and soil, but nowadays there is a general move towards synthetic colours (Nair, 2016).

Pithora Painting: Pithora is a ritualistic painting done on the walls by several tribes such as the Rathwa and Bhila who live in central Gujarat, in Tejgadh village of Vadodara. Pithora is considered as the god among the community and is called as 'Pithora baba'. During the ritual worship, the process of painting is accompanied by music and singing. This worship is made to procure good harvest, the birth of a male progeny or as thanksgiving ceremony upon wish fulfillment and bring peace, prosperity, and happiness in the home. This ritual goes on for about 3 to 5 days, and the whole clan and village community take part in the ceremony. The presence of Pithora baba is considered as a solution to all the problems at home (Parikh, 2002).

A Pithora painting (Fig. 13) is always located at the threshold, or the Osari, outside the first front wall or inside on the walls of the first room as one enters a house. The composition usually covers the whole wall. Three walls are prepared for the painting, the front wall and the two on either side

of it. The front or central wall is always more massive than the side walls. The painting is worshipped at night and gods are invoked through song, music, and trance. The ritual specialist known as Ojha introduces each character in the painting and invokes their presence. During the ritual, wine is offered, and goats are sacrificed. In Rathwa houses, the presence of horses in this painting is associated with ancestor worship. They believe that this deity is omnipresent. He rides a horse and protects their village. For the Rathwas, the Pithora painting is held so sacred that no member of the family is allowed to sit facing their back to the painted wall (Parikh, 2002). They believe that at night horses are walking, the god is walking, and the wall trembles. To feed the animals they put some grain, dhebra (a small cake) and wine in a bamboo container near the wall. It is also believed that, if they will not offer food and drink during every important festival to the horses then they will show their *chamatkar* (retribution) (Shah & Sen, 1984).



Fig. 13 Pithora mural painting, Gujarat Source: <https://www.sahapedia.org/pithora-painting> (Patel H. H., 2017)

Execution of Pithora painting is distributed in two phases writing/painting and reading. The professional painters who do writing/painting known as *Lakharas*. *Lakharas* write or paint for hours (twelve hours or thirteen hours or fourteen hours). During painting, they light the lamp, do a musical concert, dance, sacrifice and organizing feast. Once a picture is completed, the ritual of Panghu (ritual installation of a Pithora painting) makes it possible to read the painting by a *Badvo* (a ritual specialist). In most cases, *Badvo* explains that Ind & Pithoro (maternal uncle & nephew) have abandoned the space of household. The *Badvo* then suggests that a vow is made to install a

Pithora painting to invite the uncle Ind and nephew Pithora back to the house to end the reign of misfortunes (Pandya, 2004). They make prints on the wall by jawar flour and buttermilk. They mix it, and then from dipping into the liquid, they print positive prints and negative prints their hands, their children's hands, even small feet on their walls and their storage jars, then on the agricultural implements, on their bulls and cows (Shah & Sen, 1984).

Pithora god is painted with his wife, kings, and other legions, sun, moon, and all. They represent various deities in rows. *Raja Indi*, *Pithora*, *Pithori*, *Dharni Dharti* (earth), Malwi Gori, Raja Bhoj, *Kajal Rani* and *Kali Koyal* are some of the prominent characters in the paintings. There are some specific colours used to show the particular character like the orange horse of *Pithora rani*, *Rani Kajol* (village deity) holding a fan or comb. Green horse signifies greenery after the monsoon. Sun, moon, hunter and camel, dog, peacock is painted as supportive figures (Shah & Sen, 1984). Earlier colours were prepared traditionally with locally available clay, minerals, vegetables, and stones were used. These days' poster colours, acrylic and oil paints are being used. New motifs like cars, cycles, aeroplanes, motorcycle, jeep, bus, guns all find a place in Pithora paintings, expressing the contemporaneity and dynamic character of folk paintings (Pareek, 2017).

Warli Painting: Warli painting (Fig. 14) is an Indian folk art of Maharashtra. The art is done by Warli tribe reside near the base of Sahyadri mountains in the northern part of Mumbai, Maharashtra. Women in Javhar, Dahanu, Talasari, Mokhada, Wada and Palghar village practice this art form on square bamboo huts.



Fig. 14 Warli mural painting, Maharashtra Source: <https://medium.com/@anandvilhat75/the-history-and-origin-of-warli-painting-9f6e9ae182f2> (Vilhat, 2019)

Chawk (square) is one of the significant motifs in Warli paintings. There are two types of chawks found; Devchawk & Lagnchawk. In Devchawk (God's square), the square motif is drawn during marriage ceremony on walls. Inside the square stands a figure made of two triangles with outstretched arms and legs known as goddess Palghat (without whom no marriage can take place). Other characters in the painting are Pancha Sirya Dev (the five-headed god) and the headless

warrior, who is drawn in standing or riding position. Pancha Sirya Devis is an archaic symbol of the cosmic cycle of life and death (Gupta C. S., Indian Folk and Tribal Paintings, 2008). In Langchawk, the motifs are based on bride and bridegroom depicted riding a horse in the center of a square. The Warlis claim that the hawk is the jewellery of the goddess. The basic frame consists of four rows of lines drawn into a square and looped at the edges. On the outermost line are placed a row of upturned goblets known as pophala. These are placed shoulder to shoulder to form hollow centers which are sometimes dotted. All over the Warli area, hawks are made by women artists or sahvasinis, this term denotes that their husbands are alive (Dalmia, 1984).

Kanna (symbol of virginity) is another painting style of Warli, which is drawn only in the bride's house. The Warli women also perform the ritual of Muthi (fists) painting, when the new rice is brought home from the field. Muthi painting is repetitive imprints of fists are made to bring a home fistful of grains (Seth, 2013). Tarpa Dance Motif (folk dance), festival Nagpanchami Motif (Snake motif), Reaping Season Motif (labourers cutting the crops in the field) hunting, fishing, and other daily life activities, human figures are painted as a central motif. As Warlis are farmers, domestic animals' motifs like cows, bulls, cocks, hens, sheep's, dogs are used in the painting. Other motif like peacock, sparrow, snake, frog, sun, moon, trees, creepers are also painted on the wall (Patil, 2017).

During ritual functions and marriage ceremonies, bamboo huts are coated with mud and cow dung. As a background colour geru powder is coated on the wall. White rice flour paste (diluted with water) is used to draw the motifs on the wall. The designs are directly painted on walls with a wooden stick.

Warli art carries monochromatic depictions that express the folklife of socio-religious customs, imaginations & beliefs. This art form uses basic graphic vocabulary, circle, triangle & square and is Monochromatic. Two triangles represent human figures joined at the tip: the upper triangle depicts the trunk and the lower triangle the pelvis. Circle depicts the face without features like nose, eyes, and ears. Males figure painted with a bunch of hair and females with a ponytail. In painting, the circle and triangle come from their observation of nature, the circle representing the sun and the moon, the triangle come from mountains and pointed trees.

Lippan Kam: The women of Rabari community (Rann of Kutch, Gujarat) decorate their mud houses with the help of mud and mirror. The Rabari of eastern Saurashtra migrated from eastern Kutch in the 15th century and had adopted the regional styles in their entirety for household decorations. They used a consistent style for both household decorations and garments. Their embroidery traditions, like their lifestyle, were still intact (Frater, 2002). Rabari communities live

in circular mud houses known as Bhungas¹⁸. Decorative patterns are made on the partitions, doorways, lintels, niches, and the floor. The impressions of fingers and palms create relief decorations that consist of okli-textures. Walls of house and items like storage chest, quilt-stand and grain-box are embellished with this art. Elephant, camel, peacock, parrot, scorpion, a woman with water pots on her head, women churning buttermilk, trees, flowering vines, hills, and temples are common motifs used with lots of mirrors in a round, square, triangle shapes. The Rabaris believe that mirrors repel the adverse effects of the evil eye (Gadhavi, 2017).

For making murals wall is plastered with clay and donkey dung mixture. The mixture rolled on a plain surface by palm, to get a string like a form. Rabari work is characterized by thick lines with rough and rustic look done to the less care taken to prepare the cow dung and clay mixture. Mutwa community's mud relief work done by the men has the essence of their recurring motifs. Mutwa mud-relief-work is done with thin lines and geometrical Islamic forms, a replica of their ornaments and non-living forms. The women of this community are well known for their tiny embroidery stitches (Gadhavi, 2017) (Fig. 15).



Fig. 15 Lippian kam mural art, Kutch, Gujrat Source: dsources.in

¹⁸ Bhungas are made of clay or bamboo chips plastered with lippian (a mixture of clay and dung) and have wood-based thatched roofs. Bhungas is designed and built to take care of the practical needs in the harsh climate of Kutch.

Gond painting: Gond painting (Fig. 16) is done by the Gond tribe of Madhya Pradesh. In the Gond community, Pradans Gond a subgroup known as illustrious storyteller illustrate or painter. They paint the inner and outer wall of their house during weddings and festivals. Gond strongly believes that viewing a good image begets good luck. Considering painting as good omen, they decorate their homes and floors with traditional motifs. For every occasion a new painting or Digna (floor art) or Bhittichitra (mural)) is created. Gond tribal walls come alive with depictions of local flora, fauna, and gods such as Marahi Devi and Phulvari Devi (Goddess Kali). Gond is very fond of mahua; therefore, they paint mahua tree with flowers. In their painting, forms like horses, elephants, tigers, deer, snake, birds, Gods, men and objects of daily life are painted in bright colours. A Gond painting depicts various celebrations, rituals and man's relationship with nature. Through their art, Gond artists depict their beliefs and experiences related to their religion and world view. They use recurring motifs in their paintings to highlight their beliefs (Arur & Wyeld, 2016) (Saxena, 2017) (Bharadwaj, 2014) (Gaur & Das, 2013).



Fig. 16 Gond painting on paper Source: <http://gaatha.com/gond-painting/>

Before making a Gond painting, black or white colored clay and the cow-dung mixture is used for plastering the wall. After drying the wall, painting is done with the help of a cotton swab or handmade brush (a piece of cloth tied to the twig of neem or babul tree).

The composition of the paintings is wall covering compositions¹⁹. Gond painting is linear art with a wide variety of lines and small dots. Firstly, the flat colors applied followed by the lines in various colors. Dots and dashes add minute details to the artwork. In Gond painting white, black,

¹⁹ These paintings begin from the base of the wall and reach up to the height of eight to ten feet

blue, yellow or saffron are preferred colours. These colours are obtained from vegetables or locally available clay or stone-like minerals, charcoal, colored soil, plant sap, leaves, cow dung, mud, vegetables and stones especially yellow from chhui mitti and red from hibiscus flower (Bharadwaj, 2014) (Saxena, 2017).

Khobar and Sohrai painting: In Hazaribagh district of Jharkhand indigenous art forms, Khobar (Kho- cave; bar- a bridal couple) and Sohrai is practised by the women. These two conventional arts are done on mud walls on two different occasions in Charahi, Jorakath and Bhelwara villages.

Khobar art (Fig. 17) is done during marriage ceremonies (marriage season is from January to May). This art form is being carried out by the local village societies among the agriculturists, the Ganju and Kurmi, various artisan groups such as the Rana (carpenter), Teli (oil-extractor), Ghatwar (the guards of mountain passes), the Prajapati (clay-modellers) and the Kumhar (potters, workers in clay). This mural is made by using graffito art technique. The wall is repaired and plastered with mud, after that a coat of cow dung and mud mixture is applied on to it. After that, it is covered with a layer of black earth called kali mati in a circulatory half moon stroke. When the black earth coating is half dried a layer of either brilliant white earth (charak) or coloured mud (dudhi), or plain yellow earth (pila) is done. A wooden comb is used to scratch the clay. The cutting reveals the black ground beneath the coating, in a striking design pattern. The paintings depict birds, jungle plant, animals and marriage ritual symbols and are painted by the head women of the family. The bride continues this tradition and adopts a new style in her husband's house (Imam, 2017). This mural painting has different sections that are made using borders in vertical or horizontal directions.



Fig. 17 Khobar painting

Sohrai mural painting (Fig. 18) is practiced during Diwali (light festival in India). After the rainy season, rural people repair their mud houses and decorate their exterior and interior walls with figurative images like plants, fishes, birds, animals and familiar icons of the mother goddess. Some narration painted on the wall such as a peacock or mongoose fighting with a snake or snakes fighting among themselves, mother peacock with a young chick on the back, peacocks fighting, peahen breaking an egg, deer, and goats feeding their young once and birds feeding their chicks with fishes and insects (Imam, 2017) (Imam, 2011).

Sohrai painting is done traditionally. The walls are first coated with white creamy kaolin earth called dudhi mitti. The initial drawing is made using chalk then brush, broom and comb are used to draw outlines of figures and borders. Kuchi or Datwan tools are used to fill drawings. White, black and red ochre²⁰ are used in these murals.

In most cases, the wall color is used as the background color, and in some cases, white (Dudhimati) is used. Red, black, yellow, white soils, cow dung, coal, and powdered leaves are used to make the colors for these paintings. Black and white colors are used for figure outlines. Traditionally these paintings are made using natural colors, but in recent days this has been replaced by synthetic colors (Banerji, 2016)

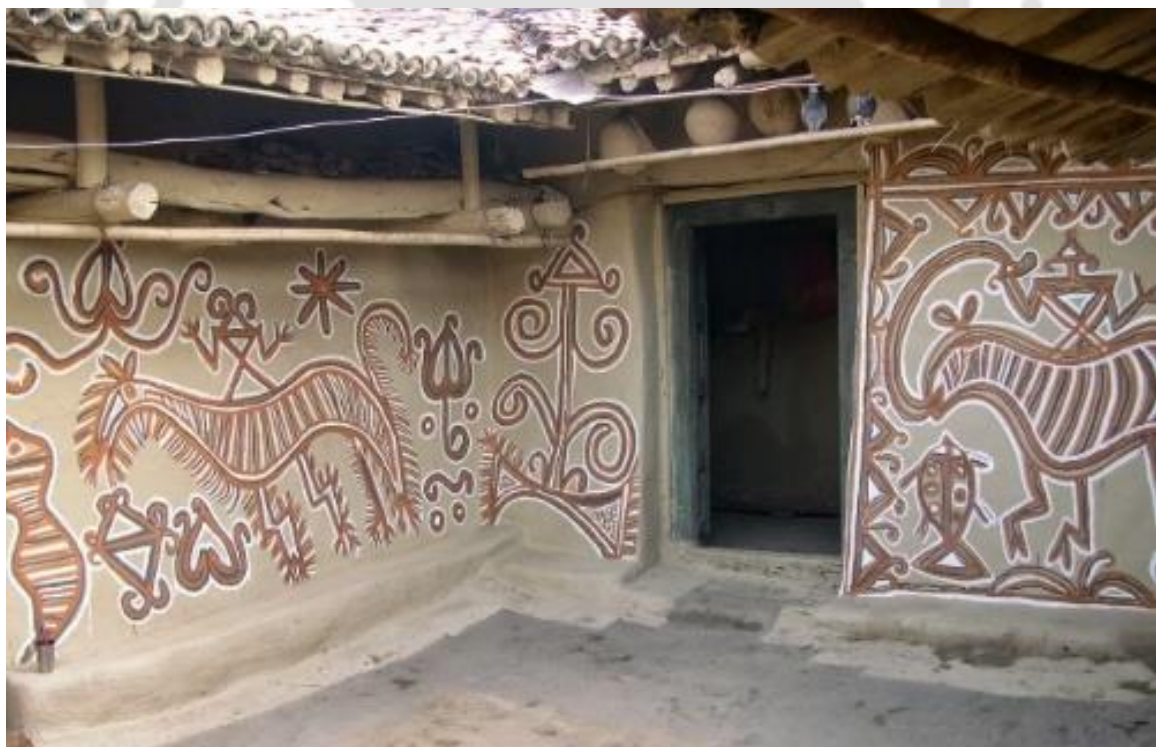


Fig. 18 Sohrai painting, Hazaribag, Jharkhand Source: tribalarartofhazaribagh

²⁰ Geru (Red ochre) is not much bright color. It is earth pigment which abundantly used in traditional Indian painting. It's found in several shades are the basic colors used in these murals

In Sohrai and Khobar art, the walls are visually divided into two parts upper and lower part. Usually, 75% of the wall is covered with painting in harmony with doors and windows. In painting composition, vertical and horizontal borders are used to divide the painting into different sections and sometimes it is done without it. Master figure with the supportive figure, side profile figures on a flat background, mirrored images with supportive image and mostly organic forms are used to create figurative images with a bold outline. Sometimes abstract patterns are also practiced. Geometrical and natural patterns are mainly used to draw borders and human figures (Pallavi, Bora, & Udaya Kumar, 2015).

In this study, rural mural art forms of eastern Jharkhand are investigated, and relevant literature is studied. Detail information about history, geography, inhabitant community, cultural and economic aspects of selected regions are discussed below.

2.1.2 Overview of eastern Jharkhand

Jharkhand is known as *Land of bush* or *Forest trace*. The Chotanagpur plateau is a continental plateau which consists of three steps in Jharkhand; high, middle and low. The eastern part of the state including Ranchi, Dhanbad, Hazaribagh, Giridih, Singhbhum, and Santhal Pargana lies on the middle and lower portion of the Plateau. The middle portions of the plateau contain a larger part of the Ranchi and Hazaribagh districts. The Hazaribagh plateau is again subdivided into two sections, high and low. The lower plateau is Kodarma plateau. The northern face of Koderma plateau is elevated above the plains of Bihar the lowest step of the plateau covers a part of West Bengal and some districts of North Chotanagpur and Kolhan division of Jharkhand. This region consists of hills, forests and several rivers like Damodar, Barakar, Koel, Karo, and Subarnrekha. The region has the richest deposit of mineral wealth; consequently, the area consists of open mines and industries. The plateau is populated by a large number of aboriginals such as Santhals, Mundas, Oraons, Hos, Gonds, Kharias, Bhuiyans, and Bhumij who are known to have a diverse cultural identity.

Santhal Pargana: Santhal Pargana is one of the administrative divisions of Jharkhand. This administrative division comprises of six districts: Godda, Deoghar, Dumka, Jamtara, Sahibganj, and Pakur. It is bounded on the north by Bhagalpur and Birbhum districts of Bihar, on the east by Malda, Murshidabad districts of West Bengal and Jharkhand and on the west by Giridih, Hazaribagh, Jamui, Banka districts of Jharkhand and Bihar. The region lies on Chotanagpur plateau including Rajmahal hill range in the north (S.P. Chatterjee). Earlier Santhal Pargana was a part of the Bengal Presidency²¹, in 1855, during British India; it was created as a district.

²¹ The Bengal Presidency (1757–1912) was the largest subdivision (presidency) of British India. It was primarily centred in the Bengal region. After 1912, it was reorganized as the Bengal Province.

Before that its northern half-formed part of Bhagalpur district while the southern and western portions belong to Birbhum. Following the natural division, the district's area is divided into three parts like the hilly portion, rolling country and flat country which consists of all six districts Godda, Deoghar, Dumka, Jamtara, Sahibganj and Pakur (O'Malley, 1910).

Dumka is the main administrative area and oldest district of this region. It is formed after the Santhal Hool²², in 1865 from the Bhagalpur district (old name Champa currently in Bihar) and Suri district (West Bengal). A large area of this region is occupied by hills and forest in the north, which earlier includes the Damin-i-koh²³. In 1983, *Dumka* was divided, and a new district was formed, which is known as Godda (Biswas, 1956).

After the bifurcation of Bihar into Jharkhand Godda was one of the 18th district of Jharkhand. It is bounded on the north by Bhagalpur district and a small portion of the Rajmahal subdivision and on the east Damin-i-koh portion of Rajmahal and Pakur. The chief hills of the subdivision are in the Damin-i-koh and belong to the Rajmahal range which is relatively under-developed. Santhal, Pahariya and the converted Santhal Christians are the major proportion of the population in these areas. In British India, many missionaries were established in Godda and Dumka. The NELC (Northern Evangelical Lutheran Church) was created as a Lutheran church before their Catholics established the missionaries in this area.

Deoghar district is one of the holiest and pilgrimage places of the Hindus. It is known as Baidyanath Dham and Babadham. The region is connected with Calcutta-Patna section of the Indian Railways, and because of the ease of commuting, thousands of pilgrims' resort to this region every year. Millions of pilgrims visit this religious place between July and August in the mela (fair) of Shraavana (a month of the Hindu calendar). Hindi, Maithily and Bengali are spoken language of this region. Bengali population is more concentrated in the eastern part of the district. In 1981, Deoghar sub-division was divided, and Pakur district was formed. Pakur district is bounded on the north by Sahebganj district, on the south by Dumka district, on the west by Godda and the east by the Murshidabad district of West Bengal. In Pakur, there are tribal handicrafts, coal mines and other industries. Sahibganj is situated in the Northeast of the Rajmahal Subdivision on the southern bank of river Ganga. Sahibganj is an important mart and trade centre because the Sahibganj Loop²⁴ connected with Eastern Railway. Jamtara is a small semi-rural

²² Santhal Hool was a native rebellion by the Santhal people. In 1855, the rebellion started against the British colonial authority and the Zamindari system.

²³ Damin-i-koh is a government estate in the northeast of the district including portions of Rajmahal, Pakur, Godda and Dumka subdivisions. The name is Persian, meaning the skirt of the hills. The country lies on foot or the slopes of The Rajmahal hill. The area has been formerly inhabited only by the Paharias, who were chiefly known and feared as freebooters and cattle lifters.

²⁴ The Sahibganj loop is a railway line connecting a part of the Howrah-Delhi main line.

area situated on the Chord Line²⁵ of the Eastern Railway. The main population of these regions are Santhali, Bengali and Paharia (O'Malley, 1910).

In the Santhal Parganas districts of Bengal, a variety of races is found, in which two-fifths of the total population is purely aboriginal, one fifth is semi-aboriginal, three-tenths belong to Hindu caste and one-tenth are Muhammadans. The earliest inhabitants in the districts are believed to be the Paharias and Mal Paharia. During the formation of this region, Santhal was the major population; therefore, the district is known as Santhal Pargana.

Though there is no documented literary evidence of Santhal settlement in this region, it is believed that Santhal are the first to settle in the district between 1790 and 1810. They were brought around 1790 to clear jungle and drive out the wild beasts which then infested the country. The written references about the Santhal is found in colonial India. In mid 18th century, the colonial ethnographers came in Chhotanagpur plateau in the district of Hazaribagh, Palamu, and Singhbhum, a neighbourhood of Midnapore and Bhirbhum districts and interacted with Santhal and studied them. Their studies constitute an important category of literature and provide information on various aspects of socio-cultural life and their group characteristics (Chattopadhyay, 2014). Jyotirmoyee Sharma made a discourse about the changing culture of indigenous people. He mentioned that in the 18th century Christian missionaries arrived in eastern India and worked with the Santhals. They introduced various welfare schemes and worked in the development of health, education, economy and Santhali language (Sarma, 1993). P. C. Biswas talked about the migration of Santhal. He also mentions that Santhal crossed Persia, Afganistan, and Chinese Tartary and entered India from Northwest, and then they settled in Punjab and made their way to Chotanagpur plateau. It is also believed that the Santhal came from Northeast India and found their way to the Chotanagpur plateau because of certain remarkable coincidences of custom and languages between the Santhals and some of the aboriginal tribes who belongs to northeastern frontiers of India. It is also mentioned that Munda, Ho and Santhal belong to the Austric group of indigenous people. These indigenous people spread over the eastern part of India mainly in the states of Bihar, Jharkhand, Orissa, Chattisgarh, West Bengal, Assam and Meghalaya (Biswas, 1956).

Chattopadhyay mentions that Santhal came from the northwestern part and crossed the Damodar valley through Hazaribagh place in Chotanagpur Plateau (Chattopadhyay, 2014). After arriving at Chhotanagpur plateau towards the end of 18th century, Santhals began to migrate to Jungle Mahal on the northeastern side of Chotanagpur plateau (which was formerly a homeland of Mal Paharia and Sauriya pahariya). At the beginning of British rule, Chotanagpur was found to be a main

²⁵ Chord line is a straight-line connecting joining two points on a curve.

habitat of the Santhals. In 1770, the great Bengal famine and following that in 1793, the introduction of a permanent settlement are the two main reasons that triggered the migration of Santhals from Chhotanagpur to Jungle Mahal. In 1855 after the Santhal Hull rebellion they began to settle in their present homeland 'Santhal Pargana'. They often wandered in search of a suitable settlement which steered them to move eastward and settle in Bengal, Assam, Odisha, Nepal, and Bangladesh. E.T. Dalton (1973) in his book, Tribal History of Eastern India has mentioned about Baghrai's statement on Ahiri Pipiri, which is the birthplace of the first human couple. Barka Kisku explains that Ahara is an open field where paddy and wheat could be extensively cultivated and the produce is enough for livelihood. The Pipiri attached with Hihiri, could mean the reverse of the paddy field upland with a lot of green groves laden with fruits of all kinds. Ahara is still in everyday use for a big parcel of paddy land, but Pipira has been adopted for villages (Kisku B. , 2000). L. O. Skrefsrud (1968) (Harpam puthi) wrote that towards the rising of the sun is the birthplace of man. Bodding wrote that it is very difficult to describe the origin of the Santhal. In Champa, they lived in prosperity under their king for a long time. At first, they dwelt in peace with Hindus, but later they had fights with them and among themselves. In Champa, several other communities like Munda Birhor, Kurmis and others are separated from each other (Bodding, 2016).

Santhal is mainly the followers of Sarana religion primarily worshiping nature. After establishing missionaries, some Santhal has adopted Christianity; consequently, two types of Santhal are found in the selected region; Sarana Santhal and Christian Santhal. The Santhals are known for their language, customs, traditions, songs dance and vibrant culture.

North Chotanagpur: Jharkhand was known as Chotanagpur in Mughal India. The name of this region Chhotanagpur and Chota (prefix) has given rise to various theories and interpretations among scholars. Chota Nagpur was first colonized in the 6th century by the Nag-worshipping Bhuiyas, who was associated with a class of 'legendary heroes' called the Chutias and the two together contributed to the name "Chota Nagpur" (Pandey, 2000).

Earlier the region came under the control of the British in the 18th and 19th centuries and was annexed to the Bengal Presidency. It included the present-day state of Jharkhand as well as adjacent portions of West Bengal, Orisha, and Chhattisgarh. In 1912, Chotanagpur division became part of the new province of Bihar and Orissa. In 1936, the province was split into the separate provinces of Bihar and Orisha. The princely states were also placed under the authority of the Eastern States Agency. The North Chotanagpur divisions comprise Bokaro, Chatra, Dhanbad, Giridih, Hazaribagh, Koderma and Ramgadh districts. The administrative headquarters of the division is in Ranchi. Dhanbad and Giridih have a large mix of different cultures and people like Bengalis, Biharis and indigenous people. Bengalis are the ethnic people of Dhanbad.

Giridih and Bokaro districts are in the west side, Giridih and Dumka on the north side and Purulia district of West Bengal is the east and south side. Giridih district was carved out from the Hazaribagh District in 1972 (Chattopadhyay, 2014). Giridih is the most populous district with a rural population of about 22.4 lakhs. The district comprises of vast forests, which are uniformly distributed. Sal is the most famous and predominant species of trees found here.

Bamboo, simul, mahua, palas, kusum, kend, asan piar and bhelwa are other common species are. The partial archaeological excavations that have been carried out have proven that Chotanagpur has been the home of a man from time immemorial and that it is one of the cradles of ancient human civilization. Apart from Santhal, Kurmi community is found as a dominant population in these regions. The Kurmi community are known as cultivators and market gardeners. Their name is assumed to have its origin in Sanskrit Language Krishi, which means cultivation or from the word Kurma, which implies the tortoise. The Kurmis mostly resemble the features of the Santhal and Bhumij communities. They are the follower of Hindu and Sarana religion. The Kurmi community are governing bodies in the regions of Maharashtra, Sindh, Gujarat, Kashmir, and in some parts of Pakistan before the Aryan invasion. Kurmi community mainly belongs to the Chhattisgarh and Jabalpur divisions (Katiyar, 2011) (Bayly, 1999).

Kolhan: Kolhan division comprises three districts such as East Singhbhum, West Singhbhum, and Saraikela Kharsawan. O'Malley discusses the formation of Kolhan division, he mentions that during the era of the British Raj, Seraikela and Kharsawan were part of Odia princely state. In 1912, first time Saraikela came under the authority of the province of Bihar and Orisha. In 1936, the state was placed under the power of the Orisha Province. In 1948, Saraikela and Kharsawan princely states were merged with Orissa in 1948. In the same year, indigenous communities of these two princely states revolted against the merger with Orissa. As a result of that in 1948, Saraikela and Kharsawan princely states became part of Bihar. Saraikela and Kharsawan princely states became part of Jharkhand when the state was separated from Bihar in the year 2000 (O'Malley, 1910). In 2001, this district was carved out from West Singhbhum district. People speak Oriya, Hindi and Santhali language.

East/Purbi Singhbhum²⁶ and West Singhbhum was known as Singhbhum district before the division. Dense forests, diverse fauna, flora and mountains cover most of the district. The word Singhbhum is derived from Bengali words *Singha* which mean lion and 'bhumi' meaning land, together meaning the Land of Lions because of the wildlife in the forest. The Singhbhum area contains hill ranges alternating with valleys, steep mountains, dense forests on the mountain slopes and in the river basins. Tatanagar is the leading industrial city of this region and easily

²⁶ In 1990, Purbi Singhbhum district was created from Singhbhum region. <https://jamshedpur.nic.in/about-district/>

connected with Southeastern railway route of India. Dalma is the wildlife century in this district. Apart from Santhal, Ho community belonging to Austric group was found here during the field visit. Ho has participated in a fierce rebellion of 1831-33, called the Kol uprising, along with the Mundas. Ho practice the indigenous religion Sarnaism and worship Sing Bonga.

2.1.3 Rural mural art forms

There are four mural making mediums found in eastern Jharkhand such as; mud mural, paint mural, rice paste mural, mirror and bangle murals (Pallavi, 2017) (Pallavi R. , Udaya Kumar, Tudu, & Bora, 2016) (Fig. 19).

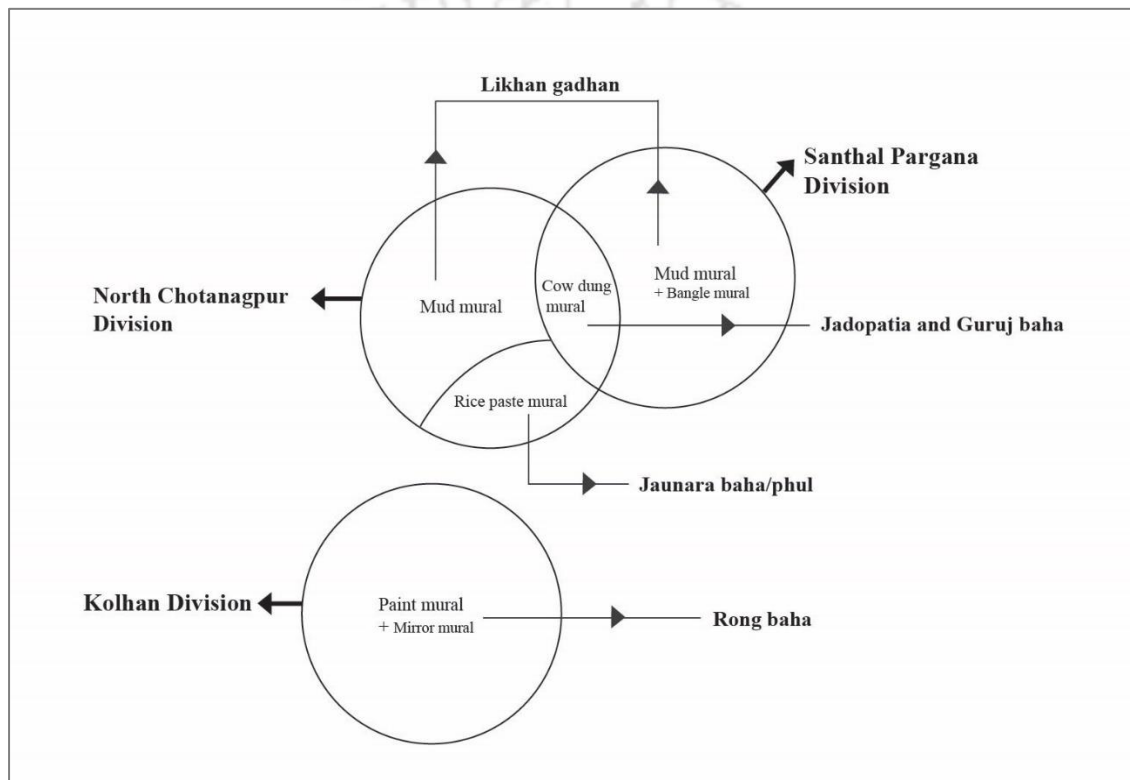


Fig. 19 Graphical representation of four making techniques of eastern rural Jharkhand

A. Mud mural (Likhan gadhan)

The mud houses of Santhal Pargana and some districts of North Chhotanagpur division are decorated using the mud mural technique. In this technique, visual forms are made on the wall with the application of mud. Both the preparation of the walls and the process of decoration are equally essential in this method. The entire technique is divided into two equal phases. In the first phase, mud walls are prepared with the mixture of murum mati (clay), fibres of jute, hemp, and husk, while cow dung paste is used to plaster the freshly prepared muddy wall. In addition,

wooden tools, brooms, and fingers are used to apply plaster²⁷ to the walls. In the second phase, women apply clay in specific shapes and patterns when the walls are about to be completely dry. Knives, wooden spatulas, and fingers are used to shape the visual elements. In some houses of Santhal Pargana, murals comprised of pieces of mirrors, pieces of bangles, broken shells, and Digital Compact Disks (or CDs), which are fixed on the clay itself. Background colours made of Khariya (Zinc Oxide) and Dudhi mati (white clay) are used as a primer on completely dried wall plaster. In the end, motifs and borders are painted using organic and synthetic colours. The following figure shown the mural-making process A. mud paste making process, B. applied clay on the wall, and C. painted mud (Fig. 20).



Fig. 20 Mud mural making technique

Mud house owners, who do not repair their walls annually, apply a few layers of plaster on existing mud walls and create murals on them after a few hours. In mud mural technique, clay is applied on the wall directly. Some artists apply clay on the wall in a circle and cut them into the shapes. In some regions, the shapes are drawn separately with the help of hands. Final painted mud house is shown in Fig. 21.

²⁷ The smooth plastering and painting further create a surface that allows rain to wash off the wall surface immediately.



Fig. 21 *Likhan gadhan* mural made by mud, Dhanbad

Bangle mural (Churi baha): In Santhal Pargana and Giridih region bangle murals were found. Bangle mural is made with the colourful bangles. Bangles are broken into the pieces and grouped according to the colours. A layout drawn on the wet mud wall with the help of sharp tool and bangle pieces is pressed to fix on the etdamp mud wall. In Fig. 22 describes the process of making bangle mural, A. mud paste making process, B. pieces of broken bangles C. pressed bangle in the mud. See Fig. 23 for final Bangle mural.

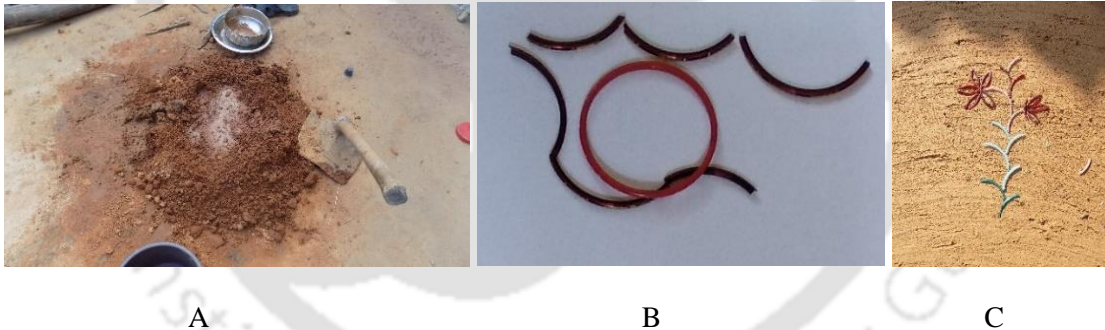


Fig. 22 Bangle mural making technique



Fig. 23 *Churi baha* mural made by bangle, Dumka

B. Paint mural (Rong baha)

In '*paint mural technique*,' the preparation of the walls and the process of decoration both are equally essential. The entire technique is divided into two phases. In the first phase, mud walls are prepared and after drying, colours are applied on the wall. In Kolhan division, paint mural technique is used. In this technique, the elements are drawn in two ways; in one free hand and the other with the help of tools such as the compass, disc, pot, pencil, and thread. Some additional materials such as CD (Compact Disc), mirror pieces and pieces of bangles are used to decorate the murals in different districts of Santhal Pargana and Kolhan division. In Kolhan region Jamshedpur is the nearest city of Saraikela-Kharsawan and Purbi Singhbhum district. For the villagers it is easy to buy various kind of paint and brushes A. mud paste making process, B. Grid making process on the wall C. geometrical form execution is shown in Fig. 24. Final painted Rong baha mural is shown in Fig. 25.



A

B

C

Fig. 24 Paint mural making technique



Fig. 25 Rong baha mural made by paint, Purbi Singbhum

Aarasi baha (Mirror mural)

In the Kolhan region, the mirrors are pasted on the painted wall. Mirror mural (Fig. 26) follows the bangle mural technique in a similar way, pressing mirror pieces in the wet mud wall. In some area, glues (babul tree's gum and fevicol) are used to fix it on the wall.



Fig. 26 *Arasi baha* mural made by pasting mirror pieces

C. Rice paste mural (*Jaunara baha/phul*)

In North Chhotanagpur and some districts of Santhal Pargana, rice is ground and mixed with water or milk. Maize bone is used as a tool to make a pattern on the wall. The maize bone is dipped in the rice paste and quickly pressed on the wall making the impression (Fig. 27). The size of the pattern varies according to the size of maize, size of the pot, which contains the rice paste, and the dipped portion of the maize bone. Final *Jaunara baha* is shown in Fig. 28.



Fig. 27 Rice-paste mural making technique



Fig. 28 Jaunara baha mural made by rice-paste

D. Cow dung mural (Jadopatia and Guruj baha)

In Jadopatia and Guruj baha painting, cow dung is mixed or diluted in the water in a pot. The visual forms are then painted on the wall using fingers (Fig. 29). Final Jadopatia mural is shown in Fig. 30 and Guruj baha in Fig. 31 (next page).



Fig. 29 Cow-dung mural making technique



Fig. 30 *Jadopatia* mural made by cow-dung



Fig. 31 *Guruj baha* mural made by cow dung

2.2 Insight from the literature

Literature provides many reasons to appreciate or value the mural artwork in various context like cultural, material, intrinsic, religious, nationalistic and psychological.

Through the literature, we find a rich source of information in the various treatises, manuals, and handbooks. These treatises mainly focus the methods of art historical research, painting expertise, and scientific research (a detail study of painting technique) in the field of visual arts by the art historians, conservation scientists, and artists. Thus, their research makes valuable information

about the painting techniques of an individual artist, a school, or an art historical period or movement.

The literature shows that in Indian art history, rural or folk art is always identified as daily life activities, and court art wall paintings are prioritised as Indian mural tradition. In rural mural art, the investigation generally focuses on the particular community or area following the cultural aspects. There are few relevant kinds of literature on rural mural art forms of Jharkhand are found in form of inquiry of painted mud houses by ethnographer *Daniel J. Rycroft* (2010), social activist *Bulu Imam* (2011) and architect & research scholar *Gauri Bharat* (2015). These relevant literatures provide information about aesthetic, narration and material, methods of the mural art form of Jharkhand. Apart from Jharkhand, the rural mural art form of other states of India are hardly investigated systematically. However, not many resources or documentation are found about rural mural art forms of eastern Jharkhand, and there is a lack of investigation on physical or visual aspects of the art form. This provides a tremendous scope and opportunity to do an in-depth study on the mural art form of eastern Jharkhand.

2.3 Aim and Objectives

Aim of the study: A study on visual characteristics of the rural mural art form of Eastern rural Jharkhand. Research questions and Objectives are listed below (Table 1).

Table 1 Research questions and Objectives

	Research questions	Objectives
1.	What are the visual characteristics of mural art forms of eastern rural Jharkhand?	To identify the visual characteristics of the mural art form of eastern rural Jharkhand.
2.	What are the types of visual forms are painted on the mud houses?	To document the rural mural art forms of eastern Jharkhand.
3.	What are the purposes and inspirations of these art forms?	To understand the rural lifestyle of eastern Jharkhand



This page is intentionally left blank

3 METHODOLOGY

This study follows the qualitative research technique. Concerning the rural mural art form of India, in 2014, a pilot study was conducted in Hazaribagh district of Jharkhand and Birbhum district of West Bengal. Approximately 2-3 villages have been visited in both states. Several mural art forms have been noticed on the mud houses of Kurmi and Santhal communities of these areas. Since West Bengal is the neighbouring state of Jharkhand and Hazaribagh is a part of North Chotanagpur division of Jharkhand, an assumption was made that mural art forms can be found in eastern part of the Jharkhand as well. Following the pilot study, further study was conducted in eastern rural Jharkhand on three administrative divisions Santhal Pargana, North Chhotanagpur, and Kolhan. The painted mud house of these three administrative divisions and 11 districts were selected randomly following the simple random sampling (Fig. 32).

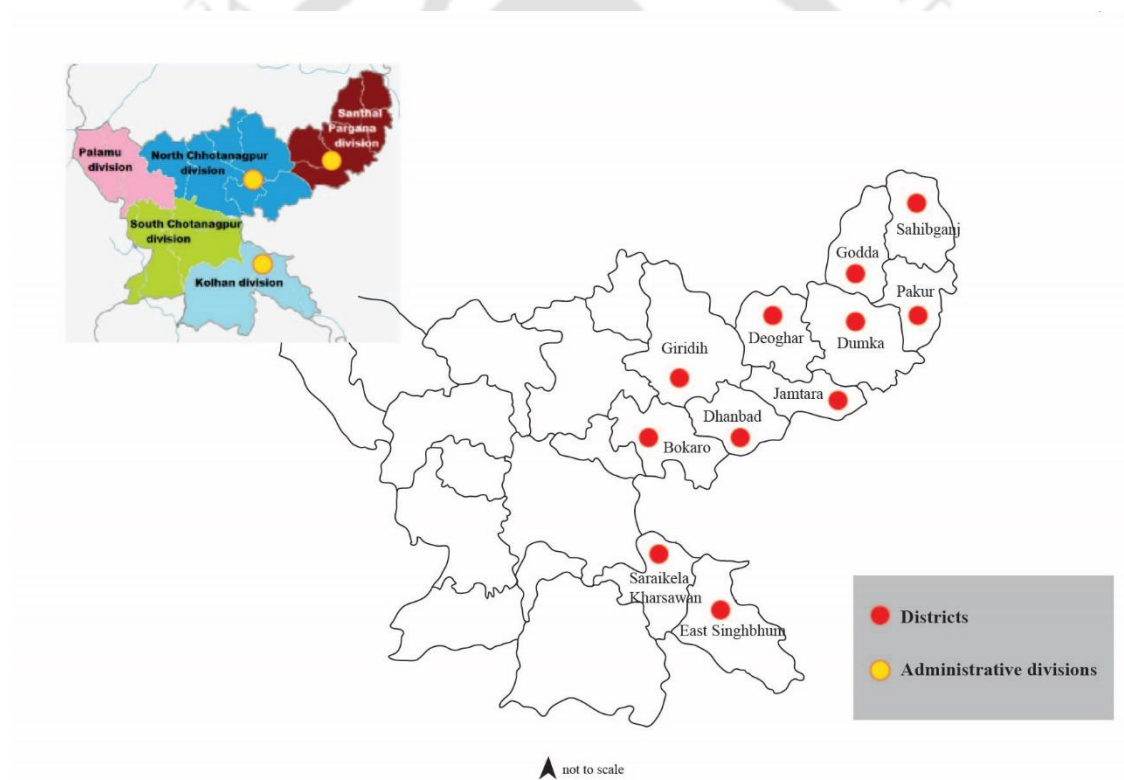


Fig. 32 Selected administrative divisions and districts for data collection

Due to the lack of documentation and information about the mural art form of eastern rural Jharkhand various visit was made to rural areas to find the rural mural art forms. Approximately 60 villages of three administrative divisions were visited and out of which, 42 villages contained rural mural art forms and was selected for further study.

The methodology for this research was followed in two steps are interlinked with each other; A. Data collection B. Visual analysis. Data collection methodology carried Random Sampling, Photo

Documentation, Field visit, Ethnographic research, and Interviews. Visual analysis carried a combination of Formal analysis and Open-coding method²⁸.

3.1 Data collection methods

After a brief study of Santhal Pargana, North Chhotanagpur and Kolhan division, the villages of these regions have been visited to conduct the field study. The field visit has been undertaken to document the visual art forms of mural art and understand the cultural significance of it. The random Sampling method was used to select the blocks and villages of this area. Photo documentation was used as a key visual method to document the art forms. Interview and participatory research were done to know the cultural and visual aspects of mural art tradition among the communities. 11 districts, 23 blocks in 42 villages and nearly 1500 painted mud houses of the selected three administrative divisions (Santhal Pargana, North Chhotanagpur and Kolhan) were documented and studied. The list of administrative divisions, districts, blocks, and villages is attached in Appendix A. A Jharkhand map (with detail information of district, blocks, and villages) is attached in Appendix B. Documented photographs are listed in Appendix C.

Photo documentation is a visual method which is used in historical or social research as a digital media. Here *Photography* is used as key visual method for documentation (Margolis & Pauwels, 2011) (Collier & Collier, 1986). In this study, photography has been done in many villages. A team was formed to address and communicate effectively with the local people and gather other needful information during the field visit. The subject of photographs was finalized through the *shooting script*.

Team formation: The pilot study (Hazaribagh district of Jharkhand and Birbhum district of West Bengal) and the overview of eastern Jharkhand (section- 2.3.1) gave an initial understanding of the region and communities. Three teams have been formed for the field study. In each unit, the people who belong to each community were included. The included team member was aware of the community lifestyle and are experts in speaking their language. In Santhal Pargana and Kolhan division Santhali, Bengali and Hindi speaking members were included, and in North Chhotanagpur, Sadari (Chhota Nagpuri language), Santhali, Bengali and Hindi speaking people were included. The role of the selected members was to translate the sentences and make proper

²⁸ A labelling process is done with the shot photographs to use tables and geographical maps (different districts of Jharkhand) allowing it to be used as an answer to different shooting script questions, or illustrating different characteristics of the subject. It is an interpretive process by which data are broken down analytically. In this coding, events, action, interaction error is compared with others for similarities and differences (Corbin & Strauss, 1990). To avoid error to place data in category systematic comparisons is located and data and concepts arranged in appropriate classifications in coding notes (Bohm, 2004). This coding allowed seeing patterns in photographs such as form (*geometric and Organic*), Common features (*Motifs and borders*) and colouring contrast.

communication between the researcher and the local people. The team also added a photographer/video recorder for taking photographs and video during the interview.

Shooting Script: Charles S. Suchar (1997) explains that Shooting script works as guides for photography. It is a series of questions about the subject matter which can be examined through photographic information. This process helped the researcher to structure daily fieldwork and photography (Rose, 2012) (Margolis & Rowe, 2004). In this study, the initial shooting script was developed, relevant to research questions, which focused on style, colour, techniques, and cultural significance. The photographs were shot by the researcher accordingly. After collecting some data, it was observed that the shooting script needs modification. It was modified to focus mainly on cultural and social influences on the art forms. The shooting script is attached in the Appendix D.

Collected data shows that out of all the communities Santhal is the community is sincerely involved in painting their mud house. In the districts of Santhal Pargana and Kolhan, the mud houses of Santhal (e.g., either Sarna Santhal or Christian Santhal) and in North Chhotanagpur the mud houses of Santhal and Kurmi (Mahato) were documented in high numbers compared to other communities. Except for Santhal and Kurmi's villages, there are no other villages, where entire village communities are involved in painting their house with visual forms. Other communities (e.g., Ho, Kumhar, Lohra, and Bengali) are either living in the neighboring villages of Santhal or staying in helmets of Santhal villages in two or three households. It is noticed that in selected districts other communities follow the wall art practices annually during the same time and similar way. They have also adopted the Santhal's lifestyle, dialects, feast, and festivals as well.

3.1.1 Ethnographic study

Photo documentation has given adequate information about the regions and communities, and it has helped in creating a suitable ambience for ethnographic research. A list on the number of villages, festival timings and location, and local folk-art forms of each district were made. Approvals were made to visit the village from the Gram panchayat members or Mukhiya (Headman) of the particular village.

Some of the villages of Santhal Pargana are a part of the Naxal belt²⁹ and in many of the villages, the local transportation facilities were limited within a specific time frame, from morning 10 am to evening at 4 pm. Because of the narrow path, only two-wheelers can be used for the field visit.

²⁹ A Naxal belongs to any political organisation that claims the legacy of the Communist Party of India (Marxist-Leninist), founded in Calcutta in 1969. At Present 18 districts out of 24 districts in Jharkhand are affected by Naxalism. Hazaribagh, Lohardaga, Palamu, Chatra, Garhwa, Ranchi, Gumla, Simdega, Latehar, Giridih, Koderma, Bokaro, Dhanbad, East Singhbhum, West Singhbhum, Saraikela, Kharsawa, Khunti, Ramgarh are are Naxalite affected areas (Shekhar S. , 2018).

The villagers, both men, and women go out to work in the field in the morning when it is still pleasant (Santhal Pargana and North Chhotanagpur). In Kolhan division, men are the ones who work in industrial companies like Tata, Telco, Jemco while some of the women in Aagan Badi (Pre-school). As can be seen, the villages have their schedule structured at different timings for their work be it in the field or the industries. For this reason, it was not feasible to gather all the participants for group discussion at one time.

Taking into account these circumstances, out of 42 villages the study was conducted in 18 villages. The villages of Dumka, Godda, Deoghar of Santhal Pargana, Giridih, Bokaro and Dhanbad of North Chhotanagpur and Purbi Singhbhum and Saraikela Kharsawan of Kolhan divisions were visited with staying arrangement made among the rural people. The lifestyle, food habit, dressing style, myth and traditions of the community were observed. Participatory research approach was adopted and unstructured interviews were conducted to make the rural people comfortable. The interview process carries two approaches; the first was a group & personal Interview and second was a photo interview. Before the interview an overview of the research is given by the researcher and consent were signed by the participants (Fig. 33). Signed consent letters are attached in Appendix E.



Fig. 33 A click of field visit, taking participants detail

Participatory research: Participatory research was conducted a few days before the local festivals like Sohrai, Baha and Makar Shankranti. Participatory research was done to understand the mural making technique, execution method and cultural aspects of the communities (Fig. 34) (Fig. 35).



Fig. 34 Participatory research, learning mural making technique



Fig. 35 Participatory research, celebrating Baha festival in sacred grove

Group & Personal Interview: Unstructured interviews were conducted which consists of Open-ended questions. The interview has been scheduled in a daily routine setup when the people are carrying out the household chores, working in the field (agricultural activities), performing some rituals and while creating art forms (Fig. 36) (Fig. 37). With the help of the interview, several questions were clarified including cultural and social significance, inspiration, resources, techniques, and design thinking. Questionnaire and informal conversation statements are attached in Appendix E.



Fig. 36 Personal interview, Santhal Pargana region



Fig. 37 Group interview, Kolhan region

Photo Interview: While conducting group & personal interview, it was observed that the explanation about visual art forms was not covered or discussed in conversations only. Therefore, an approach of presenting photographs to the participants during the interview was adopted. Collier explains that Photo interview is a method of using photographs to guide conversations and ask questions about social, cultural, and behavioural realities (Collier & Collier, 1986) (Harper, 2002). Photo interview helps to prompt participants to express things in different ways (Rose, 2012).

In this study, the photographs that were shot during the photo documentation were exhibited. Photo interviews were conducted in three villages (Govindpur, Raghunathpur and Sarkardih) in each administrative divisions of eastern Jharkhand. 30 participants artist and non-artists were selected for the interview. Photographs such as flower, plants, creepers, birds, animals, human, manmade visual forms were selected for the photo interview. Photographs were printed in A3 size paper and exhibited in the street and courtyard of the villages. The main objectives of this interview are to identify the visual forms and understand their interpretation of visual features. For identification of visual forms, photographs of unidentified visual forms were selected. For the interview photographs were marked with a serial number and exhibited. Participants were asked to identify the visual forms and following their answers a note was prepared (Fig. 38). Process of this task is shown in Appendix G.



Fig. 38 Photo interview, Identification of visual forms

The questions were open-ended. The questions regarding visual attributes of the forms were asked like; how do you know; this is a flower image? What are the similarities between the pictures? The outcome of this interview shows the minimum and maximum body parts of visual elements that helped to classify the visual forms like animals' features are different from the birds, and plants are different from the creepers, etc.

Another photo interview (Fig. 39) (Fig. 40) was conducted aiming to know the visual and cultural aspects of rural people. The photographs were selected focusing on the visual characteristics like style, colour, and technique. The photographs were developed as A3 prints and were exhibited (which can be viewed by both the researcher and the research participants during the interview) in outdoor and indoor spaces like courtyard and streets. Various aspects of artwork including inspiration, resources, and social aspects were covered during the *group interview*. *Group discussion* with the photographs was conducted to understand their understanding of the existing artwork. Personal interviews were conducted with the same photographs to avoid biases. Personal interview was also conducted with photos for comprehending the interpretations of the artist regarding this topic. With the help of the photographs, the participants were more open to sharing about their lifestyle and their personal views on the artwork. Group discussion on exhibited photographs revealed the social aspects of mural making. Participants were deeply involved in discussion and began to explain their views and understanding of the art. *Comparison* of one mural style to the other, the effectiveness of particular artwork and *prediction* of the purpose of following a particular layout were the main topics of discussion among them. Field note was used to gather information such as *activity, object, event, time, feeling, etc.* Video recording was done to record all data.



Fig. 39 Group Photo interview, understanding the visual aspects of rural people



Fig. 40 Personal Photo interview, understanding the interpretation of the artist

3.2 Visual analysis

In this study, to analyse the physical characteristics of rural art form, *New formal analysis* model was used. Concerning the requirement of this study, *New formal analysis model* was designed.

3.2.1 New formal analysis

New formal analysis is a visual analysis model that was designed to analyse the physical or visual characteristics of rural mural art forms of eastern Jharkhand. In this study, it follows two steps; first was the analysis of the *individual visual form* and second was the analysis of *visual form with the wall*. The analysis of *individual visual form* and *visual form with the wall* was done based on the nature of visual form, representation of visual form and categorization of visual form. Nature, representation and organization mainly talk about order, direction, shape execution, association, combination, repetition, rotation, reflection, proportion, emphasis, eye view and organization of shape and colour of visual form individually and with the wall see Fig. 41 for details. Visual form with wall analysis was done adopting the open coding method and as a result of this method placement and execution of visual forms were identified. Nature of visual form was studied to find the homogenous characteristics between *Baha(1)*, *Baha(2)*, *Jan-janwar* and *Hor*.

Representation of visuals was studied to identify the composition of visual forms. Organization of visual forms contains the placement of visual elements in the individual visual form and visual

form with the wall. Organization of visual form helps to understand the visual perception of the artist while making the visual art forms on the wall.

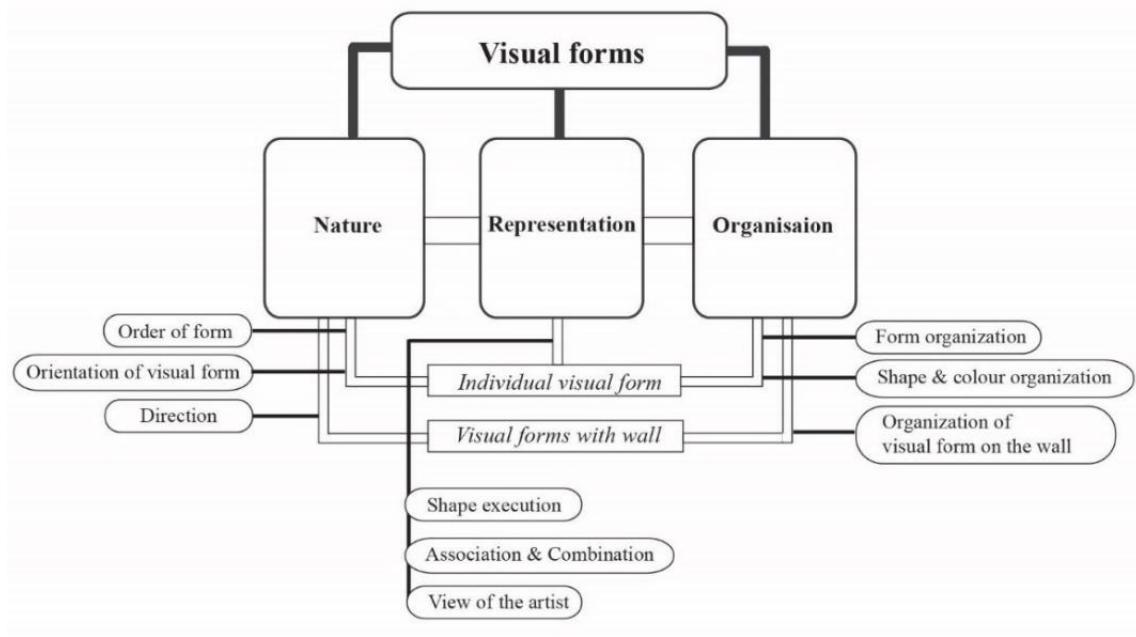


Fig. 41 New formal analysis model



4 ETHNOGRAPHIC STUDY

The rural lifestyle of eastern Jharkhand is simple and elegant. Most of the villages are surrounded by hills and forest. Archer's statement holds true about Santhal mud houses where he stated that 'The Santhal villages are very structured, there is always a main street in each village. The mud walls have a hard cement-like precision. Of all the other tribes of eastern India, none has quite the same relish for neatly ordered houses, the same capacity for a tidy, spacious living or the same genius for domestic architecture' (Archer, 2013). In Santhal village, houses are arranged in a sequence and separated with a narrow street. There is always a *kulhi* (long straggling street) between two houses. Most of the houses have their entrances open to the street. There is always *Manjhi-Sthan* (It is a mud mound with a thatched roof over it, which is supported by five poles) at the end of the street and *Jaher-Sthan* (sacred groove) in the outskirts of the village. In these sacred centres (*manjhi-sthan* and *jaher-sthan*), rituals, devotional activities and sacred performances take place. In the *kulhi* people share, their feast, festival and host village councils. Through *kulhi* (street), people bring local produce (crops, firewood, and grocery) from the local market, field, river, and forest and nearby villages. Bicycles and motorbikes are used for transportation. Hand - pumps are placed in the street, which is commonly used by the villagers. *Ota* (circular mud platform around the house) is attached with the entrance wall (opens in the main street) is frequently used by the villagers for sitting purpose in *kulhi*. Generally, in the evening people sit in *kulhi* communicate and converse about their routine life, dance and sing in the festivals (*baha*, *sohrai*, and *tusu*) (Fig. 42).



Fig. 42 House organization

The wall, which faces the *kulhi*, known as *Baha bhitt* and doorway is known as *Baha-duar* (Fig. 43). The upper elevation of the wall is used to hang pitchers for the pigeons or hang ropes for drying clothes. Size and structure of the Santhal house varies from region to region. However, the courtyard and veranda are constructed in the same manner and being used for socio cultural activities. It is used for storing all kinds of miscellaneous things like rice and mahuaa. The courtyard is also used for drying flowers and clothes etc. People keep their *dhenki* (rice- grinder)

and their *janta* (hand mill) in the courtyard. In marriage ceremony, young girls and women dance in a circle. The courtyard is also used as a kitchen (Fig. 44). People mainly use earthenware, aluminium and iron utensils for cooking purpose. For eating purpose, they mainly use *kasa thali* (brass plate) and *bati* (bowl). For drinking purpose, they use utensils like *kanda* (pot) and *lota* (drinking vessel).



Fig. 43 Baha-duar



Fig. 44 Use of courtyard

Baha-duar (doorway) facing the kulhi and courtyard is decorated with visual forms. From the courtyard, this door leads to the rooms. The rooms are used as a storeroom, bedroom, and sometimes kitchen. Windows are rarely provided in the rooms. Each house has a *bhitar* (which is a sanctified corner in any room of the house). They keep a figurine of a *horse* and *elephant* made either of metal, wood or mud in the corner covered. They believe, it will be harmful to the clan if dust falls on it. Guests are not allowed to enter this place. Generally, the rooms are dark, snug and warm in the winter and cool in summer. The villagers rarely use electricity. There are bulbs in the houses, but fans are rarely seen. There are television sets in some of the houses, but they are not used as much by the villagers. In the daytime people might sleep or do some craft work, to name a few: *sujni* (mattress) with colourful flower patterns on it, door hanging, basket making and wood carving (Fig. 45). They also maintain and repair agricultural tools and appliances. At the backside

of the house a pig shed, cow shed, and goat shed is found. A kitchen garden is common and a patch nearest to the house is used for it.

Santhal villages comprise of hamlets or *tola* of other communities like Hindu, Lohra, and Kumhar. The *tola* (hamlets) of these communities, which are practically small separate villages, fall under the *Manjhi* (Manjhi are the headman of Santhal villages). They follow the Santhal rituals, traditions and share their festivals and vice versa. They also worship in *majhi-sthan* and *Jaher-sthan* (sacred groves).



Fig. 45 Daytime activities

Five to six members live jointly in a house. In the house and village premises cocks, hen, pigeon, dogs freely roam and these animals are an important part of the family. It is seen that the rural people are soft-spoken and there is a sense of peace and tranquillity in the village. Because of the quiet environment, one can hear and enjoy the natural sounds of animals and birds found in the village.

The men work as farmers, labourers, factory workers and some of them run the small businesses. With the advent of mining and industry, some of them have adopted mining and factory labour as their occupation. Educated men join government jobs and services. Particularly those who have converted to Christianity and trained in the Christian missionary, institutions as they have good communication. Nevertheless, agriculture continued to be the main occupation. Women also work as ASHA³⁰ (Accredited Social Health Activist) Worker and Anganbadi (playschool) employers. The women help men in agriculture and take all the responsibility of household work like gathering firewood, coal and preparing food for the family. They are also responsible for cleaning and decorating the house. Every day women apply cow dung on the floor in horizontal and curved strokes with their palms or with the use of a piece of cloth. In some cases, they take the

³⁰ ASHA is a community health worker elected by the Ministry of Health and Family Welfare (MoHFW) and as a part of the National Rural Health Mission (NRHM).

impression of handmade tools to make a grid of tiles and patterns on the damp floor before it dries (Fig. 46).



Fig. 46 Household works by rural people

Every day early morning, people go to the nearest river, hilly area and field for defecation. The women like to live and walk in a group for bathing, for collecting water (use for cooking), for fuel collection and gathering food from the forest. They also prefer to attend fairs, festivals or celebration as a group (Fig. 47). For plastering purpose, they fetch clay from the nearest mountain or plain area. Women also use a bicycle as a means of transportation to carry materials collected from the forest and clay. In the evening, women go to the ponds or rivers to draw more water for cleaning the kitchen utensils. A street hand pump is used as a source of drinking water. As they wait for their turns, they gather for discussions and communicate with each other.



Fig. 47 Use of hand pump (left) and women in group (right)

The dressing style of women or men varies from region to region. In Santhal Pargana, women are invariably dressed in simple white attires. At times, they favour yellow *saree* with red border. Men wear *dhuti* (lungi) with border. In North Chhotanagpur and Kolhan embroidered green, blue, ochre colour *saree*, *dhuti*, *dhari* (turban) are most preferable among men, women and children. In *saree*, small motifs of bird, flower, pot, and emblem of *Sarana* religion are embroidered. The Santhal women decorate their hair by sticking colourful flowers into it. For body decoration,

godana khodai (tattoo making) is popular among women. Girls in their teen age mark specific visual forms (e.g., Karam tree, Kadam flower, bird, animal, comb style pattern and various border patterns) by *ojhain* or *khodani* (Sharma K. , 2011) (Fig. 48). They consider these as permanent jewellerys and mark it on their body parts like neck, hand and leg. They believe that this body mark will stay with them always even after death and in seeing this body mark *yamaraj* (God of Death) will redeem them from any punishment. Santhal also considers these markings as having medicinal properties, which gives protection or cure to particular body parts where they are marked.

The women use the ornaments, which are made of nickel, silver, and other artificial materials. At present, women wear long silver chain, which dangles on the chest and some silver bangles and anklets, which adorn the arms and legs.



Fig. 48 Hair & body decoration (left and middle) and dressing style (right)

The sacred groves, which is a replica of a forest is cared for and protected by the villagers (Fig. 49). It is an indispensable part of the Santhal village. It is usually situated in the west end of the village in the form of mini forest. The sacred groves vary immensely in size. Some contain only a few trees while others are hundreds of acres in size. Size of these groves is found to range from one kilometre to five acres. In every village, these sacred grooves are also known as *Aato Jaher/ Jaher sthan*, where village level participation in terms of worshipping and events and festivals takes place. It is associated with the socio-cultural, religious, ecological and economic aspects of the rural community. It is also associated with the environmental, social and ethnic identity of the Santhal society. Sacred performances are (sets of rites and rituals) performed by worshippers at different sacred centres. The village priest *Naike* (Santhal priest) conducts these rituals. The puja articles are vermilion, *arwa chawal* (rice), flowers, paddy, maize and puja utensils pitcher, drinking vessel, and bowl. Sacred figurines are made using straw before the festival (Kisku, Bakhat, & Guha, 2010). For preserving the sacred grove, they have some universal taboos and beliefs, which are associated with sacred groves.

- a. The falling of the tree is strictly prohibited. There is some occasional clearance in that some selected grasses and shrubs are cut down before the festivals for the dance and ritual purposes.
- b. Animals are not to be harmed in the premises of the groves,
- c. Collection of firewood or even dry firewood is also forbidden, grazing of domestic animals and farming and playing any game is strictly prohibited (Kisku, Bakhat, & Guha, 2010) (Israel Oliver King & Viji, 1997).



Fig. 49 Sacred grove

Present days' Hindu communities are also participating in sacred grove rituals. They wear Santhal dresses and perform in *sarana* or village premises. Under the religious leadership of Christianity *Santhal Christian*, do not use sacred groves any more they go to churches for the worship, though they are wearing Santhal dresses.

Some festivals of Santhal are celebrated in the village premises but most of them are celebrated in the sacred groves. A detail list of festivals is attached in Appendix. The festivals like *Magh Sim*, *Baha Parab*, *Mak More*, *Erok Sim*, and *Got Jom* are celebrated in the sacred groves (Singh A. K., 1982). *Marang Buru*, *Jaher era*, *Moreko Turuiko*, *Purudhul*, *Sima Bonga* are worshiped and various rituals are performed in the sacred grove. A few of the figurines are hanged in their sacred groves to follow some myth and concept. Straws are used to form figurines that depict peacock and human forms. Most of their festivals are related to agriculture. The agricultural festivals are celebrated during the sowing season usually in the months of July and August (*Erok Sim* & *Hariar Sim*). During these festivals, hens and cocks are sacrificed to please the *bongas* (Gods) for they believe that the Gods will make their crops yield better as they prepare the paddy fields for farming. The festival in all the Santhal villages does not start on the same day. Depending upon the completion of the harvesting and financial condition of the villagers of a particular village, the day for celebrating the festival is decided. For the decision of selecting the starting day of the festival, a meeting for discussion and decision-making is held among the members of the community, after which the final call is taken by the *Manjhi*. After the day has

been decided, the responsibilities to be performed for the festivals are assigned to the people of the village.

Most of their festivals are related with agriculture. The agricultural festivals are celebrated during the sowing season usually in the months of July and August (Erok Sim & Hariar Sim). During these festivals, hens and cocks are sacrificed to please the bongas (Gods) for they believe that the Gods will make their crops yield better as they prepare the paddy fields for farming. The maturing crops are ceremonially harvested and gathered in November and December, and they are offered to the Bongas at the sacred grove as part of Janthar ritual. With large heaps of rice, the Santhals celebrate for five days in the Sohrae festivals. Hens are sacrificed, rice-beer is brewed and fertility of cows is awakened through blessings (Day, 2015). During the conversation, it is known that the festivals time is based on nature's signal (on the appearance of the moon, on the blossoming of plants, on the fruiting of trees) and upon the solar and lunar eclipses (Aleaz, 2002).

Bir Sarda is the time for seasonal hunting. *Binsar* is the time of dawn dancing. *Na-amke* is the famine time. *Mak-more* is the epidemic time. The seasons for celebrating the main festivals also vary every year like in Santhal Pargana, the timing of *Sohrai* festival is celebrated in the month January, and in Kolhan it is celebrated in March.

Sohrai is considered one of the biggest festivals among Santhal. The *Sohrai* festival is also known as The *Hati Lekan Sohrai*, which is in comparison to the biggest animal i.e the elephant (Hati). Traditionally it starts after the first day of Amavasya in the month of *Kartik* (October or November in English) and is celebrated for the next continuous five days. Generally, at the beginning of the winter harvest, this festival is celebrated in the villages and households. This festival has its vital importance in maintaining the heritage of their culture, agriculture and traditional values. This festival has great significance in Santhal society. As per oral folklores, *Marag Buru* (supreme god) listened to their prayers and blessed them with cows and bullocks for farming. There is a tradition of inviting every married woman along with her husband by her father and brother to her ancestral home during this festival. Inviting a married girl to her ancestral home is considered as a significant and imperative part of this festival where relatives near and far get together. It is a time of happiness and enjoyment for all the guests (invited relatives).

Baha is an indicative festival of the arrival of New Year and season change (Fig. 50). There is not a fixed date for *Baha* festival celebration. *Baha* is commonly (not always or everywhere) celebrated in the month of *Phalguna*, from the fifth day of the new moon till the full moon day by the *Santal* community. The *Sal* flowers are the first flowers of the year for the Santals. As a tradition, the first flowers and first fruits are at first offered to the almighty, and then the tribe can enjoy the essence of the new flowers and fruits (Fig. 50). *Baha Sendra* is a hunting festival, and it

is celebrated just after the *Baha prob*. In this festival male hunters go for hunting in the forest with their traditional weapons like bow and arrow. Santhals are well versed in the art of hunting, where their exceptional skills with bow and arrows is noticeable. After the ban on hunting by the Government of India, the Santhals do not get chance to practice their archery skill but recently a new venture of organizing village level archery competitions during festive seasons has given an opportunity to culture this unique legacy. The bow and arrow they display in their room to showcase. In *Jaher-sthan* bow, arrow, spear and other weapons are kept for worship purposes.



Fig. 50 Baha festival celebration

Santhals mainly celebrate the Karam festival (September and October). They celebrate this festival to please God to increase their wealth and free them from all the enemies. It is a tradition among the Santhals to grow the Karam tree outside their house. In the evening, men, women, and children from entire communities get dressed in their traditional attire and dance around the *Jaher Sthan*. After the community rituals are over, the head priest of the village (*Naike*) retires to his home with a lot of joy and fulfillment accompanied and escorted by entire community male and female from *Jaher* to *Naike's* residence. While he retires to his village, the women of each house stand to wash his feet and receive *Sal* flowers from him. After this, the whole village sings and dances until late at night. The whole environment turns mystic and happiness is filled in the air. A list of festival is attached in Appendix H.

The people of the Santhal community are known for their tradition of warm welcome. A typical gesture for expressing *Johar* (greetings, welcoming, and gratefulness) differentiates the Santhal and Ho communities from the others. Giving salutation to their guest vary from one region to another. In Santhali language this gesture of respect is known as *Johar*. In Santhal Pargana by the process of *Johar*, they show their deep respect to the guest. They wash their feet with water, massage it with oil and rub it with cloths. In North Chotanagpur and Kolhan division, people bring their palms close together to greet their guests *Johar* and give them a *lota* full of water. The typical gesture for expressing greetings are used in welcoming the guest. Never is the gesture done unilaterally: the person standing in front always reciprocates. The movement is done slowly

and with a soft 'shhh' pronounced. *Arsa pitha* is prepared to welcome the guest at any social ceremony. *Kurmi* or other Hindu community do *pranam* combining their both palm and give a *lota* (steel or brass vessel) full of water to the guest to wash their feet and hands.

The Santhals eat less spicy food, boiled rice, and rice beer are among their favourite foods. Rice beer is related to their myth of the origin of mankind. Rice-beer is commonly known as *handiya* in local languages. It is said to be a highly refreshing and invigorating drink. It has great importance in religious festivals and is also used as good medicine for the stomach. Rice-beer is always offered to a respective visitor and refused by the visitor is considered as disrespect. Rice-beer is a sign of womanhood and femininity. It is normally prepared inside the kitchen. Only married women can prepare it (yet unmarried women observe and even help their mothers in the preparation process). A married woman who does not prepare rice-beer is inconceivable. Santhals eat almost all available kinds of fish and crabs. Added to these are many varieties worms, and insects like red ants and termites and the flesh of various animals like tigers, bears, crows, mice, frogs, and snakes constitute their menu and suit their palate. Different varieties of cakes are prepared like *jil-pitha*, *chor pitha* and *arsa pitha*. They eat various kinds of leafy vegetables. They also prepare different types of food items made of multiple food grains.

Traditionally, the Santhals are non-idol worshipers; they have no temple, no image too, no holy books, no official founder of their religion and no regular worship (Fig. 51). They have a strong faith which is traceable through their festivals, cleansing ceremonies, etc., and have fully developed culture. According to the Santhals belief, the world is inhabited by invisible supernatural beings of various kinds and benevolent spirits of the dead ancestors who continue to have an interest in the affairs of their survivors. The Santhals believe that they are living, moving and having their being in this world of supernatural entities. In other words, the Santals live not only in their tribal society but in a greater society consisting of supernatural creatures as well. The Santhals relation to these spirits is one of reverential fear, dependence, submission, and propitiation. Communion with these spirits is concretely manifested mainly through supplications, rice beer offering and animal sacrifice made on behalf of the particular group. Among the Santhals, the term *Bonga* is used for various categories of supernatural beings. For the creator, ghosts, own tutelary spirits, spirits of deceased relatives, witches, etc., and even Hindu deities. The Santals' belief originally centred on a supreme deity called *Thakur Jiu*.



Fig. 51 Bonga worshipping by Santhal in sacred grove (left) and in village (right)

They believe that this world is a divine place, which is full of spirits/ bongas. According to their concept, in this cosmic space, good and evil spirits stay and through the ritualistic activities of human, they became pleasure or angry (Saha & Goswami, 2013). Santhal believe that there are two kinds of spirits; one is good another is bad. The good spirits they worship in the form of nature; paragana Bonga is the spirit of the region. Sima Bonga is the forest spirit. Jaher era is the spirit of a sacred grove. They believe that the evil spirits are that, who neither participated in creation not fulfilled the function of protecting village or its people. *Churin* (Vampire), *Naihar bonga* (Spirit of Father-in-law), *Kisar bonga* (Sprit of Enrichment), *Sima bonga* (Spirit of the border), *Jola bonga* (spirit of a pool) are evil spirits who was gleeful in giving pain to others. From here, the concept of bhut originates. Other communities also have faith in *bhut*. They believed that bhut resided in every nook and corner of hills and dales, fields and plains, rivers and creeks. From these concepts, the dainism, ojhaism, and witchcrafts emerge among the rural communities. To protecting the family members from the evil spirits, they perform many rituals; wall art tradition is one of them.

The political organization and administrative is generally is democratic. The Santals govern by their laws and have their method of treating different kinds of offences. The offices of the political organization were usually hereditary and passed patrilineally, but nowadays the offices are not only innate but are conferred by selection of person. These officials are responsible to the community for their functions. The headman of every Santal village is called Manjhi, and he is elected by the entire village community. He is the representative of the village both in the external and internal affairs. He decides the date for the village festivals and also the nature of the Sohrae. He is also to see the maintenance of law and order of the village. Headman participation and opinion are very much desired. The headman participates in all important village affairs, like birth, marriage, funeral rites, etc. in any family of the village. It is a practice that the headman would be attended first on formal occasions, such as when salutations are offered in gathering, when rice-beer is served when purification rites (such as shaving, anointing) are performed. The dates for festivals, village worships, marriages and communal hunts are finalised by the headman

after consulting other persons in the village. The formal dances and the ceremonies involving the whole village are started in the house of either headman or head priest according to traditional rules (Fig. 52).



Fig. 52 Role of manjhi (headman) in sacred performances

4.1 Origin of Mural making tradition

There is hardly documented literature available from when the mural making tradition is started by the villagers. The settlement story of Santhal, Kurmi, and Ho give some clues about it.

The early history of the Santhal is replete with the stories of migration. With the time, they settled down from a nomadic community to permanent agricultural community (Biswas, 1956) (Chattopadhyay, 2014) (Kisku B., 2000). First, they cleaned some parts of the forest and started to settled down in plain and made shelters. Ratan Hembram mentions that, Jhanti was the earlier housing structure which made by them while settling in the plain. It is the earliest housing structure of Santhal. It is the original and primitive style of house making. It made by bamboo and Sagaah (a kind of shrub). There was no window or formal door/ threshold, roof, courtyard.

Bamboo was used to made walls, branches of trees and hay are used to make the roof.

Presumably, this represents a stage of Santhal life when their forest-dependent economy had not consolidated to provide the material basis for more substantial houses. In the stage of migration, they did not think to settle down at the particular site. They started making substantial houses only when they found that they could live in the chosen site safely. They also thought to collect the building's materials easily from the adjacent forest accounting for enough food. Kumbha was the improvised version of Jhanti. This was constructed with stronger building materials like mud, grass, Sal logs or bamboo poles. One side the structure keeps higher to make sloping single roofed. After introducing this permanent house structure, the community was turned towards less nomadic and more settled and started to manage village life. Single sloped roof houses were slowly converted into two- sloped roof and thatched with wild grass. With the passage of time,

they adopted the technology of plastering the walls with mud. In this way, the mud houses are an improvised version of their housing structure (Hembram, Ghos, Nair, & Murmu, 2016). Jhanti and Kumbha shown in Fig. 53.



Fig. 53 Jhanti: (left) Kumbha: (right) Santhal earliest house structure

The pattern of houses of rural people has undergone considerable changes in the last fifty years. Forest Act might be one region for their development in house structure. Up to the middle of the 19th century, people use forests and their produce. After the introduction of Forest Policy of 1894 by the British rulers their dependency on forest slowly decreases (Zakir, 2015).

Ratan Hembram et al. (2016) states that the Santhal community started building mud houses between the end of the 19th century and early 20th century. During this year, forests in the Singhbhum region were increasing bought under state control since the framing of the Forest Act in 1865. This act curbed people's unhindered access to forests. Shrubs and wood for construction were subsequently not abundantly available also due to the opening of coal mining and industrialization. Archer (2013) mentioned that villagers prepare a layout or map before the foundation of the house like Northern part is *Jonom* (birth part), Southern part is *Moron* (death

part), Eastern part is named (referring sun), the western part is *Needachando* (referring moon). The length of the house is generally 7 Haath, 7 Haath or 9 Haath (Fig. 54).



Fig. 54 Mud house of Santhal in Kolhan region

Santhal mud houses are always rectangular not square. The houses are divided into Bonga Orah (place of worship, Gilich Orah (the bedroom), Gora Orah (the cowshed), Daka Orah (the Kitchen) (Bharat, 2015). Structure of the mud house is varying from region to region, but courtyard and varamdah made consistency in house structure of every region Water passage, drainage is also taking care of by the villagers while construction of a house.

At present, the villages of all three administrative divisions mostly contain mud houses and somewhere concrete houses so every year after the rainy season, rural people repair their mud houses and paint it to save the mud wall from damage till the next monsoon. It is to be noted that, the rural people of the villages paint their mud house once in two or three years, annually and twice in a year. In the Santhal Pargana region, the rural community makes mud mural on the wall; it is a time-consuming process, so they do not change it annually. In the Kolhan region, rural people use paint to make visual forms on the wall, and they change it annually. The tradition of making visual forms, they have learned from their elderly and passing it from generation to generation. It is noticed that in selected districts other communities are following the wall art practices annually at the same time and same way. They have also adopted the Santhal's lifestyle, dialects, feast, and festivals as well.

4.2 Mural art forms and its subjects & purposes

Photo documentation data suggest that, the mud houses of eastern rural Jharkhand consist of five types of mural art forms; *Likhan gadhan* (mud mural), *Rong baha* (paint mural), *Jaunara baha/phul* (rice-paste mural), *Jadopatia* (cow-dung mural) and *Guruj baha* (cow-dung mural). There are various visual art forms (natural and manmade) such as *Baha* (flower plant, non-flower plant, creeper, tree, plant seedling, band, and border), *Jan-janwar* (bird, animal, reptile, and

insect) and *Hor* (human) are painted on the mud walls (Table 2). In this table, documented visual forms and its categorization is listed. Categorization of visual forms is done following the categorization of the rural artist for particular visual forms. In this table, natural and manmade forms are categorised in vegetative, figurative and manmade visual form. *Baha* is considered as vegetative, figurative and manmade visual forms. *Baha(1)* as vegetative visual form painted with plant, creeper, and grass. *Baha(2)* as manmade visual form is painted with band and borders. Figurative visual forms comprise of *Jan janvar* and *Hor*. In *Jan janvar*, bird (chene) and animal (janwar) are painted as a visual form, and in *hor*, human visual form is painted on the wall.

Baha is also considered as a figurative visual form in some special composition like if vegetative visual form composes with figurative visual form and vegetative visual form is bigger than supportive visual form. A list of visual form is attached in Appendix I. Appendix J. and Appendix K.

Table 2 Local names of visual forms and its categorization

A. Natural visual forms				B. Manmade visual forms	
Vegetative		Figurative		Manmade	
Baha (1)		Jan-janwar	Hor	Baha (2)	
1.	Flower or non-flower Plant	Bird (chene)	Human	1.	Border (baha)
2.	Creeper	Insect (chene)		2.	Band (baha)
3.	Tree	Animal (janwar)		3.	Religious symbol (baha)
4.	Plant seedling	Reptile (janwar)		4.	Pot (gamala)
				5.	Weapon
				6.	Word (chiki)

The mud houses of Santhal Pargana replete with natural visual forms (e.g., flower, animals, creepers, plants) (Fig. A). In some villages of Deoghar (Santhal Pargana) human forms are painted on the walls (Fig. B). The mud houses of North Chotanagpur contain borders and flowers, animals, creepers, and plants (i.e., it keeps resemblance with Santhal Pargana murals). In the Kolhan division, the mural art forms are mainly geometrical border and band patterns (Fig. C). Giridih wall art forms are painted with plants and borders (i.e., no resemblance with visual forms of other districts) (Fig. D). Except for Deoghar and Giridih, in other districts, creepers are painted with a pot on the doorways. In vegetative visual form 'flower,' in animal visual form 'peacock' and 'elephant' and manmade 'pot' is the most common visual form in this wall art tradition

(Fig. 55). In this figure a. *Likhan gadhan* b. *Jaunara baha* c. *Rong baha* d. *Guruj baha* and e. *Jadopatia* is shown.



Fig. 55 Wall art traditions in eastern rural Jharkhand. See details in Fig. a. b. c. d. and e.

A graphical representation of administrative divisions, communities with painted visual forms, are shown in Fig. 56.

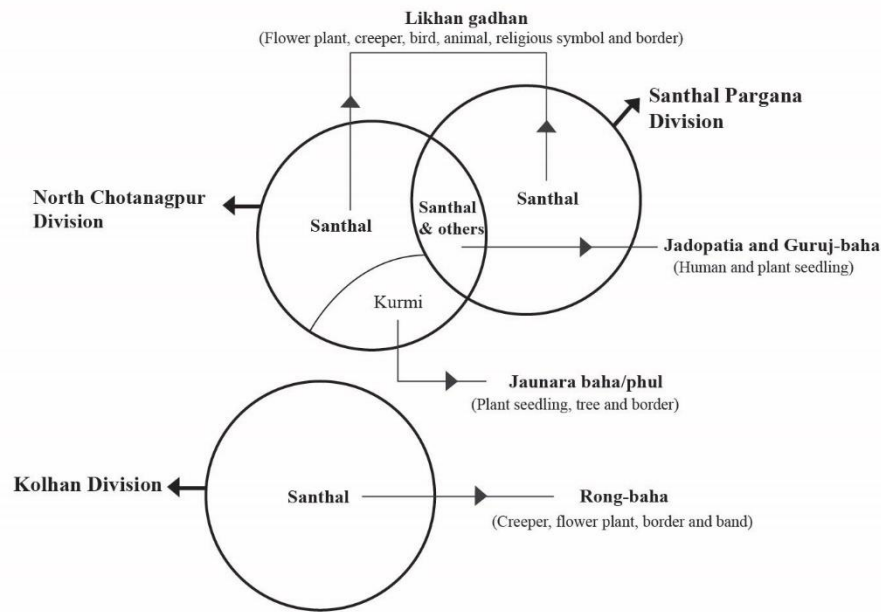


Fig. 56 Graphical representation of three administrative division, visual forms and communities

The villagers clearly or unclearly explain the purpose behind the execution of art forms (Pallavi, 2017). Some of them have explained that *‘In festivals, my mother and grandmother make patterns on the wall and now I am doing the same. ‘While going to fair, I saw beautiful designs in neighbouring houses/villages, I am trying to make the same design but using a different colour. ‘I like to paint. In my village, before the festival, every woman makes it, that why I am doing. ‘When I was unmarried, I have learned it from my mother, after getting married I am decorating my in-law house. Some villagers explained that ‘our mud houses are like our mother and decoration of houses is like decorating the ‘aayors palrair’ ma aka aanchal³¹. ‘If I will clean & decorate my houses than Laxmi will visit my house.’ ‘Bongas will happy to see a clean and decorated house; he will pay his visit to my home.’ ‘These figures will protect us from the evil eyes or ghost, that why I have painted it.’ ‘While going forest, I have seen this flower or animals. I like that and tried to paint the same’. ‘Jan-janwar (birds & animals) are our family members that’ why I have drawn these.’ ‘Guest or visitors will feel good to see this,’ ‘these murals make our houses different from other’s houses,’ ‘to see our painting anyone can understand this house belongs to the particular community.’*

³¹Anchal is the end/ corner of the Saree (it is a traditional Indian dress worn by women) in Hindi is known as Aanchal or Pallu. Aanchal is generally the most decorated part of the Saree. ‘maa, ka anchal’ is a proverb used by the rural people for the decorated houses.

These conversations reveal various aspects behind mural execution purpose among the rural people like decoration, salutation, documentation, protection, and Identity. In all five-mural technique, the purposes are discussed in detail.

4.2.1 Likhan Gadhan

This art form is made applying mud on the wall. In this art form, artist paints a various flower or non-flower plants, creepers, trees, animals, birds, reptiles, insects, religious symbol and border patterns on the wall. In bird visual form, peacock and parrots are painted frequently near the doorway (Fig. 57). People believe that by painting the beautiful birds on the wall their houses appear more beautiful. As peacock is the most beautiful bird (carry colourful tail) and the green colour of parrot is attractive. This concept is applied to flower plants, creepers, and animals. Rural people acknowledge the mud houses as their '*aayors palrair*' or *ma aka aanchal* (traditional Indian attire). They respect their house as they respect their mother and they feel happy to paint it with visual forms (flower, animals, and birds) as they decorate the *maa ka aanchal*.



Fig. 57 Painted peacock on the wall, Dhanbad

The Santhal has a concept that a guest is a form of bonga (good spirit). For their salutation, it is not possible to arrange garland quickly, so they paint it on the entrance doorway. The entrance doorway is known as *Baha-duar*, and it is the most decorated place in their houses (Fig. 58). This *Baha-duar* is decorated with *Sarjom* (saal) leaf or flowers and painted flower plants and creepers. *Chene jora* (bird couple) is painted for salutation purpose near the doorway.



Fig. 58 Painted *Baha-duar*, Godda and Dumka

The Santhal community is concerned about conserving nature and its creation (Fig. 59). They are a nature lover and want to live surround with nature's creation. On their mud houses, they paint many natural visual forms; various flowers, and animals that are easily seen village premises and forest areas. An amount of variation indicates that they document the natural creation as visual forms. The execution of lion, ox, peacock, and parrots with some pots/ utensil, peacock with a scorpion, elephants in various action, running deer, a goat eating the plant leaves are documentation of particular situation. The artist obserb these narration from daily life activities.



Fig. 59 Painted *Jan janwar* and *Baha*, Godda

Flower plants, creeper, and tree are associated with pot. Rural people assign this natural element with a good omen. They paint the good omen resources to stop or avoid bad omen. It indicates that they paint good omen for protection purpose

In villages of Dumka, Godda, and Sahibganj districts apart from borders and motifs, religious symbols of Christianity and vermillion on the door-head are used to make religious identity among the villagers (Fig. 60). Totem animal (antelope and goose) are found on specific clan houses.



Fig. 60 Religious symbols of Christianity is executed on the wall, Dumka

4.2.2 Rong baha

The mud houses of Kolhan region are decorated with *khond sima* (geometrical borders and bands). People decorate their houses with *chuck chuck* (bright) colours and bold shapes. They decorate their doorway with handmade doorway hangings. Creepers and flowers are part of the decoration of *Baha duar* (entrance doorway) (Fig. 61).



Fig. 61 *Baha-duar*, Saraikela Kharsawan

For welcoming the guest, they usually write *sagun johar* in Ol-Chiki script or *welcome* in Latin script (Fig. 61). They paint creepers around the doorway with the pot. Between the geometrical patterns, bunches of flowers (flower bucket) are painted. This painted pot and bunch of flowers symbolize as salutation elements among the rural communities.



Fig. 62 *Sagun johar* (welcome) written on the *Baha-duar*

Geometrical patterns keep resemblance with Sambalpur textile pattern and architectural elements. Colourful flowers and several kinds of pots are painted with creepers. The execution of the textile pattern, architectural element and colourful flower show their purpose of documentation (Fig. 63).



Fig. 63 Resemblance of textile pattern, Purbi Singbhum

In Kolhan region concept of protection is associated with a good omen. In rong-baha, the elements of good omen (e.g., pot, flower and creeper) is painted to keep bad omen aside. People think that painting their wall with geometrical band make them different from others. As a result, painted mud houses of Santhal community of eastern Jharkhand keep a distinct place among others.

4.2.3 Jaunara baha/phul

In Giridih region Kurmi community, make the ritualistic design on the wall with rice-paste. Jaunara (maize-bone) use to make an impression on the wall. Before Diwali festival, they paint the patterns, Karam plant seedling and karam tree on the wall in *tikka foka/chit* (dot pattern) (Fig. 64). People have a concept that in Diwali festival, *Lakshmi* goddess roaming on the earth. Besides, she likes to visit decorated and clean houses. Cleaning the houses and executing some pattern showing the decoration and salutation and protection (protection from poverty) purposes.



Fig. 64 Patterns on the wall, Giridih

People provide a salute to mother earth by painting the field patterns. *Karam* tree, paddy seedling is documented in the various form on the wall. The painted visual forms are the identity of the agriculture community (Fig. 65).



Fig. 65 Painted Karam plant on the wall, Giridih

4.2.4 Jadopatia

In Jadopatia art form there is no concept of decoration while executing the art form. In Deoghar region, some human figure is found in salutation gesture. The figure (joint both palm) is painted near the doorway. It seems that these figures are welcoming the guest or Bonga. There are some Hindu goddess and god are depicted with trisul (trident weapon) (Fig. 66). It indicates their salutation towards the respected god.



Fig. 66 Shiva with Trisul (left) figure in salutation gesture (right), Deoghar

In Deoghar district, some figures are painted in western dresses (e.g., shirt and pants) and with the particular weapons.

Among the villagers of Santhal Pargana and North Chhotanagpur region, misconception of the evil eye is a popular concept. Various ritual and activities are done for protection from the evil eye and wall art tradition are one of them. Human forms are painted with cow-dung in particular gesture (with open hands) either single or in a group along with weapons near the doorway. People admit that this figure will stop the evil eye and not allow entering inside the house (Fig. 67). These protective figures are painted on the external walls of the houses and the main wall with the entrance to the house, using cow dung paste.



Fig. 67 Evil eye protection gestures, Deoghar

4.2.5 Guruj baha

The human figure, which is shown in doing dance and doing some activity, is painted in sequels, which assume as a pattern on the wall and it's fulfilled the purpose of decoration.

Human forms are painted doing some action; dancing mood and playing the musical instrument (Fig. 68). Some of the human forms are painted with weapons. It shows that people want to document their culture and at the same time want to represent it and make their identity.

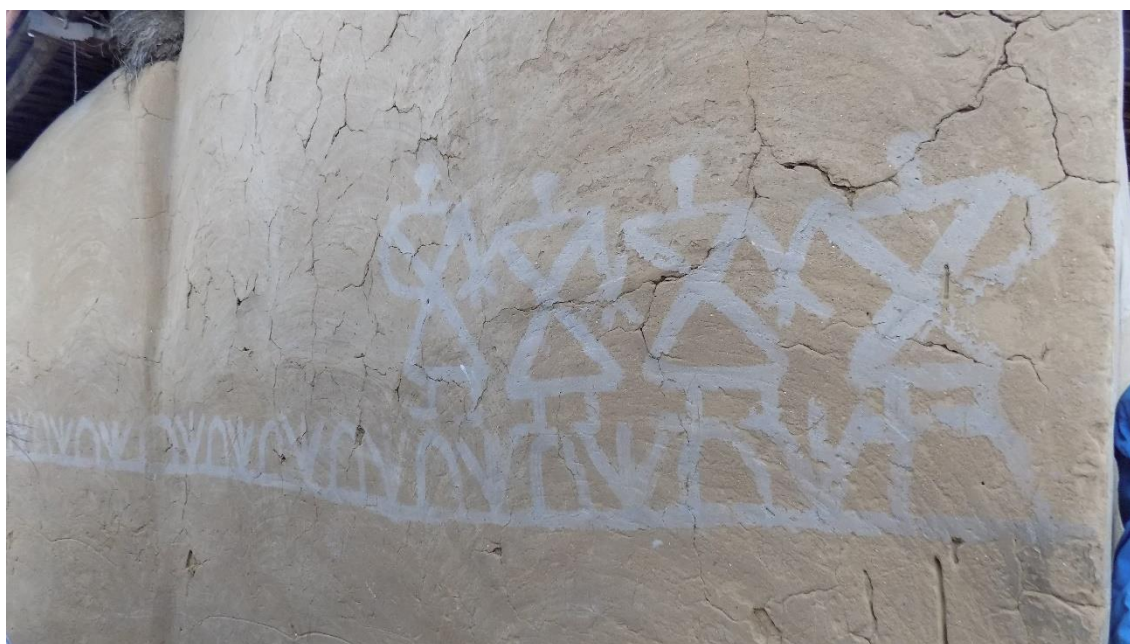


Fig. 68 Dancing postures of human figure, Bokaro

Rural people like to decorate their body parts with various elements; cloths, jewellery, flowers, and tattoos. Decorating their body parts with various elements show their perception of beauty and its execution. This concept unconsciously reflects in their wall art tradition in the form of visual motifs. They want to decorate their houses either pleased goddess Lakshmi and Bonga or get viewers attention. Santhal villages have a specific village pattern, and they define their particular village in terms of a specific sacred grove. Some sacred grove contains only a few trees while others are hundreds of acres in size found from one kilometre to five acres. Sacred Grove is known as *Sarana* among rural people (Amirthalingam, 2016). The sacred grove is an environmental, social and ethnic identity of the Santhal community. It is related to their ecological values, religious beliefs, and traditional values. Santhal's awareness of nature is combined with their cultural values. The aspect of nature conservation among the villagers are also justifying the executed visual art forms. They paint religious symbol it is documentation among them. The rural lifestyle of eastern Jharkhand is simple. Rural people believe in *Bonga* or spirits. They think that this world is a divine place, which is full of spirits/ *bongas*. To protecting the family members from the evil spirits, they perform many rituals; wall art tradition is one of them. As Santhal Pargana was a relatively under development hilly area, during the British period the Santhal's practicing Sarna religion were converted by missionaries (Biswas, 1956). In villages of Dumka, Godda, and Sahibganj districts apart from borders and motifs, religious symbols of Christianity

and vermilion on the door head are used to make religious identity among the villagers. Totem, cultural dance is known among them an identity. During field visit, after covering some areas, there was no need to ask about the village and their belonging community, because to see the painted houses it makes a confirmation of particular communities. It means that mural is a part of their identity.

These above-mentioned points lead the villagers to find the purpose for mural execution on the wall. Decoration, Salutation, Documentation, Protection, and Identity are the purpose behind making the murals on the wall. A graphic representation of these concepts is shown in below Fig. 69. In this figure there are five boxes are shown, and all box has their no. No1- Decoration, 2- Salutation, 3- Documentation, 4- Protection and 5-Identity.

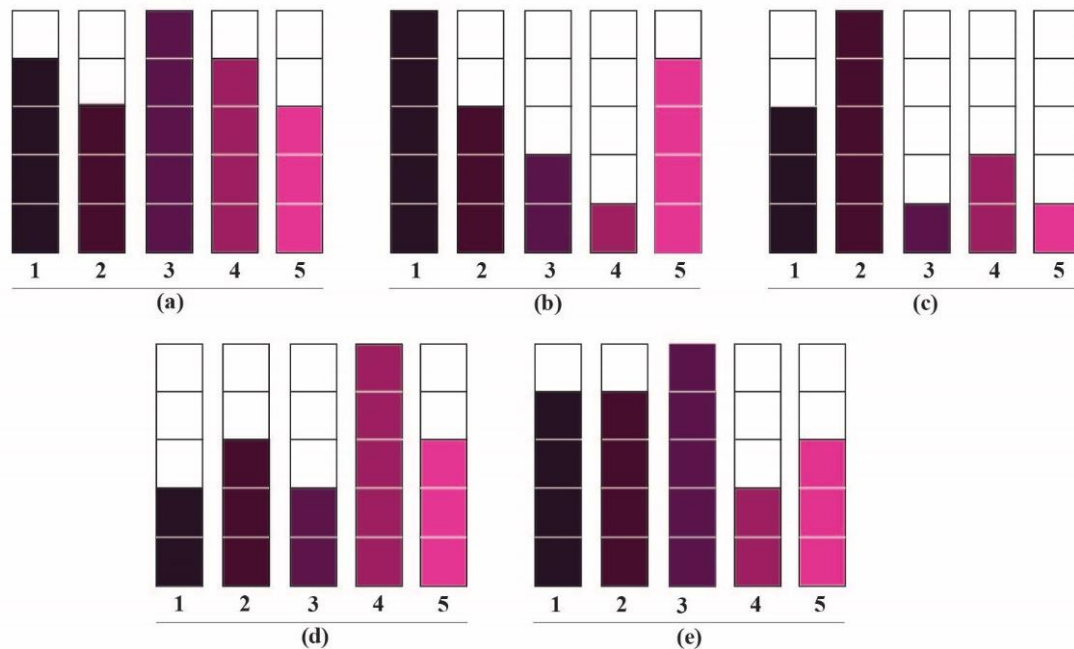


Fig. 69 Purpose of mural art form 1. Decoration, 2. Salutation, 3. Documentation, 4. Protection, 5. Identity

The execution of each visual art forms shows some correlations with each other. In *Likhan gadhan*, the rural artist has given the priority to documentation; consequently, the natural forms are painted on the wall. In *Rong baha*, rural artists have given priority on decoration or making things more beautiful and attractive, as a result of that colourful and bold geometrical bands are painted. In *Jaunara baha/phul* salutation of mother earth and Lakshmi goddess is a main concern while depicting the visual form. In *Jadopatia*, human figures are associated with weapons, created with the idea of repelling evil spirits. In *Guruj baha* some of the human figures are painted in dancing posters. Protection and documentation are the purpose of making the human forms in various actions of *Jadopatia and Guruj baha*.

The graphical representation of overall data is shown in next Fig. 70. It is shown that *decoration* and *salutation* is the very common purpose behind the mural execution. *Documentation* is second common and *protection* and *identity* is third common purpose among the rural communities of eastern rural Jharkhand.

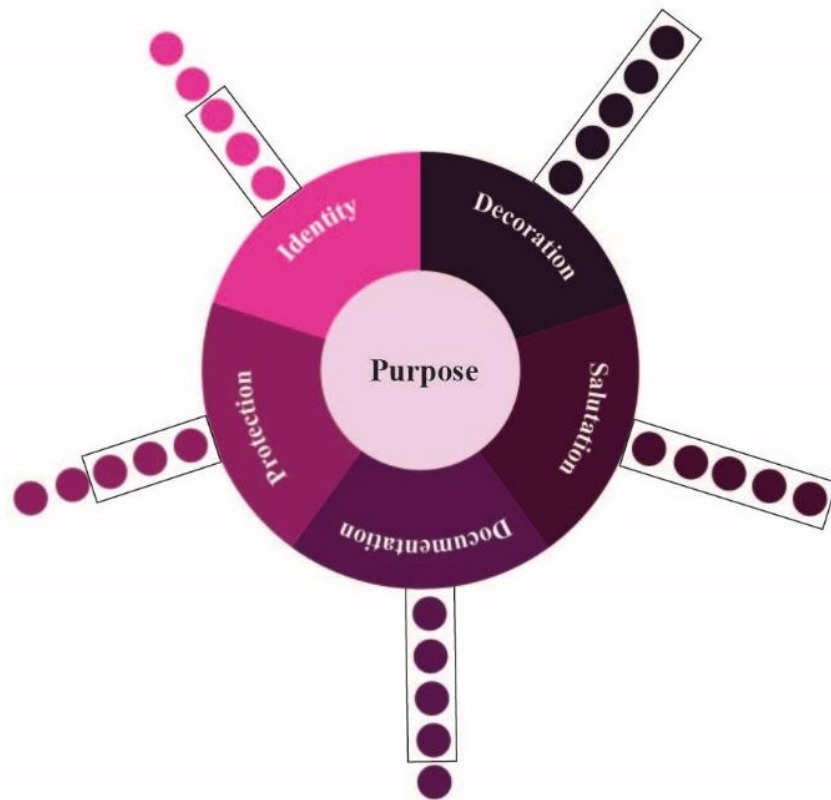


Fig. 70 Graphical representation of visual arts purpose (combining all four visual art forms)

A correlation of all the mural execution purpose is shown through a graphic representation (Fig. 71). In this figure, the relation of decoration is shown with identity, salutation, and protection. Relation of documentation and identity and relation of salutation and protection is shown. It shows that purposes are interlinked with each other. Purpose of decoration leads the salutation, protection, identity and documentation leads the identity. In *Likhan gadhan* art form, creepers at the *baha-duar* reveal the reasons for decorations and salutation as well. Salutation elements are good omen among the rural communities and it indirectly shows their purpose of protection. In *Rong-baha* decoration leads the identity of Santhal community, decorative visual form on the mud houses make them specific among other communities. In *Jadopatia and Guruj baha*, dancing human forms are painted with musical instrument, it shows documentation of their culture and that gives them the cultural identity. In *Likhan gadhan* art form, regional symbol is painted on the mud houses of Santhal Christian. It shows the representation of their religious identity.

It can be concluded that the visual art forms of eastern Jharkhand are executed following the five interlinked purposes; decoration, salutation, documentation, protection, and identity. These purposes are assigned to the daily life activities, myths, and traditions of rural communities.

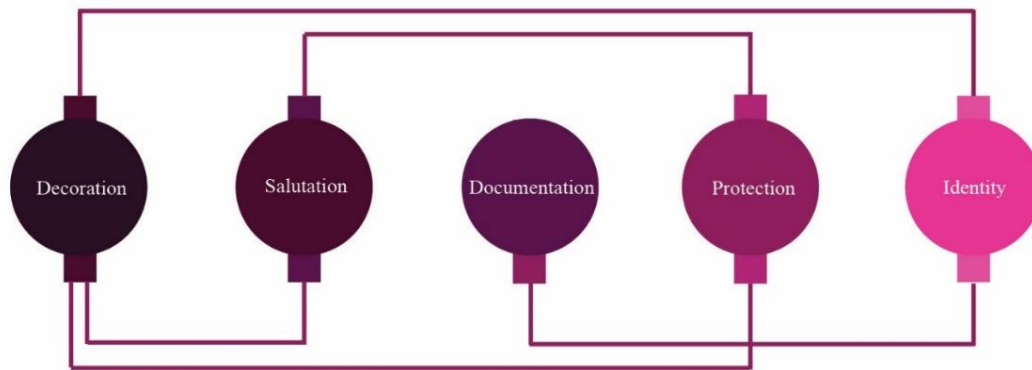


Fig. 71 Correlation between the purposes of mural making tradition

4.3 Inspirations of visual forms

Detail information about the lifestyle, myths, and traditions of sincere communities and their effect on visual art forms are discussed below.

4.3.1 Baha

The Santals are nature lovers, and flowers always attract them. It is known as *Baha* among them. The Santals believe that the flowers are the most beautiful gift of the Almighty. At first, *Marang Buru* planted the seed in the earth and *Jaher Era* nurture it and flower came out. In this way, the flower is a union of *Purusha* and *Prakriti* that spread the message of love, happiness, goodwill, prosperity, and peace. The blossoming of the *Sal* and *Palash* flowers marks the arrival of a new beginning in their daily lives. *Saal* flower is the most sacred flower among them. The *sal* is the most sacred tree among them. The flower is associated with their festival that is known as *Baha prob* and *Baha Sendra* festival. They also celebrate the flower friendship. They decorate the entrance with painted creepers and plants. This *Baha-duar* they also decorate with *sal* leaf or flowers. They have a concept that a guest is a form of *Bonga*. For their salutation, it is not possible to arrange garland quickly, so they paint it on the entrance doorway. Rycroft has mentioned that outer entrance it is known as *baha-duar* and it is the most decorated space in Santhal house (Rycroft D. J., 2010). They have a concept that these creepers painted with pot will bring prosperity in their house. This concept shows similarity with the Hindu religion where the divine creeper is known as '*Kalplata*' as symbolism of prosperity. *Baha* generally mean the flower, but in wall art tradition, they consider flower plant, non-flower plant, flower creeper, non-flower creeper, tree, pot, religious symbol with creeper, word, band, and border as *Baha*. In-group

motif if the flower is painted bigger than bird and animal than it is considered as *baha*. Any textile pattern and any kind of decoration (i.e., pandal decoration for marriage purpose or any festival) or any visual design they draw or paint consider as Baha. The purpose behind using the *Baha* as visual forms is discussed below.

- *Baha* is an indicative festival of the arrival of New Year and season change. During *Phalguna* month (mid-February and March), *Palash*, *Sal*, and other flowers bloom. Rural people believe that bees and birds are roaming around the flower during this period to thank and show our respect to mother nature, Kisku mentions that *Baha* is more than a flower among Santhal. *Baha* is a deity of spring. In respect of *Baha* deity, they celebrate *Baha prob*. In welcome of *baha*, deity Santhals do not eat new fruits and pluck new flowers during the Spring until *Baha prob* (Kisku B. , 2000). *Baha prob* is a three days festival. The first day of this festival known as *uhm* (bath). On this day, the rituals are performed in the *Jaher Sthan* (sacred grove). Rituals and rites are performed with vermillion, *sut* and, war weapons.
- In the night the young santal male, female practice *Baha* and *Dahaar* Dance and Music. The second day is known as *Sardi maha* or *Baha puja*. This is the main day of *Baha prob*. Goats and hens are sacrificed on the worship place. During the *Baha prob*, *Sarjom Baha* (Sal flower) and *Matkom Gele* (Mahua flowers) are offered in front of the Gods and Goddess. Later it is distributed as a sign of goodwill to people. The women, children of each house stand to wash his feet and receive *Saal* flowers as *prasad* put on the ear and hair and bring it in the home and hang at the main entrance. It is a believe that it will bring happiness and prosperity. After this, the whole village sings and dances until late at night. Third-day *Baha* festival is celebrated as *Baha Baskey* or *Baha dahk* or *Baha Sendra*. As a tradition *Falgun* (March-April) is considered as the first month of the year. On this day the Santal male-female, also play pouring water (i.e., not coloured water like holy but simply plain water) on each other (e.g., Sali-Jija, Bhabhi–Dewar, Nana- Nani, Dada-Dadi). Sal- the dry leaves are used to produce plates and bowls. The leaves are also used fresh to serve readymade paan (betel nut preparation) and small snacks. The used leaves and dishes are also eaten by animals likegoats and cattle. The Sal flower represents brotherhood and friendship among the villagers.
- *Baha Sendra* is a hunting festival, and it is celebrated just after the *Baha prob*. In this festival male hunters go for hunting in the forest with their traditional weapons like bow and arrow. After the hunting when the hunters entered and passed through the street of any village, the girls of that village washed their feet, and the hunters gave these girls *Champa* flowers and they *johar* each other. Nowadays this tradition is found only some areas of Santhal Pargana. (Imam, Antiquarian remains of Jharkhand, 2014) Jungle in

which the ritual hunts are performed are sacred sites, for example, the Dalma Hill near Jamshedpur in Singhbhum; and the Tatijharia and Konar watershed jungles of Hazaribagh where the Santhal perform their annual spring and summer hunt (Sendra). Sal flowers are consecrated during the sarhul festival in April month by the tribal priests or pahans to usher in the spring, when it is believed that the marriage of the sun and earth take place.

- *Golwari* is a dance form among *Santhal*. This dance has the dignity of a graceful march. This is a narrative dance form. Dancer makes various gesture to narrate some theme *Baha sid* is one theme in that. *Baha sid* means 'putting flowers in the hair'. Girl and boy dance facing each other in a queue. The girls put out their hands as if they were picking flowers from a tree. They collect the flowers in a cloth bind around girl's hip. Then, as the line moves slowly on, each 'pick a flower' from her hip and put it in the hair of the girl in front of her. Sometimes they turn about, and after picking flowers from a bush, they swing sharply round and put them in a dancer's hair (Archer W. G., 2013).
- The *Karma Puja* is a festival of agriculture and is sacred for Santhal. It is a spiritual and religious festival which is associated with harvest. Among the Hindu community, also this festival is celebrated. The devotee (mainly girls) keep fast whole day without fast and in the evening time, worship the karma branch and sing the songs of karma dharma. According to them, Karama dharma was brother and sister. *Karma* is known as a god of wealth and fertility among *Santhal* and *Kurmi*. As per the *Santhal* creation story, *karam* is the first plant which was shown in the earth. They make three circles near a *karma* tree. Then they cut a branch of *karam* tree and carry to *akhda* (worshiping place) youth perform *Langde* and *karam daantha* dance. *Karam* branch is used for praying, so it is also known as *karam daantha*. In Kolhan region, it is not popular among *Santhal*. In Santhal Paargana *dangua karam* is another festival, which is celebrated once in five years. Archer has mentioned it is as 'flower friendship.' In this festival, boys make friendship with boy and girl with girls by exchanging presents, sweets, and garlands and putting flowers in each others hair at a fair in the presence of their friends and family. They know as *karamdar*. After being *karamdar* these pair, help each other and support always. This pair cannot make a matrimonial relationship with the *karamdar*'s brother, father, step-father or with any of a true sister (Archer W. G., 2013).
- In case of crop, being the subject of an evil eye, a branch of *soso dare* (Bhelwa Tree) is drilled in the field of the crop. Mother in protection of her child applied soot *kajol* on the forehead or cheek of her babies. In villages when babies and kids cry breathlessly and do not sleep the whole night, or any person behave unnatural way, people predict that she or he has fallen victim to an evil eye. For protecting the evil eye, *ojha* is called. *Ojha* ask for a seed of *bhelwa* a worn-out broom, a piece of coal of wood and *lamak here* (a huge

climber, Known as Phanera Vahilii). With all these articales, he spells some mantra and through the evil power away into the fields of others.

- If sterility persists in women, they steal secretly a gulanj flower from the head or ear of an unmarried girl. Mix with a mandargom flower. Grind it and make two pills. After taking bathe in a full moon night, she offers one pill to Jaher Era and take own shelf. Hibiscus flowers also use among them for hair growth. The eating of some specific part of hibiscus flower and dry and grind it and put on the hair will help to grow a black, strong hair. The hibiscus plant has a wide array of uses. The juice of the leaves and the flowers are considered useful in including hair growth. It acts as a natural hair-conditioning agent and is commonly used in the preparation of herbal shampoo and hair oil.
- *Kamal phul* (Lotus) is a symbol of purity, spontaneity and divine Beauty. It rises from unclean water to blossom as a pure, uncontaminated flower. Lotus and the Sun reciprocate unconditional love displaying the importance of perfect symbol of love. The love showered by the Sun on the Lotus is unconditional. Among Hindu goddesses, *Lakshmi* has the closest connection with the lotus. Santhal praise the bridegroom or bride keeping resemblance with lotus. They say '*aman rup dai upal behare or aman rup dai sagan sakamre* means *your beauty is just like a lotus! Or your beauty is just like a new leaf*. Red rose flower, yellow *genda* flower they use as garland in festivals. They wear in neck and wrist while dancing. These flowers are common flowers in their local habitat which easily available in the locality. Sunflower is symbolised as fertility; it is said that following the various petals of flowers their coming generation would be like the fertile sunflower. Apart from these natural flowers rural people make artificial flowers with colourful papers and glossy plastics. They use the *Baha mala* of artificial flowers in different ceremonies for facilitation while dancing performance and decorating their houses. Among Santhal Christian, artificial flower is more popular.
- Flame of the forest- Its broad leaves are stitched and used as umbrellas in rural areas. The Santhal tribes make ropes out of its root. The coarse fibre of the inner bark is used in boat making. The leaves are used to wrap babies and to make cups and plates, and as fodder. It is employed in Hindu ceremonies to bless calves to ensure that they become good milk producers. The orange-red flower of this tree is offered to goddess Kali (Krishna & Amirthalingam, 2014).
- Sacred grove is an environmental, social and ethnic identity of Santhal community. The relationships between ecological values, religious beliefs and traditional values of sacred groves are shown below (Fig. 4). Santhal's awareness of nature is combined with their cultural values. For preserving the sacred grove, they have some universal taboos and beliefs, which are associated with sacred groves.

- A. The falling of the tree is strictly prohibited. There is some occasional clearance in that some selected grasses and shrubs are cut down before the festivals for the dance and ritual purposes.
- B. Animals are not to be harmed in the premises of the groves,
- C. Collection of firewood or even dry firewood is also forbidden, grazing of domestic animals and farming and playing any game is strictly prohibited (Kisku, Bakhat, & Guha, 2010) (Israel Oliver King & Viji, 1997).
- Rice- Because of its importance as a staple food, rice is culturally essential. Rice is deemed a sacred symbol to denote auspiciousness, wealth, and fertility. Hindus associated rice with goddess Annapurna and goddess Lakshmi and refer the grain as dhanya Lakshmi.

Vegetative visual form

***Baha(1)* (Flower or non-flower plant, Flower or non-flower creeper and tree)**- There are 22 types of *Baha* vegetative visual forms are documented from the painted mud houses of rural Jharkhand. The list of *Baha* is shown Table 3 with local names and with inspirational aspects of painting.

Table 3 List of documented *Baha(1)* vegetative visual forms with the purpose of execution on the wall

Baha		Inspirational aspects
No.	English name	Local names: Santhali ¹ Hindi ²
1.	Sal flower	<i>Sarjom baha, Saal phul</i> Ritual, prosperity, salutation, love
2.	Gulantha flower	<i>Gulanj flower</i> Medication
3.	Jasmine	<i>Chameli</i> Beauty, salutation
4.	Champa	Champa Beauty, salutation
5.	Sun flower	<i>Suraj mukhi</i> Fertility
6.	Flame-of-the-forest	<i>Murud baha, Plash phul</i> Beauty, salutation

7.	Lily flower	<i>Upol baha</i>	Fertility, beauty, prosperity
8.	Lotus	<i>Porayani baha, Kamal phul</i>	Fertility, beauty, prosperity
9.	Marigold	<i>Khushbi baha</i>	Beauty, salutation
10.	Rose	<i>Gulap baha</i>	Beauty, salutation
11.	A common flowering plant	<i>Caulia</i>	Ritual
12.	Bur flower	<i>Karam baha, kadam phul</i>	Prosperity
13.	Brinjal	<i>Bengarh baha</i>	Beauty
14.	Ladyfinger	<i>Bherawa baha</i>	Beauty
15.	Bitter gourd	<i>Karuyala</i>	Beauty
16.	Hibiscus	<i>Joba baha, Urhul phul</i>	Medication, salutation
17.	A flowering plant found in the gardens of Santhal	<i>Bare baha</i>	Beauty
18.	A small common plant	<i>Catom arak</i>	Beauty
19.	A small bush	<i>Gada hund baha-</i>	Beauty
20.	An ornamental tree	<i>Bokom baha</i>	Beauty
21.	Creeper	<i>Narhi baha, lata phul</i>	Beauty
22.	Small flowering plant	<i>Cutia candbol</i>	Beauty

A graphical representation of Table 3 is shown in Fig. 72. In this figure, the inspirational aspects of *Baha* are mentioned in the form of wings. The highest number of wings show the strongest aspect of *Baha* visual form execution on the wall. Beauty and salutation is the most inspirational aspect among rural people to paint the *Baha* visual form.



Fig. 72 Graphical representation of *Baha(1)* visual forms and the inspirations

Manmade visual form

Baha(2) (Band and border)- Kolhan region is in the southern part of Jharkhand, which is neighbouring districts of Orissa state. The region is an industrial area. The geometrical mural is the specialty of this division, and it is known as *Baha* among Santhal. On the mud, houses of East Singhbhum and Saraikela- Kharsawan geometrical bands painted on the most of the wall. Triangle, square and circular form is painted including the vegetative *Baha* visual forms. The bright colours and geometrical form give a resemblance of *Sambalpuri* textile pattern and *pandal* decoration.

A graphical representation of *Baha(2)* border & band (manmade visual form) is shown below (Fig. 73).



Fig. 73 Graphical representation of *Baha(2)* border & band visual forms and its inspiration

Gamala (pot/vessel)

Pot is one of the most common visual motif, which is associated with plant, creeper, bird, animals and religious symbol and word motif. In local habitat, pot is used in various ways in kitchen, ritual place, in agriculture but it rare that in village premises any pot is used to plant the flower plant and creepers. In wall paintings, the plant and creepers always associated with various kind of pot. Using pot as a visual form touch various cultural aspects among the rural people, which is discussed in detail.

- Pot or vessel is connected from Santhal's creation story. Marang Buru taught *Pilchu haram* and *Pilchu budhi* (first parent process of preparing Handia (rice bear). They make it in earthen pot locally known as *handia* among the rural people.
- Good omens, on the other hand, include a pot full of water, a herd of cattle, a corpse, some washed clothes. A full pot is a good omen because it shows that the journey would be full of joy. There is various ritual pot are used while sacred performance some of the earthenware, and some are metal pots (e.g., *lota*, *ghada*, and *handi*).

- The women who are not able to conceive the baby know as *banjh* or *banjhi*. Santhal and other community for curing the bareness do *totaka* (a ritual exorcising evil spirits). In this *totaka* at the night-time, husband and wife carry an earthen pot full of water on the head and go to the end of the village street. The women sit there, and the water from the pot is poured on her. She changes the clothes and leaving the wet cloths theirs on the street. While leaving that place, they break the pot. A pot full of water in this ritual represents the fertile womb. The water is regarded as a life-giving element. The pouring out the water on the barren women in the act of bestowing fertility on her and the empty earthen pot representing the infertile womb. It is believed that the women are a kind of container of seed much like the earth itself. A pregnant woman is spoken of as the collector of a bundle of seeds and her womb as *Kumbh* among Hindu.
- To find a marriage match people use pot/vessel word as a connotation for girl/boys and potter for their parents. The matchmaker asks girl or boy party; *we are searching for a new pot, please show us this pot.*
- *Sarpha* is a community dance of the Santal women. It performed on *Amavasya* (New moon day) of *Kartik* (October-November) month. Women dress in symmetrical checkered and bordered saris. They keep *Kansa Thala* (Brass plate), and *Katori* (Brass bowl) in their hand with a wooden *Sarpha* (a single string instrument framed in wooden bits) and a *kasa lota* (Brass pot) keep on their head. The pot is precisely balanced on the head while dancing.
- A Santhal marriage could not duly take place until water marriage was held first. In this ritual, water is sprinkled on the bridegroom and bride. The *Naike* of the village in the *Baha porob* sprinkled the water upon every village house and villagers.
- The village people generally, keep the vessels or pot near the doorway because it is accessible for them from inside and outside of the house.

Vassal keep an essential place in their life in the form of sacred drink, add glory in dance forms or life-giving power. Water plays an important role in all human activities. The Santhal used water for sprinkles on every house of a village, because it conveyed the meaning of life. The *Naike* of the village in the *Baha* festival sprinkled upon every village house to convey the symbol of life. Even during the marriage ceremony. The rural culture water always associated with any vessel and both symbolise about the *jivon* (life). Their daily life habit also motivates them to paint the vessel or pot as a visual form. A graphic representation of the inspirational aspects of the pot visual form is shown below (Fig. 74).

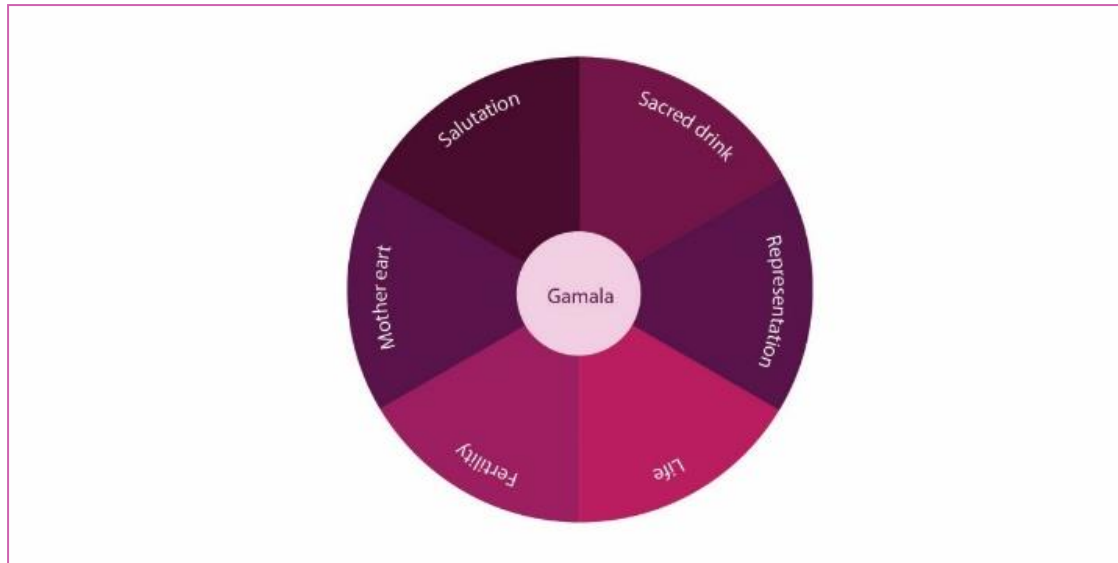


Fig. 74 Graphical representation of gamala visual forms and the inspirations

4.3.2 *Jan Janwar* (Animal & bird)

Animals have been in close association with rural people of Jharkhand. Animals play multiple roles in their life. They use the animals in the provision of food, agriculture, transportation, identity and as a guard. They are worshiped as supernatural beings. Owing animals bring honour and prestige to the people. Once a new animal born and bought, it becomes part of their family. A new animal initiates into the family by the application of roli/sindur on their forehead and turmeric and oil on their horns. The Santhal have a respect for all animals, live or death. Santhal categorises the animals into three categories (Mathur, 2001).

1. **Domestic and offer in sacrifice** - Cows, buffaloes, pigs, rabbits, goats, sheep, fowls, other birds, etc.
2. **Non-domesticated edible and not offer in sacrifice** - Porcupine, mongoose, squirrels, snakes, frog, rats, monkeys, etc.
3. **Flesh is edible but no use for sacrifice** - Dogs, cats, tiger, elephants, horses, etc.

The bird is known as *chene*, domestic animal as *ato janwar* and forest animal is as *bir janwar* among Santhal. The Jan janwar visual forms are painted on the wall in a single motif and group with the combination with *janwar+janwar*, *janwar+baha*, *janwar+pot*, *chene+pot*, *chene+baha*, *chene+chene*. Using *Jan janwar* in pair is a sign of goodwill among them. The inspirational aspects behind these visual forms are discussed below in detail.

- The Santhal concept of nature and life, thus begin with animals. In Santhal lifestyle, animals are associated with their creation and their totems. The animals and birds are known as their ancestors, so their clans are named after animals. According to them, their

ancestor *Pilchu haram* and *Pilchu budhi* gave birth to seven sons and daughters. They turn married each other and formed seven exogamous clans (Hembram, Ghos, Nair, & Murmu, 2016). Over time, five more groups were formed. A total of 12 clans *Hansdak, Kisku, Hembram, Marandi, Soren, Tudu, Baske, Besra, Bedea, Pauria, Chore*. are found among the Santhals, and every clan has their totem animals. Hansdak clan totem is *haas* (goose). Murmu clan totem is *Murum jel* (nilgai/ blue bull) and Pauties totem is pigeons. It is observed that the animals, which are connected with a particular clan, did not harm them. For a Santhal, the killing of one's totem is equivalent to killing a member of his clan. At present, *Santhal* does not strictly believe in totemic animals.

- Sohrai is considered as the biggest festival of Santhal. Santhal mention this festival the *hati Lekan Sohrai*, I, e., as big festival as the elephant in the Jungle. The timing of the celebration of this festival varies from region to region. In Singhbhum region, it is celebrated in *Kartik* (October –November) in Santal Paragana, and it is celebrated in Poush (December). The number of days (three or five days) varies from one region to another. The first day of the Sohrai is known as *umh*. In this day all the villagers gather in the place of worship at some open site after taking an early bath. That place is known as *gnot*. This day they worship their ancestors and *bongas* (sacred spirit). Worship is done in *Jaher Sthan* or *got tandi*. Animals are sacrificed, and their blood offered to *Bonga*. Later a feast is served with *Sode (khichdi)* to the male at *Jaher Sthaan*. Women do not participate in this event. To bring good luck in the village, the villagers put an egg or some paddy stalk near the place. In this course the cow which crashed the egg is considered as the lucky cow. The owner of the cow gets special treatment in the village. He has to distribute *handia* to all in the time of the evening to sing *Jagarni Gaan* for the good of the domestic animals to make their cattle awake. This practice is called “*Gayi Jagaw* or *Gai Jagran*.” Calling to married girl to home considered as a very significant part of this festival. All the invited relatives gather in this second day of the festival from the distant village. The second day is known as *sarde maha*. The second day of *Sohrai* is a day dedicated to cleaning cow shed. They clean all their agricultural tools and machinery as well as their cattle, and then they anoint the horns of their animals with vermilion and oil. They bring some ripe paddy from their field that they have cultivated and offered it while worshiping. After worshiping, they tie *Dhaana* (ripe paddy plants) to animal's horn. In their worship, *Handia* is offered to their god and ancestors in the name of Sohrai. The third day is known as '*Khuntao Maha* known as *Gura Khunta* and *Kara Khunta*. *Gura Khunta* is a process of teasing the cow and *Kara Khunta* is teasing the bullocks which are used in the field for harvesting. In this day, they gift new cloth to the husband of daughter and sister and request them to dig the whole to put a wooden pillar, that was the bullock will be tied. After that, the men of the village tie each bullock to the

wooden pillars and start to tease them. They wave a piece of dry leather of cow or bullock in front of the creature. It makes the animal furious, and cattle go here and there. It is believed that cows and bullocks become idle after the harvest. This whole process work as an exercise for cattle before the winter harvesting season. With *raimuni dana* (grains of paddy) cows and bulls in the cattle shed were graced with a blessing by the landlady of the house. In *Sohrai* festival floor decoration done with rice paste for welcoming the cattle.

- For set up a new *Santhal* village, they search the village site. While exploring, if people see birds sitting on their eggs, or they see a tiger, they take it as a good omen. They predict that, in the future, our village will be here and we will be very crowded. For more confirmation of the selected place, they bring with them two white and one speckled fowl, rice, sindur, and a thin-necked earthen pot. On the land, they tie the fowls and keep the rice and water away from them that they cannot reach the rice. Next day they come to check if a big or small fowl-feather has fallen down it is not a good omen, and if no any feather is there that consider as good indication. If the water of narrow-mouthed pot has dwindled a little, they say about this: a couple of years there, we shall have the scarcity of water. If the water has not dwindled at all, they consider it there will be no scarcity of water. A vessel full of water, a cow, a new earthenware vessel, a pack bullock or the footmark of a tiger, it meant as good omens for them., a cow, a new earthenware vessel, a pack bullock or the footmark of a tiger, it meant as good omens for them when they go for finding a match for boy and girl. When they finish planting the rice, they sacrifice the fowl only to the village bonga. They mention it that they are doing it for the sale of green fowl. It meant the growing crops (O'Malley, 1910).
- When a young *Santhal* man forcibly applied sindur to a girl, the girl's father ask for justice to the headman and say, please act for us in accordance with custom. Then they enter the young man courtyard and beat every single water- pot into pieces, they bind the man and beat him after that they go hunting for castrated goats or pigs. Thereupon they go to the cattle-herd to size some cattle. This is one way to deprive the young man's power. When the wife demands a divorce because the husband has taken a co-wife, the man will not get the bride price paid back, and he will have to give a cow, one bundle paddy, and cloths.
- Pigeons make their homes in *Santhal* families. They are kept for food and sacrifice. The *Santhals* believe that the pigeons are peace-loving birds and do not make their nests in quarrelsome families. This biblical scene led to interpreting the dove also as a symbol of peace.

- Dasai* festival is performed during the *Dasai/ daak-saay* month (Sep-Oct) among Santhal of Santhal Pargana. *Dasai* means rain gets over (*daak* means water or rainwater, *saay* means end). In this dance performer wear saree as *dhuti*, tied *pagadi* on the head with peacock feathers. Along with bow and arrow, they carry *bhuaang* (a dried gourd covered as conceals wood) they sung sorrow song (*hai-re-hai*) by dancing and visiting each door of the village household. They do this performance in search of the worriers in villages and adopting this type of attire to camouflage. Dongar dance is one of the oldest dance, which is known as hunting dance among Santhal. While performance dancers performed like hunters, they wear *baniyan*, *dhuti* tide in unique style, colourful head gear- turban fitted with peacock feathers. *Dantha* dance is a primitive dance form of *Santal* community. The young *Santal* male performs *dantha* dance together with vigor and speed on the third day of the *Sohrai* festival. This is a male-dominated dance which reveals the festive mood of the auspicious occasion. During the dance performance, men wear white tops and *dhuti*, with a colourful band on their forehead. In *golwari* dance consists of a series of figures based on scenes of *Santhal* life, each dance being, as it were a rural pantomime. It is known as vulture dance and is modeled on different kinds of birds. The women stand one behind the other in single file, their arm held out like flapping wings. Then very slowly and deliberately, they start to move in a circle. The peacocks feed on scorpions and snakes. In a song, they mention about peacock wings and express her/his desire to dance like a peacock.
- Children are described as parrots. The *caco chatiyar* is a ceremony that is celebrated to accustomed the village manners to growing *gidra* (children). The ceremony usually performed when children are eight to ten years old. For announcing a date for this ceremony headman say that, *I have heard some little parrots crying in the hole of a tree. Their feathers are sprouting.* The headman then enquires in how many holes there are parrots means how many children are proposed for confirmation. The headman then announces a date and commands all the villagers to be present. After this ceremony, children are allowed to brew rice bear, go to fairs, and summon the meetings.
- Dogs are owned by almost all the families for hunting and helping to catch pigs and fowls. In Santhal creation story, the dog stood against the "day horse" who wants to destroy the first human being. It is believed that dog appeared from the sky on the earth and after going back they shine as dog star in the sky and stand a saviour of man. The *Manjhi Santals* do not exactly worship the forest god Shiva, but they continue an ancient tradition of the forest god and his two dogs *Bhairav* and *Bhairavi* found in stone relief carvings in Shiva temples in the area, showing the forest god with his two dogs. The dog is an affectionate inmate of the Santal household.

- In marriage, bridegroom have to give bride price and in bride-price recompense the bride family they have to give cow, brass-cup, earthen pot, and cloths. After marriage, the Jog Manjhi says: Please, honoured bridegroom's art, we wish to see the remaining bride price money, and they sing a song in that they compare the fish with money (Bodding, 2016). The song is below; do take it out. Then they sing:

Bring out, young man, bring out

Money, fine like the puthi fish.

Bring out, young man, bring out

Gold, like fish- blood.

Hand over, young man, hand over

Money, fine like the puthi fish.

Hand over, young man, hand over

Gold, like fish- blood.

- Santhal believe in *baghut Bonga* or the spirit of tiger. They worship it for the welfare of the villagers as well as the domesticated animals especially the cattle. They believe that they cannot hunt the tiger because the tiger is a vehicle of *bir bonga* (forest god).
- The singing of the frogs indicates that the rain has come and it is a time for celebration, while the silence of the frog means that nature and the god have forsaken man. This, of course, is attributed to human evil. If frogs are killed, the rains, it is believed, will forsake man.
- The goat is a domesticated subspecies. Goat is one of the oldest domesticated animals, having been used for their milk, meat, hair, and skin over several millennia.
- Rati wife of Kama, the god of love, is depicted seated on a parrot vehicle.

Apart from the provision of food and clothing, animals were connected with religious belief and practices. The song and dances of Santhal express their traditional art based on the habit or imitation of animals. Their festivals acknowledging the contribution of animals in the creation of wealth, and body decoration with various purpose. Animals also carry good and bad omen in their social life. Various connotation they use assigning animals in their day to day life. In wall paintings, 10 kinds of birds and 15 kinds of animals including domestic and wild are documented.

The list of *Jan janwar* is shown in Table 4 and Table 5 with local names and with inspirational aspects to paint it. A graphical representation of table 4 & 5 is shown in Fig. 75 and Fig. 76.

Table 4 List of documented *Chene* (bird) visual forms with the purpose of execution on the wall

Chene			Inspirational aspects
No.	English name	Local names: Santhali ¹ Hindi ²	
1.	Peacock	<i>Marah/Pilior marak, mor</i>	Beauty, love, Legends fertility, prosperity
2.	Peahen.	<i>Martu marah</i>	Beauty, love, Legends fertility, prosperity
3.	Cock	<i>Sim, murga</i>	Ceremonial, Status, nourishment
4.	Parrot	<i>Miru, tota</i>	Beauty, love, fertility, prosperity
5.	A species of wild pigeon.	<i>Kudbur potam</i>	Peace, prosperity, nourishment
6.	Butterfly	<i>Pipirhiyarg, titali</i>	Beauty
7.	Duck	<i>Gede</i>	Beauty, nourishment
8.	Heron	<i>Koh</i>	Beauty, nourishment
9.	Pigeon	<i>Parva, kabutar</i>	Peace, prosperity, Identity, nourishment
10.	GooseTwo mythical birds	<i>Has hSsil</i>	Fertility, prosperity, Legends

Table 5 List of documented janwar visual forms with the purpose of execution on the wall

Janwar			Inspirational aspects
No.	English name	Local names: Santhali ¹ Hindi ²	
1.	Cow	<i>Gai</i>	Fertility, beauty, Legends Ceremonial, prosperity, nourishment
2.	Buffalo	<i>Kada</i>	Fertility, Ceremonial, prosperity, nourishment
3.	She goat	<i>Merong/bir merong, kutura</i>	Fertility, Ceremonial, prosperity, nourishment
4.	Goat	<i>Bir Mero</i>	Fertility, Ceremonial, prosperity
5.	Elephant	<i>Hati, Marang horh</i>	Status, prosperity, nourishment
6.	Ox	<i>Dangara</i>	Fertility, Ceremonial, prosperity, nourishment
7.	Camel	<i>Unt</i>	Positivity, Legends
8.	Dog	<i>Seta</i>	Honesty, Legends, nourishment
9.	Pig	<i>Sukari</i>	Nourishment
10.	Rabbit	<i>Kulay</i>	Fertility, Ceremonial, prosperity, nourishment
11.	Frog	<i>Rote</i>	Nourishment

12.	Tiger	<i>Chetara</i>	Legends, status
13.	Deer	<i>Jeel</i>	Fertility, nourishment
14.	Fish	<i>Hanku</i>	Fertility, nourishment
15.	Antelope	<i>Murum jel, Nilgai</i>	Identity, prosperity, nourishment

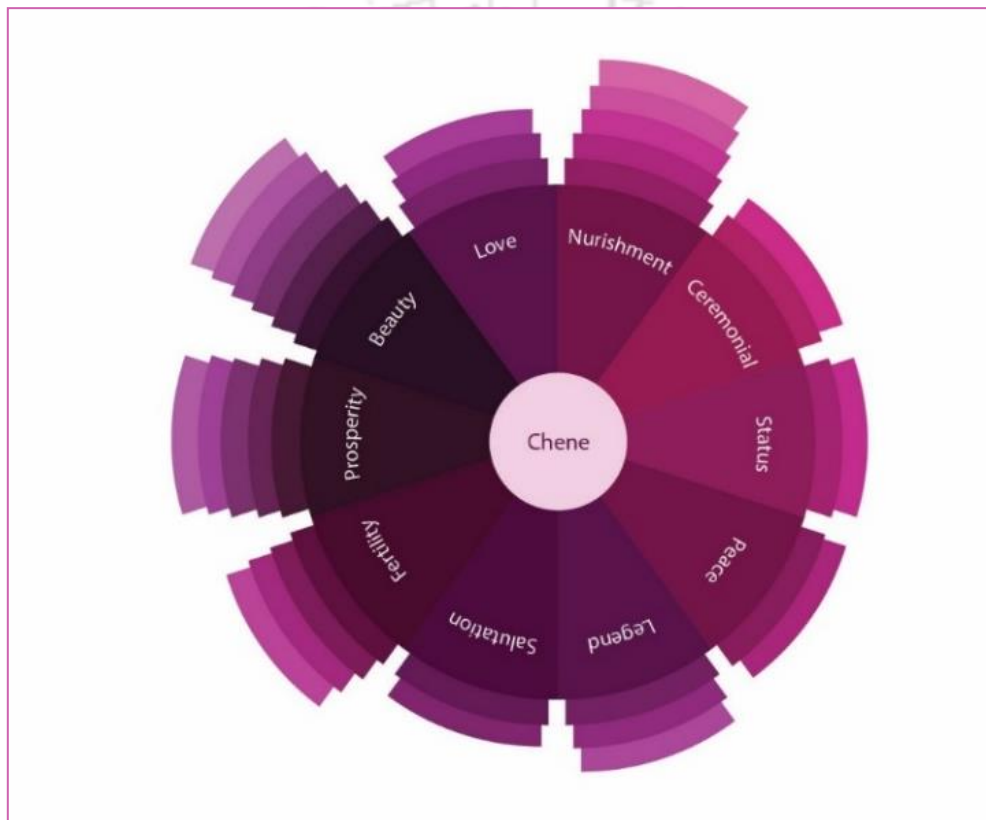


Fig. 75 Graphical representation of *Chene* (bird) visual forms and the inspirations



• **Fig. 76** Graphical representation of *Janwar* (animal) visual forms and the inspirations

4.3.3 *Hor* (Human)

Rural life is simple and full of the festival, dance and other folk art forms. People like to leave in-group and share their feast and festival. Their village pattern also helps in that. The main street was known as kulhi, people, seat there, talk to each other, held their council or meeting. In wall art tradition mainly two kinds of human forms are found. The life style of rural people and inspirational aspect of human visual form is discussed below.

- Among rural community dance, keep a significant aspect in their life style. They generally dance in a group in open space. They celebrate every festival in group Sarana festival (e.g., Baha prob, janthar, harihar sim), village festival is Karam festival. Karam is village level festival and *sohrai*, and *harihar sim, janthar, disom Sendra sohrai* and *Baha* festival is village level festive. In these occasion, people gather and celebrate the festival with dancing (Singh A. K., 1982). Various kind of musical instrument is used while performances.
- Santhal is not idol worshipers, but some of the figurines are taken place in their sacred groves to follow some myth and concept. Peacock and human forms are made from straw. These figurines were known as *Pilchu haram* and *Pilchu budi* as their legends as Hindu legend *shiva* is drawn with *trisul*. Hindu worship Shiva as their god and call him

Mahadev, Bhola, Shankar. They worship him in abstract form and figure form also. Among Santhal, there is no figurative form of *Shiva*, but they worship *marag buru* as *Shiva* in an abstract form like a stone.

- There are two types of scroll paintings are found in these regions one is *Jadopatuaa* (Santhal Pargana), and another is *Pytkar* (East Singhbhum). *Jadopatuaa* is a scroll painting which is (made by the Jadu community. It is an ancient traditional painting which is a form of Bengal Pat Chitra (scroll painting). These Patchitra are narrations of myths and tales from the Santhal cosmos, like the yamaraj story, creation story, Baha festivals, Santhal dance Santhal totem, etc (Sinha, 2014). In West Singhbhum Pytkar community also involve making the scroll paintings on handmade paper with natural colours.

In wall painting, human forms are painted doing some activity (dance or guarding the house and salutation gesture) with the association of musical instrument and weapons. A graphical representation of the inspirational aspect is shown below (Fig. 77).

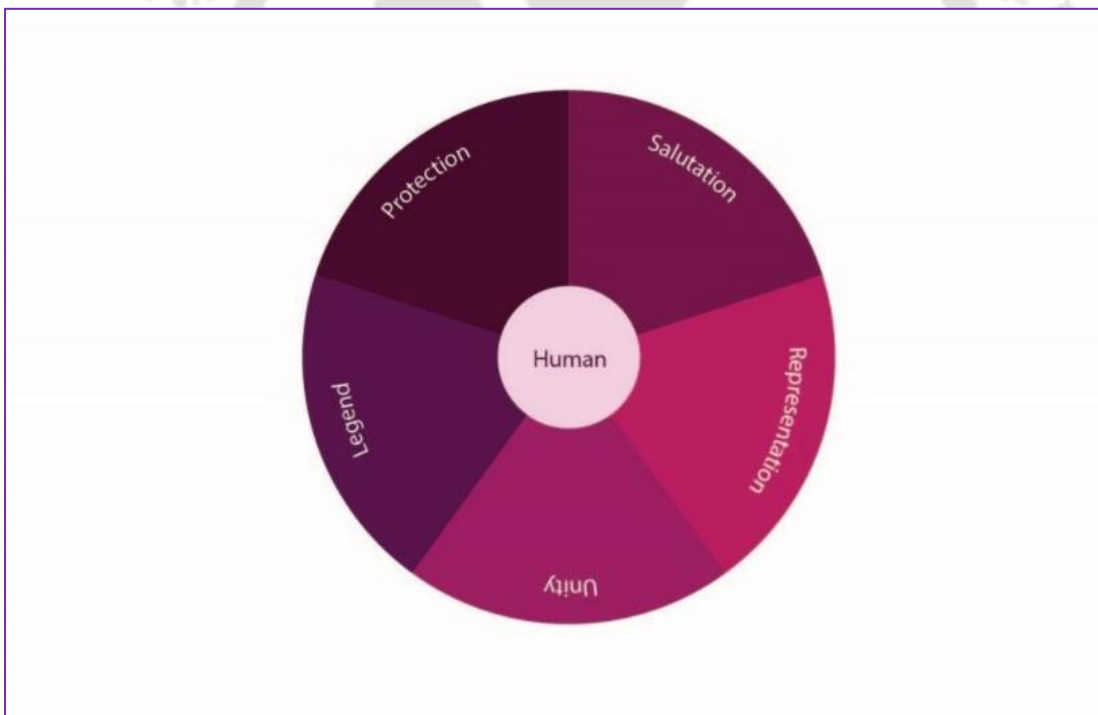


Fig. 77 Graphical representation of *Hor* (human) visual forms and the inspirations

The concept of beauty, fear, pleasure and displeasure, conservation of nature lead the rural communities to paint their mud houses with various visual forms. They get the inspirations for the visual forms from their forefathers, folk tales or their local habitat and present it in a very simplified way in visual forms. As it is discussed that rural people are nature lovers and nature conserver. They respect the nature creature and its creation. For natter's greetings, they celebrate

various festivals, performs many rituals, and follow some taboos to conserve it. The festival is assigning with, unity, representation, awareness for nature, man and animal relationship and social status. The social rituals, including, marriage and children ceremony is assigned with connotation, good or bad omen, fear, prosperity, fertility, and love. Their dance form is assigned with, representation of attires, competition, mood, and documentation. In their wall art practice, the traditional value of their life style represented in various visual forms. For the representation of visual forms, the rural artist has executed in natural and manmade creations.

In the wall paintings, natural objects such as animal, birds, creepers, plants and human forms are painted. These natures created visual form are mostly executed with manmade objects such as pot, word, weapons, musical instruments, band, and border. Pot is one of the most common motifs which is associated with most of the natural forms except human. Pot is deeply connected with their daily life chores. It is also used in rituals and keep sacred space in their life. It made by terracotta and metal and counted as a constructed object among the rural community. Musical instruments and weapons generally made by metals, wood and fruit cells. These visual forms are associated with human forms (natural object). Word motif is also humanly constructed, and at the *Baha-duar* salutation, words are written in Ol-Chiki and Latin script. The word motif also associated with creepers (natural object). Border and bands are found in geometrical shapes, in that repetition of shapes are executed inside a limited area. To making a more appealing bunch of flowers and flower plants (natural object) are painted between the patterns.

The inspirations behind the visual forms are natural objects, and another is a constructed object. Both objects are equally sacred and play a significant role in their social and cultural life. The visual forms are executed combining both objects natural and manmade. It can be concluded that as they respect creature's creativity at the same time, they also respect the creature's creation's creativity and execution of both creativities make the rural people significant from others.



This page is intentionally left blank

5 VISUAL ANALYSIS

To analyse the physical characteristics of rural art form, *New formal analysis* model has been designed. The visual analysis was done in two steps; first was the analysis of the *individual visual form* and second was the analysis of *visual form with the wall*. The analysis of *individual visual form* and *visual form with the wall* was done based on the nature, representation, and categorization of the visual form. Nature, representation and organization mainly talk about order, direction, shape execution, association, combination, repetition, rotation, reflection, proportion, emphasis, eye view and organization of the shape and colour of visual form individually and with the wall (Fig. 78). *Visual form with wall* analysis was done adopting the open coding method and as a result of this method placement and execution of the visual forms were identified. Nature of visual form was studied to find the homogenous characteristics between *Baha(1)*, *Baha(2)*, *Jan-janwar* and *Hor*. Representation of the visuals was studied to identify the composition of visual forms. Organization of visual forms contains the placement of visual elements in the *individual visual form* and *visual form with the wall*. Organization of visual form helps to understand the visual perception of the artist while making the visual art forms on the wall. Formal analysis model (large size) is attached in

Appendix L.

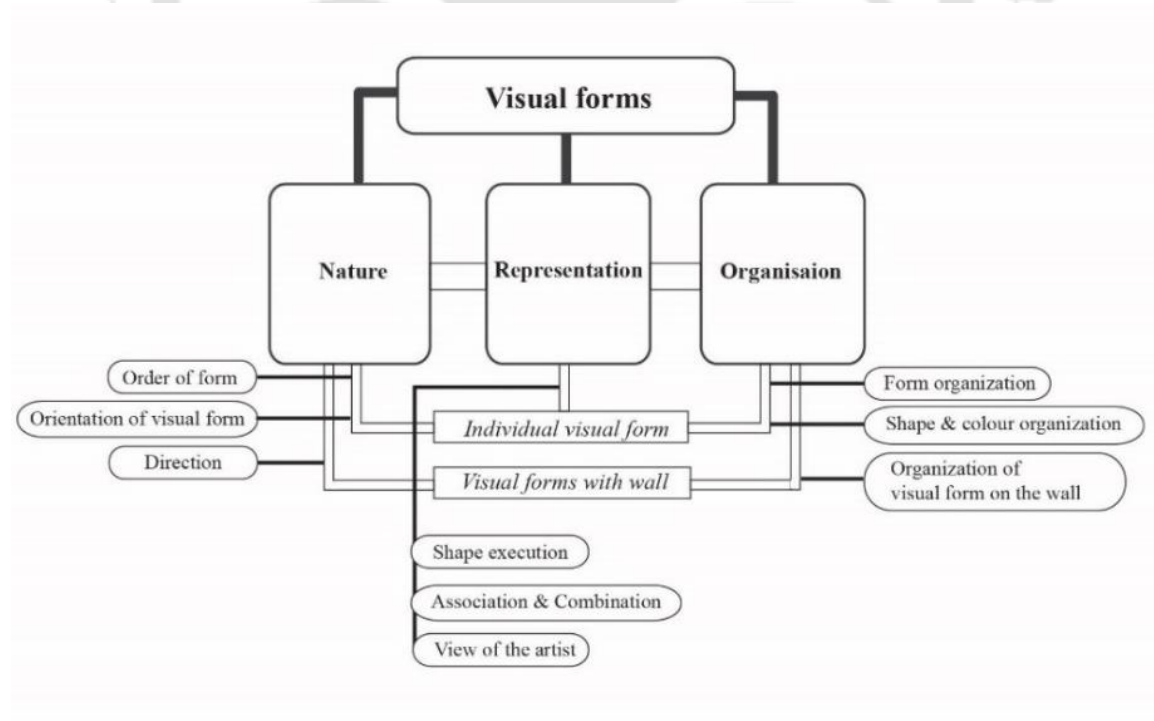


Fig. 78 New formal analysis model

5.1 Nature of visual forms

In Photo documentation data suggest that, the mud houses of eastern rural Jharkhand consist of five types of mural art forms; *Likhan gadhan* (mud mural), *Rong baha* (paint mural), *Jaunara baha/phul* (rice-paste mural), *Jadopatia* (cow-dung mural) and *Guruj baha* (cow-dung mural). There are various visual art forms (natural and manmade) such as *Baha* (flower plant, non-flower plant, creeper, tree, plant seedling, band, and border), *Jan-janwar* (bird, animal, reptile, and insect) and *Hor* (human) are painted on the mud walls (Table 2). In this table, documented visual forms and its categorization is listed. Categorization of visual forms is done following the categorization of the rural artist for particular visual forms. In this table, natural and manmade forms are categorised in vegetative, figurative and manmade visual form. *Baha* is considered as vegetative, figurative and manmade visual forms. *Baha(1)* as vegetative visual form painted with plant, creeper, and grass. *Baha(2)* as manmade visual form is painted with band and borders. Figurative visual forms comprise of *Jan janwar* and *Hor*. In *Jan janwar*, *bird* (chene) and animal (janwar) are painted as a visual form, and in *hor*, human visual form is painted on the wall. *Baha* is also considered as a figurative visual form in some special composition like if vegetative visual form composes with figurative visual form and vegetative visual form is bigger than supportive visual form. A list of visual form is attached in Appendix I. Appendix J. and Appendix K.

Table 2 (Chapter 4) it is found that there are multiple combinations of visual form are painted on the wall, and each combination is different from the other. To find out the homogenous characteristics between *Baha(1)*, *Baha(2)*, *Jan-janwar* and *Hor*, nature of the visual form is studied. Nature of visual form is studied through the direction of *visual form on the wall*, order in individual visual form and orientation of the visual form. The direction of visual form is considered as an important factor of visual form.

5.1.1 Direction

In rural mural art form of eastern Jharkhand, visual forms are mainly found around the doorway in the form of creeper and border. Execution of these visual forms follows the shape of the architectural elements (doorway, ventilator, and window). Open coding method was used to identify the direction of the visual forms. It is found that *visual forms with the wall*, carry two types of directions; one is *natural/regular/vertical*, and another is *horizontal*. At the *Baha-duaar* (main doorway) visual form is arranged in two directions; vertical and horizontal (creeper & border). Plant, tree, Jan-janwar, and human are identified in natural direction; vertical and horizontal (as found in nature). Religious symbols are marked as regular direction (as it is found commonly). In Table 6, a list of the direction of visual forms is shown.

Table 6 Direction of visual forms

	Visual forms	Direction
1.	Baha(1)- Flower or non-flower plant	Natural
2.	Baha(1)- Flower or non-flower creeper	Natural/vertical and horizontal
3.	Baha(1)- Tree	Natural
4.	Baha(1)- Plant seedling	Natural
5.	Jan-janwar- Bird	Natural
6.	Jan-janwar- Animal	Natural
7.	Jan-janwar- Insect	Natural
8.	Jan-janwar- Reptile	Natural
9.	Hor	Natural
10.	Baha(2)- Border	Natural/vertical and horizontal
11.	Baha(2)- Band	Horizontal
12.	Baha(2)- Religious symbol	Regular

Direction of the visual forms suggested that following the shape of architectural elements, the features of *individual visual forms* might vary from one another. To analyse the features of *individual visual forms*, order of the form was studied.

5.1.2 Order of form

To study the order of form, *photo interviews* were taken during the field visit (chapter 4). The rural people explained the minimum and maximum features of the executed visual form (Table 7). In this table, in *Baha(1)* it is shown that flower plant carries flower, leaf, and stem as minimum form, and flower, bud, branch, stem, and pot as maximum form. In both cases, it is considered as a flower plant by rural people. In *Baha(1)* vertical creeper carry pot but horizontal creeper does not have pot. In this way, the features of the vertical creeper are different from the horizontal creeper. In *Baha(2)* (Table 8) border is found in two directions but their forms are almost the

same. In religious symbol, single cross and cross with pedestal/pot and with creeper/plant is considered as *Baha* among the rural people.

In *Jan-janwar*, bird and animal are shown as sample visual form. For the representation, maximum form is shown in the table combining all birds and animal body parts [It does not mean that trunk, horn, and hump are associated with one animal]. In *Hor* (Table 9), human forms are shown in two style, and minimum & maximum forms are different in both.

Table 7 Elements of *Baha(1)* visual form


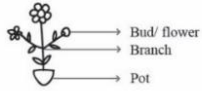
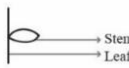

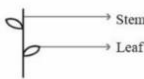
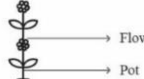
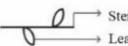



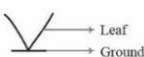
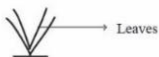
Visual forms		Minimum elements of visual forms	Maximum elements of visual forms
Baha(1)	Flower plant	 Flower Leaf Stem	 Bud/ flower Branch Pot
	Non-flower plant	 Stem Leaf	 Branch Pot
	Vertical creeper	 Stem Leaf	 Flower Pot
	Horizontal creeper	 Stem Leaf	 Flower
	Tree	 Stem Stem	 Ground
	Plant seedling	 Leaf Ground	 Leaves

Table 8 Elements of *Baha(2)* visual form

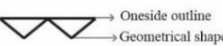
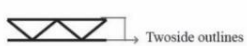

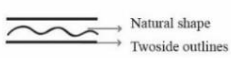

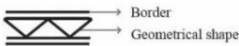


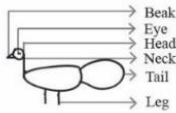
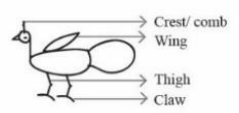
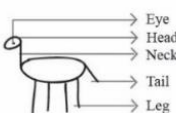
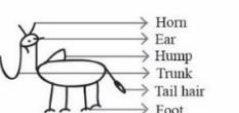
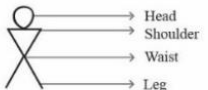
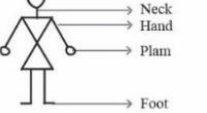
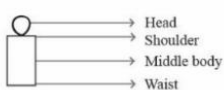
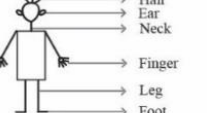
Visual forms		Minimum elements of visual forms	Maximum elements of visual forms
Baha(2)	Border	 Oneside outline Geometrical shape	 Twoside outlines
		 Natural shape Oneside outline	 Natural shape Twoside outlines
	Band	 Simple band	 Border Geometrical shape
Religious symbol	 Cross	 Base	

Table 9 Elements of *Jan janwar* visual form

Visual forms		Minimum elements of visual forms	Maximum elements of visual forms
Jan-janwar	Bird		
	Animal		
Hor	Human		
			

Order of form helps to find the homogeneous arrangements between the visual forms. It suggests that there are two types of visual forms, one as simple and another as repetition of visual forms. One and more than one visual form is named as *simple visual form* (e.g., flower or non-flower plant, tree, plant seedling, animal, bird, human and religious symbol) and *order of visual forms* (e.g., creeper, band, and border) respectively. Baha is a mixup of *simple visual form* and *order of visual form*. It means that the visual forms have two types of nature: one is, "*simple visual form*" and the other is "*repetition of the visual form*".

Nature of visual form is shown in Table 10. In this table, flower or non-flower plant, tree, plant seedling, animal, bird, human and religious symbol are marked as simple visual form. Creeper, band, and border are mainly a repetition of visual forms.

Table 10 Order of visual form

	Visual forms	Nature of visual forms
1.	Baha(1)- Flower or non-flower plant	Simple visual form
2.	Baha(1)- Flower or non-flower creeper	Repetition/pattern of visual forms
3.	Baha(1)- Tree	Simple visual form
4.	Baha(1)- Plant seedling	Simple visual form
5.	Jan-janwar- Bird	Simple visual form
6.	Jan-janwar- Animal	Simple visual form
7.	Jan-janwar- Insect	Simple visual form
8.	Jan-janwar- Reptile	Simple visual form
9.	Hor	Simple visual form
10.	Baha(2)- Border	Repetition/pattern of visual forms
11.	Baha(2)- Band	Repetition/pattern of visual forms
12.	Baha(2)- Religious symbol	Simple visual form

5.1.3 Orientation of visual forms

The orientation of visual form has been studied by analysing the rotation of the visual form. The rotational symmetry of the single and group is analysed, following the repeats at 60° intervals around a centre of rotation (360°) (Haan, 2012) (Hann, 2003). Mainly single motifs are analysed through this method. In Table 11 & Table 12, order of rotational symmetry named Ro1, Ro2, Ro3, Ro4, Ro5, and Ro6.

Ro = Rotation

Ro1= rotation of 360° (one rotation)

Ro2= rotation of 180° (two-fold rotation)

Ro3= rotation of 120° (three-fold rotation)

Ro4= rotation of 90° (four-fold rotation)

Ro5= rotation of 72° (five- fold rotation)

Ro6= rotation of 60° (six-fold rotation)

Table 11 Rotational symmetry of single visual form













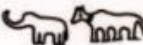



Single visual form	Rotation					
	Ro1	Ro2	Ro3	Ro4	Ro5	Ro6
Baha						
						
Jan-janwar						
						
						
Hor						
						

Table 12 Rotational symmetry of group visual form

Group visual form	Rotation					
	Ro1	Ro2	Ro3	Ro4	Ro5	Ro6
Baha						
						
						
Jan-janwar						
						
Hor						
						

Analysis shows that most of the visual forms (single & group) carry 360° rotation (one rotation). Therefore, these visual forms *Baha*, *Jan-janwar*, and *Hor* are asymmetrical.

In Bhaa some of the visual forms have 2 & 4-fold rotational symmetry, means Ro2 motifs consists of two fundamental units (180°) and Ro4 consists of four fundamental units (90°). Therefore, these visual forms are symmetrical.

5.2 Representation of visual form

Artist's imagination, knowledge about particular form and repetition of specific form in their daily life motivate them to represent visual forms in various ways. Taking inspiration from local habitats (village premises), forest, mini forest (sacred grove), children's books, textile pattern, and cave art, they draw various combinations in visual forms. Someway, inspiration of visual forms affect the shape of the visual form, in like *Likhan gadhan* (mud mural), *Rong baha*, *Jaunara baha* (rice-paste) and *Jadopaatia* (cow-dung), organic shape is used and in *Guruj baha* (cow-dung),

geometrical shape is used (explained in chapter 4). Resemblance of the shape is discussed in Appendix. For mural execution, rural artist uses multiple tools and materials. However, their inspirations for making the visual form, use of materials for executing the visual form on the wall and view of the artist affect the representation of visual form. To analyse the *representation of visual form* shape execution, association and combination of visual form and view (visual form) of the artist were analysed.

5.2.1 Shape execution

The method of making mural art forms adapt to different tools and materials (Table 13). In Santhal Pargana and North Chhotanagpur region, *Likhan gadhan* is made with the mud and finger/homemade brush is used as a tool. During participatory research (chapter 5), it is noticed that use of the finger as a tool affect the shape of the visual form and consequently tip and joinery of the visual form are blunt or round. Most of the time, artist follow mud shape (applied for form execution) to colour the visual form. Kolhan region is known for *Rong baha* (Paint mural). In this art form, synthetic colour and brushes are used to execute the visual forms. Application of brushes gives a sharp tip and joinery to geometrical and natural shape. In Giridih region, *Jaunara baha/phul* is drawn with the repeated impression of *jaunra* (corn cob). Impression is mostly taken from left to right horizontally. This type and method of application create rectangular shapes on the wall. In *Jadopatia* and *Guruj baha* Cow dung paste is applied on the wall with the help of finger or homemade brush. In contrary to the mud mural, the use of fingers as a tool in cow dung mural allows the artists to cast a round shape tip and sharp joinery. In Fig. 79, tip and joinery are explained. In Table 14 & Table 15, the shape execution is discussed in detail.

Table 13 List of art forms, used material and tools

Art form	Material	Tool
Likhan-gadhan	Mud	Finger
Rong-baha	Paint	Brush, thread
Jaunara-baha	Rice-paste	Maize cob
Jadopatia	Cow-dung	Finger/kuchi (handmade brush)
Guruj-baha	Cow-dung	Finger/kuchi (handmade brush)

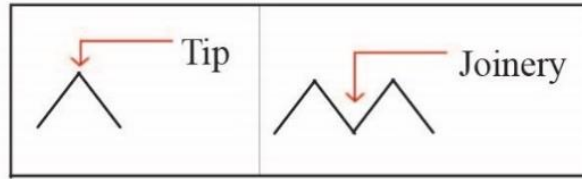


Fig. 79 Tip and Joinery of execute shape

Table 14 Shape execution in art form













Shape execution				
Likhan-gadhan	Mud		Bangle	
	Round tip 	Round joinery 	Sharp tip 	Sharp joinery 
Rong-baha	Paint		Mirror	
	Sharp tip 	Sharp joinery 	Sharp tip 	Sharp joinery 
Jaunara-baha/phul	Rice paste			
	Round tip 	Sharp joinery 		
Jadopatia & Guruj-baha	Cow-dung			
	Round tip 	Sharp joinery 		

Table 15 Tip and Joinery of visual form

Art form	Shape	Tip	Joinery
Likhan-gadhan	Natural	Round & smooth	Round & smooth
Rong-baha	Natural & geometrical	Sharp	Sharp
Jaunara-baha	Natural	Round & smooth	Round & smooth
Jadopatia	Natural	Round & smooth	Sharp
Guruj-baha	Natural & geometrical	Round & smooth	Sharp

5.2.2 Association & Combination

In chapter 4, categorization of visual form is done based on natural and manmade form such as Baha(1), Jan-janwar, Hor and Baha(2). While studying association & combination, the visual form is identified either as 'single' or 'group'. Visual form (flower & nonflower plant, human,

creeper, religious symbol, band and border) which are executed individually with the association of pot, word, weapons and musical instrument are known as single visual form. Group visual form is mainly a combination of single visual forms. *Baha(1)* is painted with *Jan-janwar*, *word*, *religious symbol* and *Baha(2)*. The *Jan janwar* visual forms are painted on the wall in a group with the combination of *Janwar+Janwar*, *Janwar+Baha*, *Janwar+Gamala*, *Chene+Gamala*, *Chene+Baha*, *Chene+Chene*. *Hor* is painted with a combination of *Hor+Hor*, *Hor+Baha(2)*. Overall visual form is categorised in single and group (Table 16). The detail combination of visual form is listed in Table 17.

Table 16 Representation of visual forms

Single (One visual form)		Group (More than one visual forms)	
1.	Baha(1)	1.	Baha(1) or (1) ¹ +jan-janwar
2.	Baha(1) +Gamala = Baha(1) ¹	2.	Baha(1) or (1) ¹ +Baha(2) or (2) ¹
3.	Baha(1) or (1) ¹ +Word	3.	Baha(2) (band)+ Baha(2) (border)
4.	Baha(2) (religious symbol)	4.	Baha(1) (flower plant) + Jan-janwar (insect)
5.	Baha(2) +Gamala= Baha (2) ¹	5.	Jan-janwar (animal & bird)+Gamala (pot)
6.	Hor	6.	Janwar (animal) +Janwar (animal)
7.	Hor+weapon/ musical instrument= Hor ¹ (human)	7.	Jan-Janwar (reptile) + Jan-Janwar (bird)

8.	Jan-janwar	8.	Hor+Hor
9.		9.	Hor or Hor ¹ (human) + Baha(2) (border)

Table 17 Visual forms and its composition

No.	Visual forms	Composition	
1.	Baha(1)	Flower or Non-flower plant	Pot, Bird, Animal, Religious symbol, Word, Insect
		Creeper	Pot, Bird, Religious symbol, Word
		Tree	Bird, Animal
		Plant seedling	Border, human
2.	Baha(2)	Band	Flower or Non-flower plant, Creeper, Border
		Border	Human
		Religious symbol	Pot, Flower plant, Creeper
3.	Jan-janwar	Bird	Pot, Flower or Non flower plant, Creeper, Reptile
		Animal	Animal, Pot, Tree
		Insect	Flower plant
		Reptile	Bird
4.	Hor	Human	Weapon, Musical instrument, Border

5.2.3 View

Analysis of the view of the artist for drawing visual form was done by comparing original photographs of the visual with the visual form executed on the wall (Fig. 80). It is noticed that, in *Baha* visual form, flower is drawn in front view. Disk (central part of the flower, where petals are connected) of the flower is painted centre or off centre and bud are drawn in side profile view. Lotus and rose flower carry the side, front and top view. Human forms carry both front and side view. In human, face, body, legs are at front but feet are in side positions. In some human forms, body is in front position and head and feet is in side position. In animal visual form, head, body and tail are in side profile but ear and horn are in front. In birds, head and body are in side view but tail, feet and crest/crown are in front view. Manmade visual forms (e.g., religious symbols, earthen pot, musical instruments) are drawn in front viewpoint. Border and bands are mainly the repetition of shape and are connected to each other. Multiple view of the artist is used to draw the *individual visual form* (Table 18).

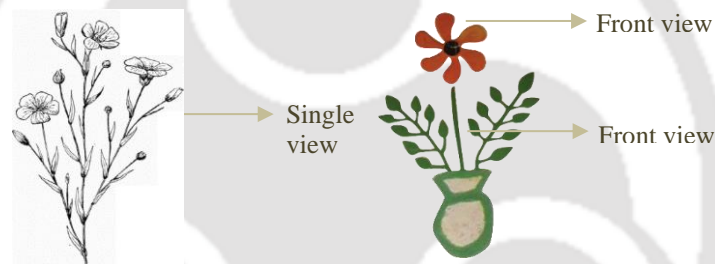
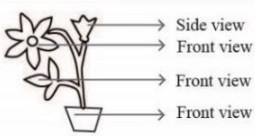
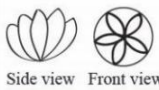
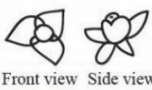
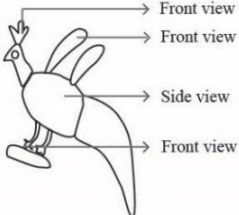
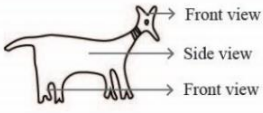
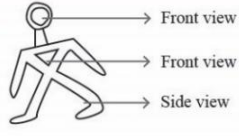
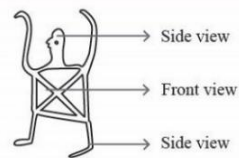


Fig. 80 Analysis of view of the artist

Table 18 Multiple views in visual form

Baha		
	<p>Lotus</p>  <p>Side view Front view</p>	<p>Rose</p>  <p>Front view Side view</p>
Jan-janwar		
		
Hor		
		

Representation of visual form clarifies that the artist uses various tool and material to execute visual forms. These visual forms are a combination of natural object and the manmade object such as pot, word, weapons, musical instruments, band, and border. Pot is one of the most common motifs associated with most of the natural forms other than human. Artist uses multiple views to showcase each body parts of visual forms. Consequently, visual forms are documented in multiple views.

5.3 Organization of visual form

Organization of visual forms was studied from the form and colour of *the individual visual form*, and the placement of *visual form with the wall* is studied following the placement of form in single and in group motif.

5.3.1 Form organization

During the field visit, rural artist was asked to draw the visual form on any surface (e.g., wall and paper) (Fig. 81). It is observed that, in *single* visual form, habitually artist start to draw from the

top to bottom. The flower is drawn first, after that stem, leaf, and branch and at the end, the pot. If a flower plant has a bud at the top, then it is painted at last. In the below figure the organization of visual forms is shown with a number. Number 1 is marked as emphasis on a particular part of the visual form (Fig. 82).



Fig. 81 Drawing by the rural artist on the paper

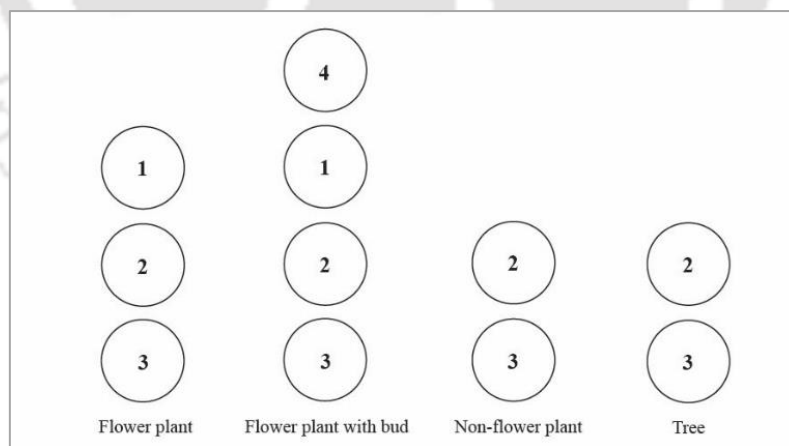


Fig. 82 Organization of single visual form; 1. Flower, 2. Leaf with stem, 3. Pot, 4. Bud

Group visual forms are drawn by arranging the form one after another. It shows that repetition is used to draw the visual form. There are two kinds of repetition found, *double layer repetition* and *single layer repetition*. *Vertical creepers* (flower or non-flower) are drawn following the *double layer repetition*. In this repetition, the flower is drawn in *repetition* at a certain distance and

followed by leaves in repetition mode (Fig. 83). In non-flower creeper, the leaf is drawn continuously (Fig. 84). In horizontal creepers, the flower is drawn in the centre and leaves at both sides. Some horizontal creeper, a central flower is arranged after the leaf Fig. 85. Some of the creepers carry bud at the ending point of both sides. In border and band, pattern carries *single layer repetition* (Fig. 86).

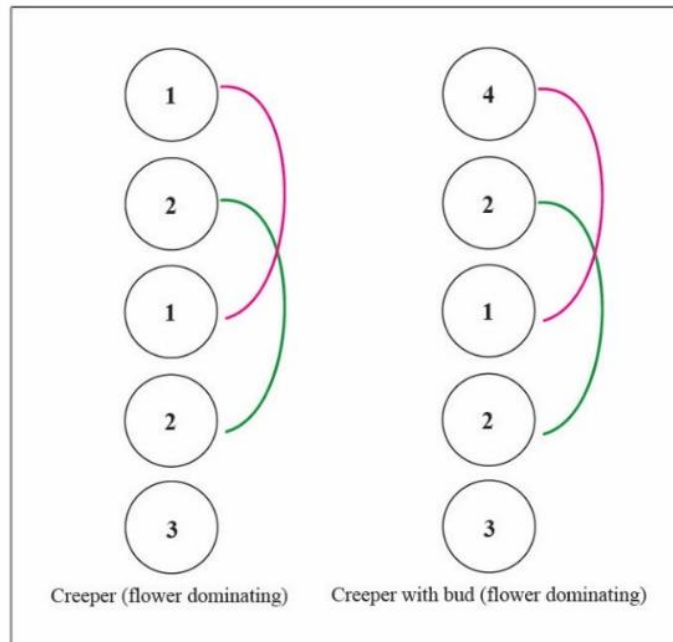


Fig. 83 Double layer repetition in vertical creeper

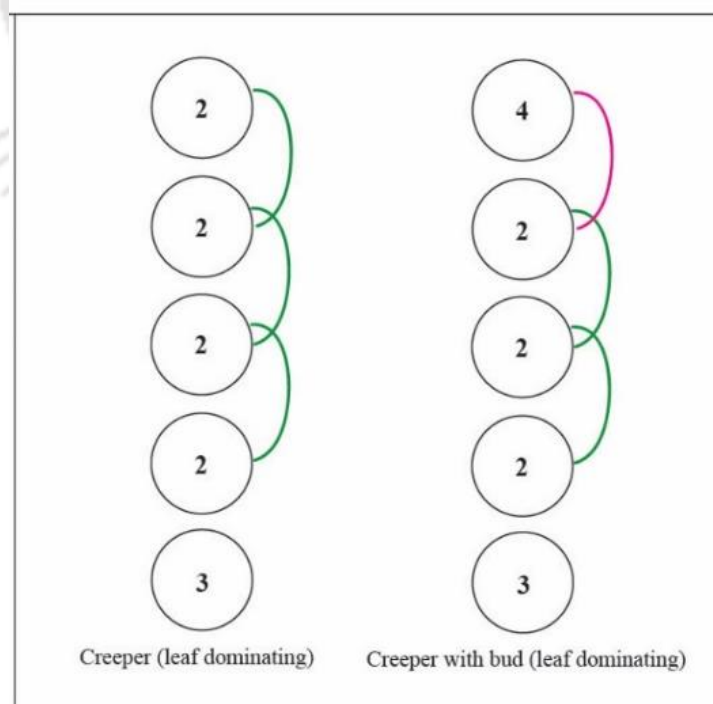


Fig. 84 Single layer repetition in vertical creeper

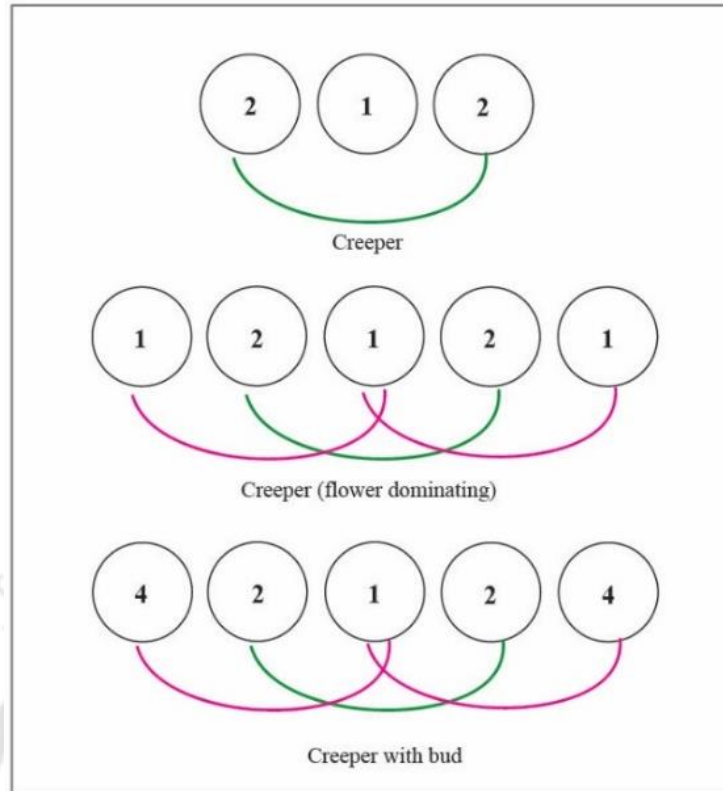


Fig. 85 Double layer repetition in horizontal creper

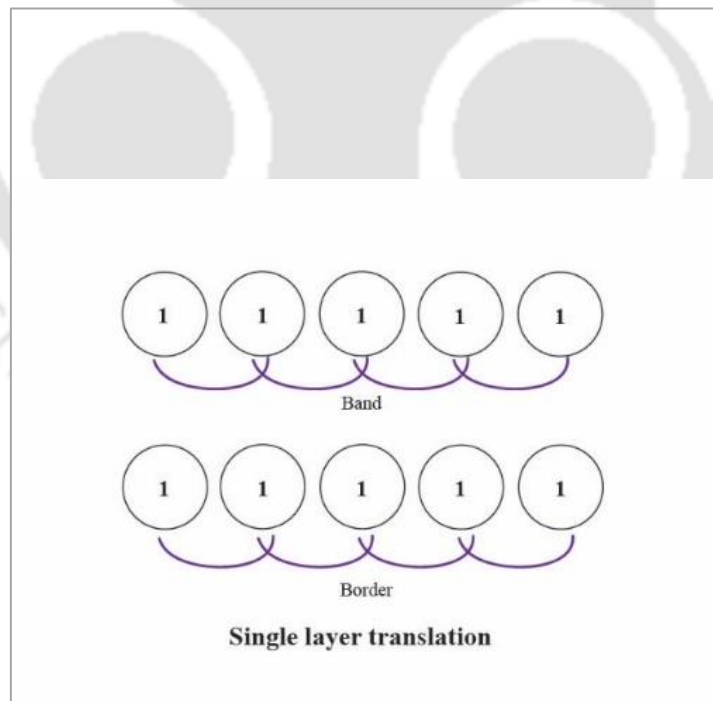


Fig. 86 Single layer repetition on border

In *group* visual form, there are two kinds of combinations; one is a bird kept 'on the plant' and another 'with the plant.'

The bird 'with the plant' visual forms are analysed by reflection symmetry. The order of reflectional symmetry of a motif is equal to the number of reflection axes passing through the motif's centre. One table (Table 19) has been drawn ordering the rotational symmetry and named Re1, Re2, Re3, Re4, Re5, and Re6. Except for Re1 motifs, others contain rotational symmetry (Haan, 2012) (Hann, 2003).

Re = Reflection

Re1= one reflection axis

Re2= two reflection axis









Re3= three reflection axis

Re4= four reflection axis

Re5= five reflection axis

Re6= six reflection axis

Table 19 Reflectional symmetry of group visual form

Group visual form	Reflection					
	Re1	Re2	Re3	Re4	Re5	Re6
Baha						
						
						
Jan-janwar						
						
						
						
						

The bird '*with the plant*' has mirror reflection face-to-face and tail-to-tail. Animals are placed on one side and both sides. Pot is placed in the centre with a mirror reflection of bird and animals. Creepers are placed on both sides of a religious symbol in mirror reflection (figures are divided into two equal mirror-image parts). These figures consist of bilateral symmetry.

Analysis of group visual forms clarified that visual form carries reflection in the form of bilateral symmetry. To analyse the reflection of visual form in detail, the placement of visual forms are marked and shown in Fig. 87 and Fig. 88. It is found that in a *group* visual form, birds are combined with plants and creepers. There are two kinds of combinations found; one is a bird kept '*on the plant*' another '*with the plant.*' The bird '*with the plant*' has mirror reflection face-to-face and tail-to-tail. Animals are placed on one side and both sides. Pot is placed in the centre with a mirror reflection of bird and animals. Creepers are placed on both sides of the symbol in a mirror reflection. Reptiles are kept in the centre with the reflection of a bird. The border is placed on both sides of the band, and human forms are placed along the border.



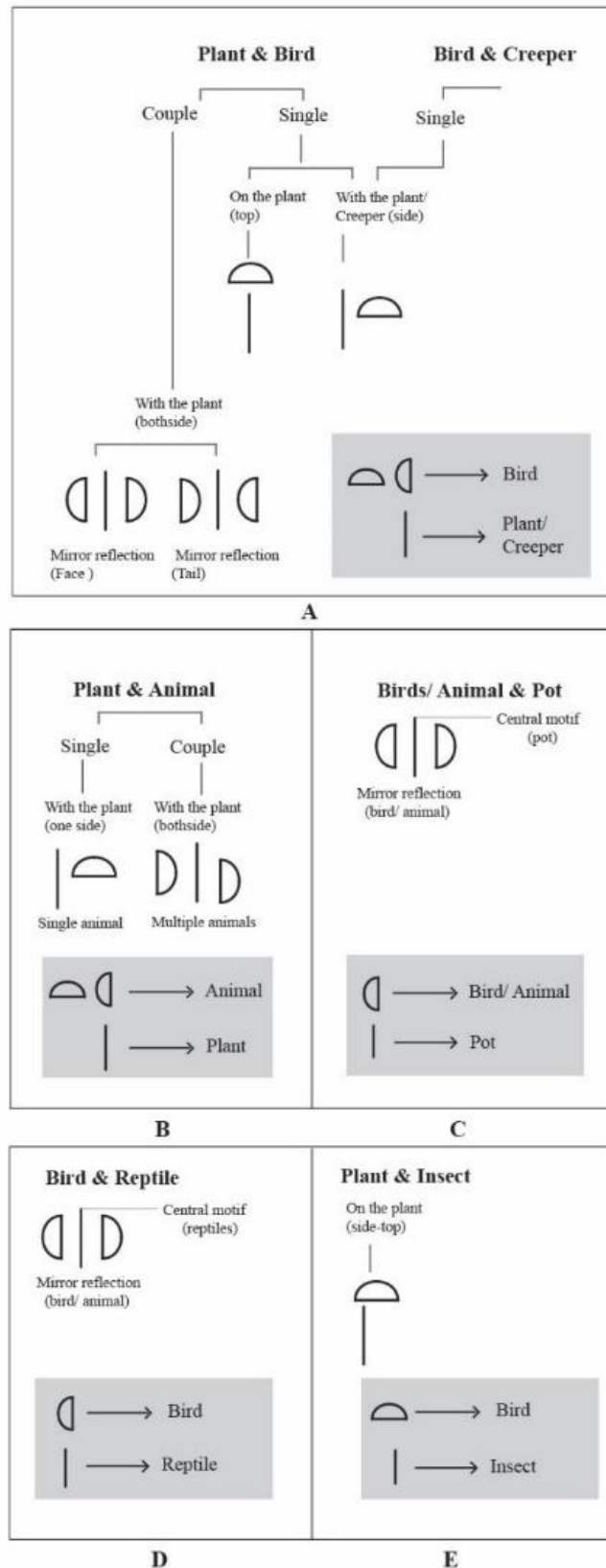


Fig. 87 Organization of visual form

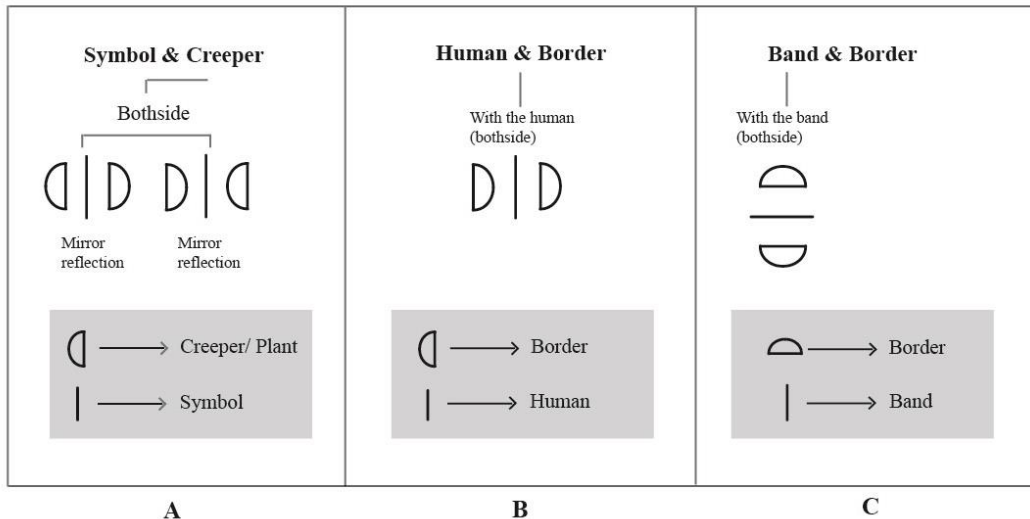


Fig. 88 Organization of visual form

5.3.2 Shape and colour organization

To analyse the shape and colour, organization of visual forms is decoded through segmentation. Appendix M. In segmentation, each element of visual form is decoded according to the placement of elements (upper, middle and lower) (left, middle and right) (forward, middle and backward) and each segmentation is named like, A, B and C. Body parts of flower plant are shown and in Fig. 89, segmentation of a flower plant is shown in Fig. 90.

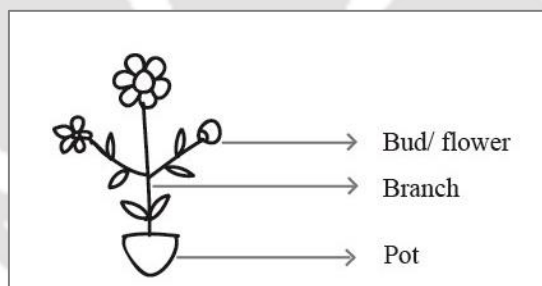


Fig. 89 Parts of flower plant

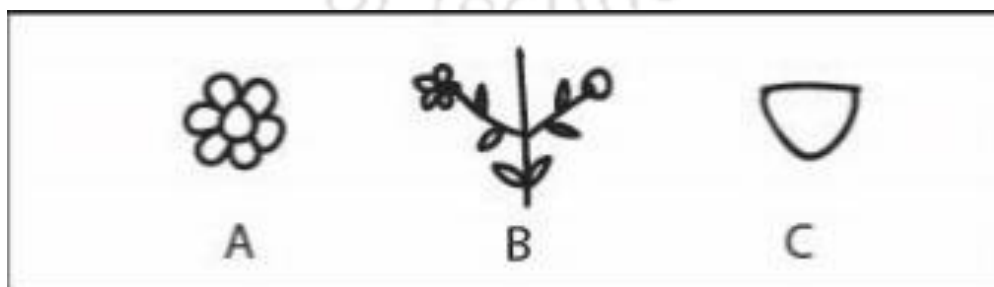


Fig. 90 Segmentation of flower plant

Segmented part of flower plant is analysed in Table 20, Table 21, Table 22 & Table 23.

Table 20 Layers of disk



Disk	
Single	Double
	

Table 21 Arrangement of petals and layers of petals









Petal			
Petal arrangement in disk flower		Petal arrangement in non disk flower	
Disunity	Unity	Disunity	Unity
			
Layer of petal (disk flower)		Layer of petal (non disk flower)	
Single	Double	Single	More than one
			

Table 22 Branch arrangement and branch direction



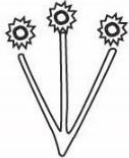






Branch				
Branch arrangement		Branch direction		
Opposite	Alternate	Upward	Downward	Upward down
				

Table 23 Leaf arrangement with stem and leaf arrangement with branch

Leaf			
Leaf arrangement with stem		Leaf arrangement with branch	
Opposite	Alternate	Opposite	Alternate
			

Colour Coding

Segmentation has helped to find the colour arrangements and combinations. There are four colour combination is noticed in flower plant. The colour coding of visual forms is discussed below Fig. 91. Analysis of other visual form is shown in Appendix N.

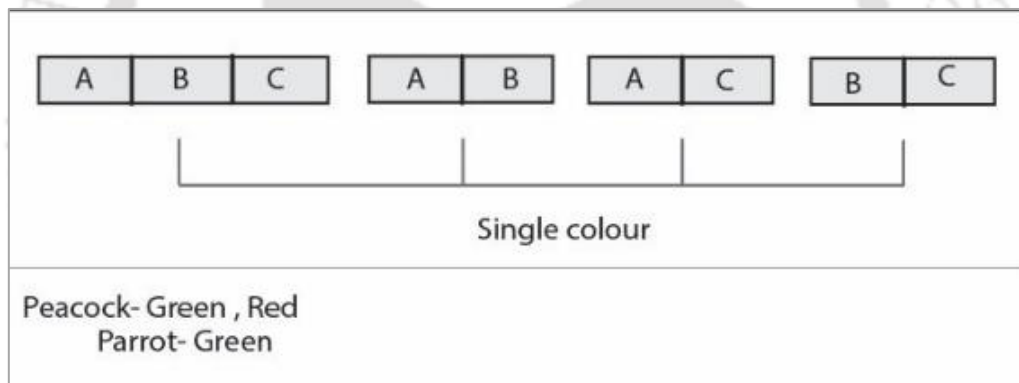


Fig. 91 Colour coding of visual forms

5.3.3 Organization of visual forms on the wall

Organization of visual form on the wall is studied following the open coding method. A leveling process is done with the collected data. In the photo documentation method, the photographs of the mud houses were taken from each side (following the shooting script). The photographs were kept together and leveled one by one in a common pattern. The leveling shows that the front wall of the house is the main decorative wall. Following the main wall, side and backyard walls of the house consist of similar mural making patterns. The execution of visual form on the wall varies in each technique. As it is mentioned, that, front wall of the house is the main space for decoration among the village people (Chapter 4), the execution of a visual form of the front wall of the house is studied during participatory research (Fig. 92). In mural making season the placement of visual forms has been studied according to the outer structure of mud house in selected regions. An

approximate measurement of the front wall of the house, the size of the doorway is measured, and accordingly, visual elements are marked. There are six kinds of layout. In mud mural, the upper portion of the wall is comprised of a horizontal border and motifs, and middle-lower part is comprised of the vertical border, horizontal border, and motif. In paint and rice paste mural the main visual elements are mainly composed in the middle lower part of the wall. In the paint, mural horizontal bands are painted in the middle-lower part of the wall. In rice paste mural two kinds of layout are found. In one layout, basically middle-lower part is used, and in the second layout, one middle part of the wall is used. In both layouts, a pattern of visual forms is found. In cow dung mural also, two kinds of the layout were found; in one layout, the placement of visual forms are done randomly. It means that artist has drawn the visual figures without any constrain like the upper, middle and lower part of the wall. In the second layout in most cases, the placement of visual forms are done on the eye level in upper-middle part of the wall and some cases at the middle part of the wall (Pallavi & Udaya Kumar, 2019).

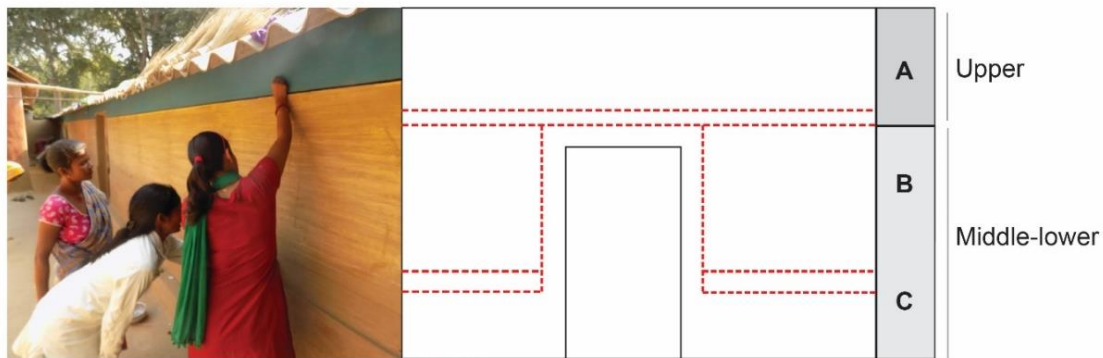


Fig. 92 Analysis of layout of the mural art form

In below figure, the wall is divided into three parts A, B, and C. Part A was the upper part of the house, B is the middle and C is the lower part of the house. Following these part segmentations, open coding is done. There are six layouts were identified for each mural making mediums (e.g., mud mural, Paint mural, Rice paste mural, and Cow-dung mural). The identified layouts of the front wall of the house Fig. 93 and overall mural layouts are shown in Fig. 94 (next page).

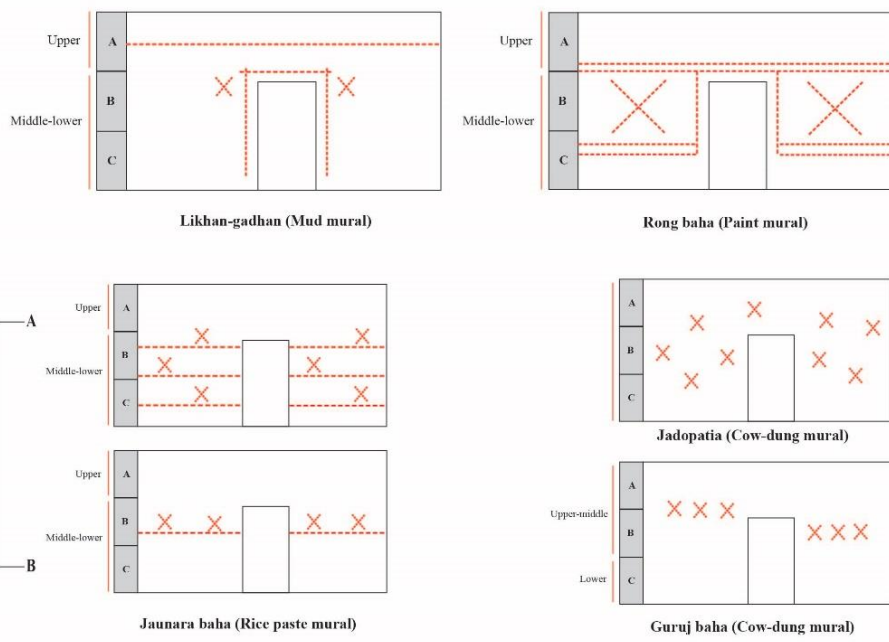


Fig. 93 Layout of front wall of the house, Upper and middle-lower division of the wall

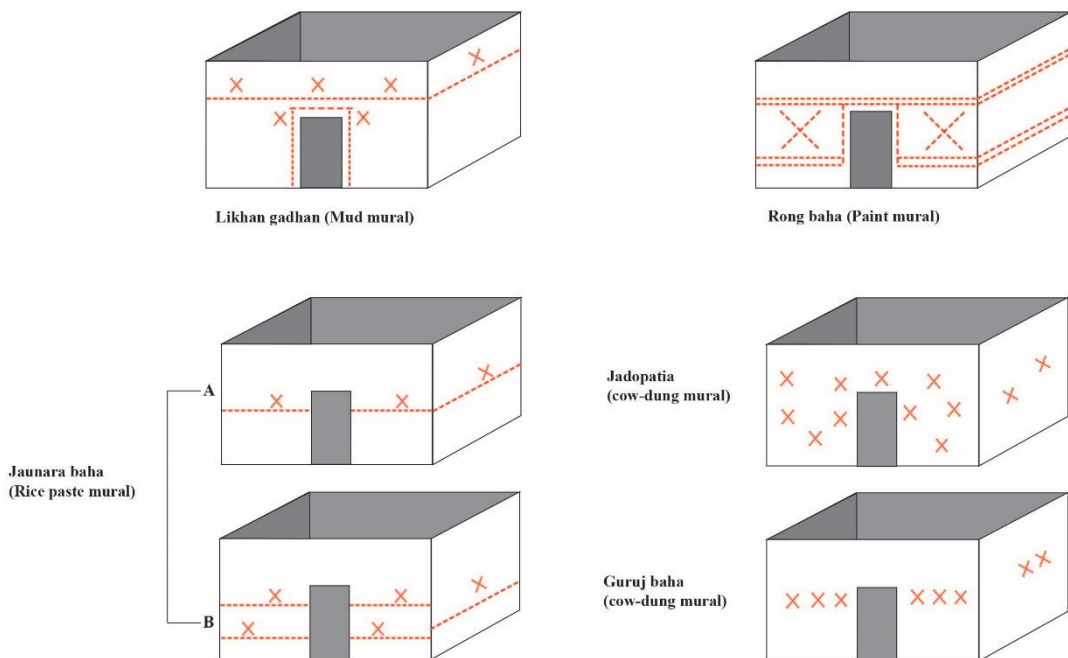


Fig. 94 Graphical representation of layouts of mural art forms

This analysis opens new insight into space division practice among the rural artist. In all six mural layouts, the front wall of the house (i.e., mural execution area) on which the subject of the art work is painted or executed is described as visual space among the rural artists. While designing the murals by the rural artists, the decision regarding visual space (e.g., space division, angle of visual form) affect the two significant aspects of the space; one is physical space, and another is conceptual space. Both concepts are discussed in the following paragraphs.

Physical space: From the ethnographic study it is understood that space which is the part of architectural elements and space which is created by architectural elements deal with physical space among the villagers (Fig. 95). In this figure physical space is comprised of working space, empty space, and shape of the architectural elements (shape of window and door). While executing murals, the depth of the architectural elements is either counted as empty space by the artist or as a figure on the wall which has shape and form. While executing the mural, depth of the architectural elements space always gets special attention by the artist as shown in the figure 'A' following the shape of the architectural elements visual forms are arranged.



Fig. 95 Explaining physical space

In selected villages, there is always the main street and small street between two houses. The entrance of some of the houses open into the main street and some of them in the courtyard (Fig. 96). There is generally a small street between the two houses. Generally, seating platforms are attached with the outer wall of the house, and that marks the edge of the house. Houses mainly contain rooms, courtyard, and veranda. In the figure, A and B, space which is created by architectural elements like the main street, small street and courtyard create physical space which is important to get the viewer's attention.

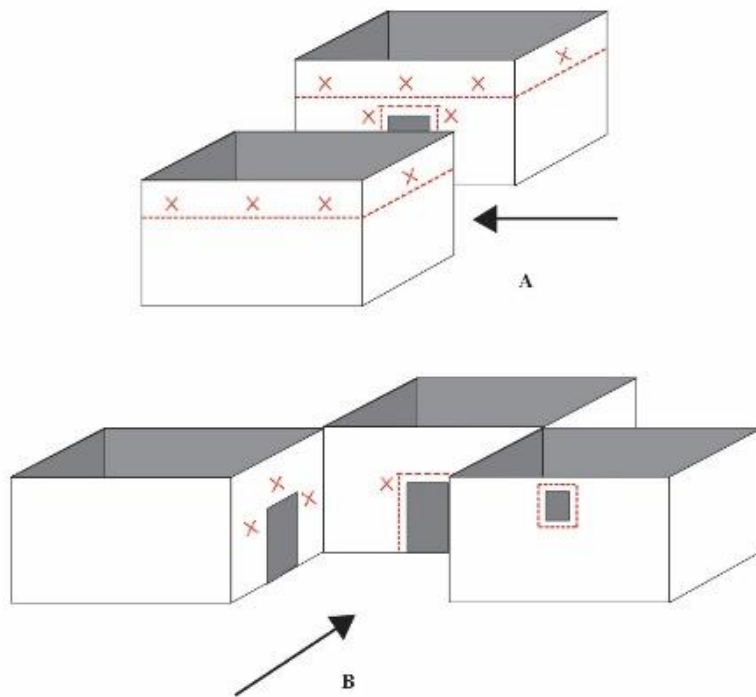


Fig. 96 Explaining physical space; A. Space within the architectural elements B. Space created by architectural elements

Likhan gadhan: Mud mural layout is mainly found in Santhal Pargana and some villages of North Chhotanagpur regions. In this region, most of the villages have courtyard style houses, and in this style houses, more than two entrances open in the courtyard facing each other. On these entrance walls, murals are executed. The mural execution wall mainly contains a doorway and sitting platform, and rarely window or ventilator is found on these walls. The height of the wall is generally 5-6ft or more than an average human's height. The height of the wall motivates the artist to work on the eye level. As it is mentioned that the mural wall is the part of the courtyard, and the courtyard is used for various house hold purpose such as for cooking, drying cloths or agricultural work. In this work, it is noticed that people use the seating platform for sitting purpose or keeping vessels. This habit indirectly guides the artist to make a proper distinction of foreground and background in the mural. Consequently, creepers or plants and pot are drawn around the doorway. The rectangular shape of the doorway also directs the artist to mark the shape with the help of visual forms and repetition of visual forms. The space between the edge of the wall and doorways are used as working space and empty space. In this layout, empty space is found in the vast area of the wall.

Rong baha: Paint mural layout is basically found in the Kolhan region. In this region, the entrance of the painted house mainly opens in the main street. In the main street, people dance,

sing and perform many rituals. Their village governance council is also held in the main street. The seating platform is frequently used by the villagers for the sitting purpose. In the paint mural layout, the middle-lower portion of the wall carry the most of the visual forms. In the lower portion of the wall where the sitting platform attached to the wall, are painted with plain bands. It is noticed that till the sitting height, the bands are intentionally painted plain (i.e., without any motif or pattern). As the upper elevation of the wall is generally used to dry clothes or to hang pitchers for pigeons, the upper portions of the wall are not painted with any visual forms.

Jaunara baha: Rice paste mural is found in North Chhotanagpur region. There are no such particular house patterns identified in this region. The entrance of the houses opens in the main street, courtyard and sometimes in a small street. In most of the houses, a sitting platform attached with mural execution wall. The middle lower portion of the wall use for the mural execution. The upper portion of the wall is used to keep some agricultural equipment and to dry cloths.

Conceptual space: In this mural making tradition, the involved communities are followers of various religions like *Sarna*, *Hindu*, and *Christian*. The followers of *Sarna* religion are nature worshiper; for them, the cosmic space is the spirit world. Bir Bonga is the forest spirit. Jaher era is the spirit of the sacred grove, Dadi bonga is the spring spirit, Marang Buru is the spirit who dwelt with the first Santhal, Pargana Bonga is the spirit of the region, Sima Bonga is the boundary spirit, and Manjhi Haram is the spirit of the founder of the village. They worship animals such as bull, cow, cock, tree, farm barn and also other symbols of nature like Sun, Moon, stars, rivers, and mountains. For them, the house is like "Maa ka anchal", and they have to decorate the mother's clothes with various visual motifs. Cleaning houses with mud is equal to worshipping the mother earth. For the other communities, prosperity is interconnected with clean and decorated space. According to them, the divine god and goddess only pay their visit to decorated houses. Most of the communities decorate the main entrance of the houses for welcoming the guest who will come to pay their visit during festivals. Rycroft (2010)remarks that conceptually the entrance gate is decorated for welcoming the guest with flower garland. The pot motif is represented as earth, which symbolises the life in creepers. In layouts, the villagers arrange the creepers and motif without the division of ground and the skyline. It gives a perception of conceptual space among rural people. All three layouts discussed below defines the conceptual space.

Likhan gadhan: In mud mural layout, the wall is seen as an infinite space or boundless space among the villagers of Santhal Pargana. People depict animals, birds, flower plants, creepers on their wall and show their gratitude to Mother Nature. Sometimes animals are placed in the upper part of the wall, and the birds are in the middle. These arrangements clarify their angle of seeing this wall as the earth in aerial view. The conceptual layout process makes the resemblance with the prehistoric art concept of visual form placement. The primitive concept of space suggests the

visual world as a spatial extension of visual forms. Mathpal has mentioned in his cave art study that the prehistoric artist was not bound by conventional restrictions of space. There is no indication of a ground line with the figure (Mathpal, 1984).

Rong baha: In paint mural layout, horizontal geometrical bands are never framed with vertical border. It defines that artist does not want to limit their earthen canvas within their wall of the house; in fact, they want to create their conceptual space consistency beyond the wall. It also shows their social unity; in which they want to bind each other in one band symbolically.

Jaunara baha: In rice paste mural layout, agricultural motifs are painted in layers without perspective. In this mural art form, rather than considering the wall as a vertical canvas they consider it as an agricultural field. In support of that, they place their motifs in layers. They do not use any border to bind the wall, and they do not use any pot motif to represent the earth. Through this mural, they thank the mother land before working in the field and paint their houses with agriculture related motif. For them, it helps to increase their prosperity and wealth.

5.4 Discussion

Study of *nature of visual form* exposes that each visual form has personalization/interrelation between one form to another. In group visual form, central visual form is socially, habitually or naturally connected to the supported visual form. Like a bird with the pot, an animal with the pot, bird, and animals with plants, creeper, and plants with pots and wild animals with village animals, two birds in the mirror reflection. There is no other motif that has plants on both side and bird as a central motif. It shows how personalization is important for them. In border and band motifs, various shapes are interrelated with each other in order. Interrelationship also creates figure-ground visual forms, which helps to create an illusion of architectural forms.

Study of *representation of visual form* reveals that, in executed mural art form, artists have emphasized that kind of form, which he likes most. In this way, the front view of the form is drawn frequently. Artist has given second preference to the side view of the form. More than one view execution indicates that the artist wants to share several information at the same time. Flower or leaf motifs are repeated again and again in front view because it shows one completeness. In the side angle, an incompleteness is shown, and it always tries to make a connection with the other motifs. In terms of field drawing, there are two types of drawing found. In one type, the corn and field stripe drew alternate and in second kind only corn is repeated. It shows top and side view of the artist. In *Baha*, flowers like Rose and lotus flowers are drawn in multiple views. Lotus has been drawn from various views. Rose is one of the difficult flowers to draw. Because it does not contain disk and without disk, the arrangement of petals are little confusing for the artist. But in these murals, rose flowers are also drawn following the multiple

views. Leaves are drawn in two views; front and side. In front, leaves veins are drawn in the middle and side; veins are in the side position. Pots are always drawn in front view.

Artists have used multiple views to draw the composition on the wall. The wall is understood as a wall. In *likhan-gadhan*, *Jadapatia* and *Jaunara baha*, wall is considered as open space, and visual forms are placed randomly. In mud mural layout, wall is seen as an infinite space or boundless space among the villagers of Santhal Pargana. They depict animals, birds, flower plants, creepers on their wall and show their gratitude to Mother Nature. Sometimes animals are placed upper part of the wall, and the birds are in the middle. These arrangements clarify their angle of seeing this wall as earth in aerial view. The conceptual lay out process indicates that artist is not bound by conventional restrictions of space. There is no indication of ground line with the figure. In this mural art form, rather than considering the wall as a vertical canvas they consider it as an agricultural field. In support of that, they place their motifs in layers.

Organization of visual form exposes that, in *single* visual form, habitually artist start to draw from the top to bottom. Flower is drawn first, after that stem, leaf, and branch and at the end pot. In flower plants visual form, the ratio of the flower is bigger than the rest of the parts of the plant, including the pot (Fig. 97). Constraint in space is a factor that effects the proportion of these visual form. Proportion of the visual form also depends upon execution technique, material, space, and emphasis.

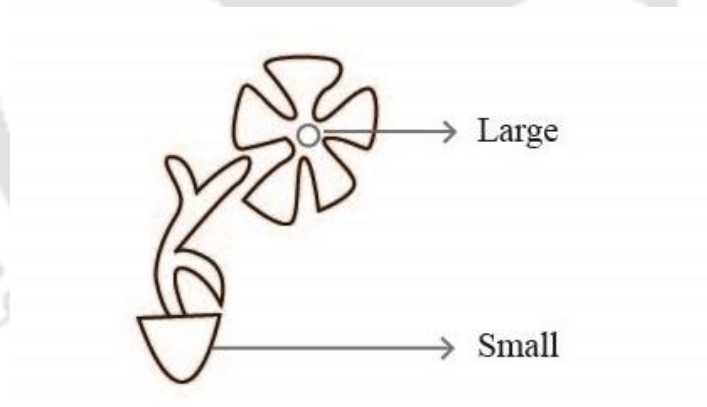


Fig. 97 Proportion of form

In individual visual form, proportion of the visual form leads the artist towards the emphasis. The working style of the artist helps to create emphasis on the form. In visual forms, multiple colours are used in single visual form because element of visual forms and its arrangement are interlinked with colour execution. Colour is often used to emphasize the visual form. Front wall of the house is the main space for decoration among the village people, and the rural artist always emphasized the entrance doorway of the house.

In support of viewer's attention, it can be added that front wall of the house is the most decorated wall of the house and it contains entrance doorway and seating platform, and there is always an open space in front of the wall in the form of street and courtyard. In some villages, mural execution is not done on the side and the backyard wall because the side wall is adjunct with small street or *granary* stores and these portions do not get the viewer's attention. Consequently, the decoration on those walls is optional.

Visual characteristics

Likhan gadhan (Mud mural)

- Vegetative, figurative and manmade visual forms.
- Vegetative and figurative visual forms are most preferable.
- Visual forms create 'simple visual form,' and 'order of visual forms.'
- Visual forms are the combination of vegetative, figurative and manmade forms.
- Visual forms have two types; group and single.
- Visual forms (group or single) are asymmetrical and symmetrical.
- Group motif has a mirror reflection.
- One motif contains a minimum two and maximum three body parts (segmentation).
- Direction of 'motif's pattern' effect the segmentation (upper, middle, lower and forward, middle, backward) and combination (vegetative, figurative and manmade) of visual forms.
- The number of colour application sometimes depend upon segmentation of visual form.
- Pattern of motif carries single layer repetition and double layer repetition.
- Multiple views are used to draw one visual form.
- In vegetative motif, natural law is used in the form of radiation and arrangement of body parts.
- Most of the visual forms carry natural shape.
- Selection of material affects the shape and numbers of colour of the respective visual form.
- Application of material effect the shape of the visual form.
- Red, green and blue is the most preferable colour.
- The overall composition of visual form is affected by the structure of the architecture and elements of the architecture.

Rong baha (Paint mural)

- Vegetative, figurative and manmade visual forms.
- Vegetative (creeper and plant) and manmade forms (band and border) are most preferable.
- Visual forms create 'simple visual form,' and 'order of visual forms.'
- Majority of *order of visual forms*.
- Motifs are the combination of vegetative, figurative and manmade visual forms.
- Motifs (group or single) are asymmetrical and symmetrical
- One motif contains a minimum two and maximum three body parts (segmentation)
- The number of colour application sometimes depend upon segmentation of visual form.
- A pattern of visual form (border) carry single layer repetition, and creeper carries double layer repetition.
- The direction of visual forms affects the segmentation (upper, middle, lower and forward, middle, backward) and combination (vegetative, figurative and manmade) of visual forms.
- Multiple views are used to draw one visual form (vegetative).
- In vegetative motif, natural law is used in the form of radiation and arrangement of body parts.
- Vegetative visual form carries natural shape, and geometrical shape and manmade visual forms carry only geometrical shapes.
- The composition of geometrical shape use of colour to create an illusion in the pattern.
- Selection of material affects the shape and numbers of colour of respective visual form.
- Application of material affects the shape of the visual form.
- Flat and bright colours are used in pattern.
- The overall composition of visual form is affected by the structure of the architecture and the elements of architecture.
- Following the life style of rural people, the overall composition is done.

Jaunara baha (Rice paste mural)

- Vegetative and manmade visual forms.
- Vegetative (paddy plant) and manmade forms (field and field) are most preferable.
- Visual forms create 'simple visual form,' and 'order of visual forms.'
- Majority of group visual form and pattern of visual form.
- Motifs are a combination of vegetative and manmade visual forms.
- Motifs (group or single) are asymmetrical and symmetrical
- One motif contains a minimum two and maximum three body parts (segmentation)
- Every visual form carries one single colour.

- Single motif carries the repetition of rectangular shapes.
- A pattern of motif carries single layer repetition.
- Multiple views are used to draw and organize the visual form (figurative and manmade).
- Selection of material affects the shape and numbers of colour of the respective visual forms.
- Application of material affects the nature of the visual forms.
- Following the lifestyle of rural people, the overall composition is done.

Jadopatia & Guruj baha (Cow dung mural)

- Figurative (human form) and manmade visual forms.
- Visual forms have two types; group and single.
- Motifs are a combination of figurative and manmade visual forms.
- Motifs (group or single) are asymmetrical.
- One motif contains three body parts (segmentation).
- Visual forms carry a single colour.
- Multiple views are used to draw one visual form (figurative).
- Figurative visual form carries natural and geometrical shape, and manmade visual forms carry only geometrical shapes.
- Motifs carry multiple hand gestures (straight, downward, upward and folded).
- Figurative motif carries action (dancing, drumming).
- Figurative motif is drawn with a bare body and with cloth (paint and shirt).

5.5 Expert reviews

Experts' reviews have been taken on the visual characteristics of visual art forms. Six sets of photos of mural art forms are made (printed) and exhibited in front of the reviewers and asked them to write the visual characteristics in points (Fig. 98). The written points of experts are grouped together, and several repetitions of words are marked. A scan copy of once reviewer is attached in Appendix O.

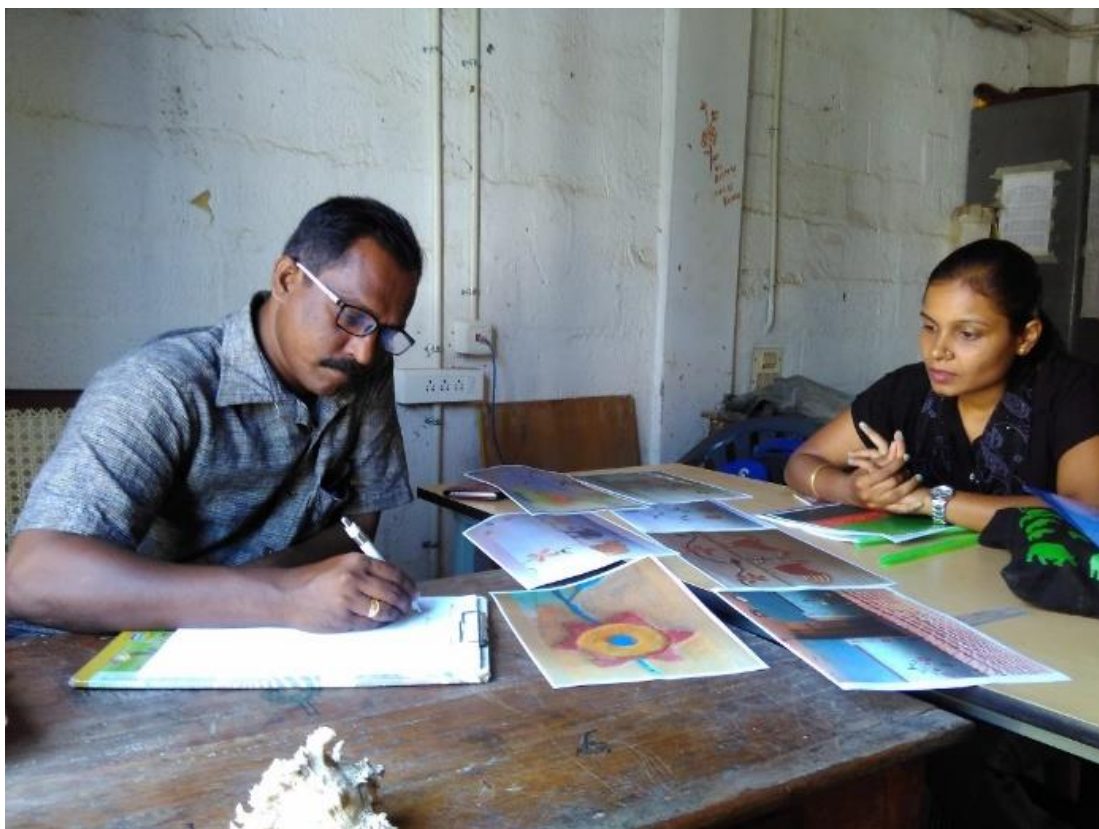


Fig. 98 Expert review

Likhan gadhan (Mud mural): Relief, Simple form, Motif, Botanicals, Floral, Symmetrical balance, Naively shape, Flower pattern, Two dimensional, Symmetrical patterns, Running design, Simplified patterned form, Natural art form, Painted, Folk, Dull colours, Repetition of form, Roughly symmetrical motif, Earthy, Rustic, Childish, Well organised/ established, Indus Valley toys, Rich colours, Simply geometrical design, Primitive, Archaic, Big motif

Rong baha (Paint mural): Vibrant colour, Pattern, Architectural form, Textile design, Geometrical, Contrast & deep colour, Colourful Accuracy, Bold & bright, Decorative art, Artificial, Simplified form, Modern, Repetition, Classic, Elite, Formal, Pandal decoration, Hybrid art, Boredom.

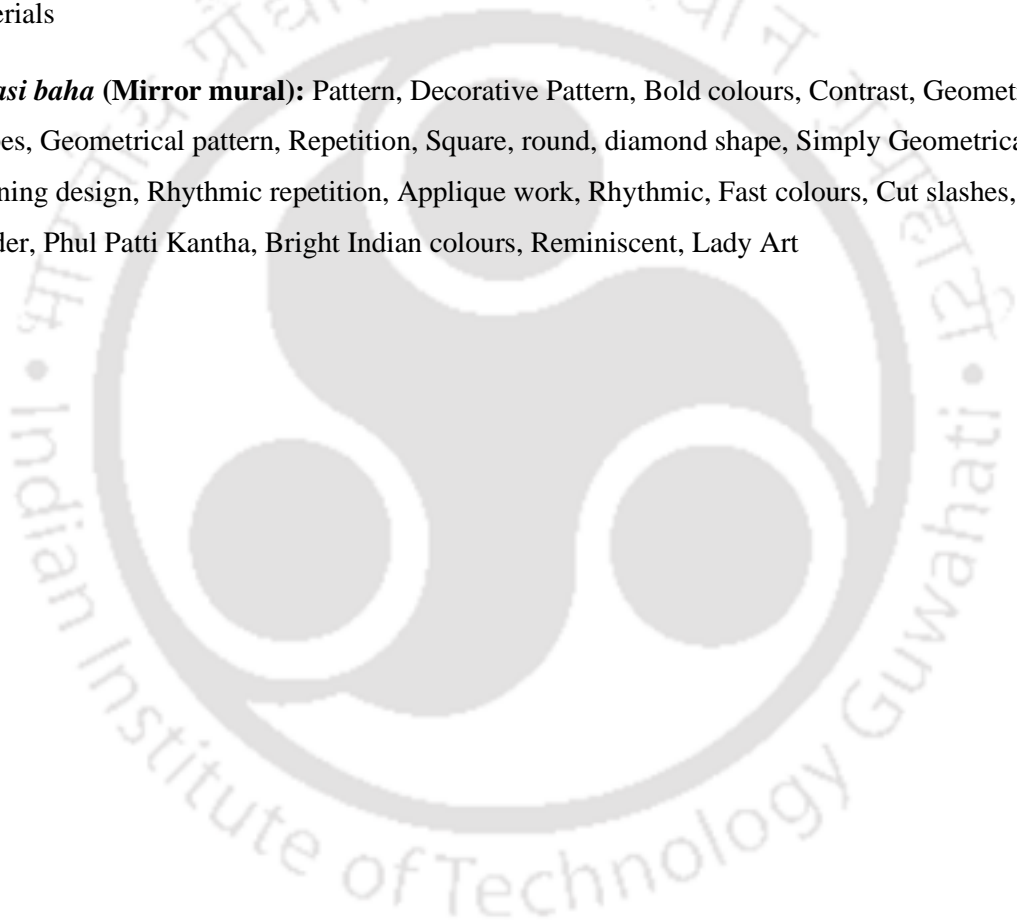
Jaunara baha (Rice paste): Pattern, Rhythmic, Primitive art, Print making, Very less colour, Monochromatic, Repeated form, Very simple, Minimalistic, Alpana, Border, Rhythm, Decorative

art, Balance in imbalance, Natural form, Natural pattern, Similar pattern repetition, Harmony, Unity, Impasto technique, Natural Design, Naïve art, Cave art, Mirrored pattern, Traditional art, Kantha stitch embroidery

Guruj baha and Jadopatia (Cow dung): Child art, Native & primitive form, Geometrical Shape, Cave art, Earthy colour, Monochrome, Pattern, Decorative art, Engraving, Warli art, Icon, Stick figures, Artistic

Churi baha (Bangle mural): Motif, Brocken bangle pieces, Floral, Concave convex, Decorative, Appliqué work, Minimalistic, Flower pattern, Colourful, Botanical, Simply geometrical, Running character, Stylised, Manner of recompilation, waving nature, Repetition, Lady Art, Playful use of materials

Aarasi baha (Mirror mural): Pattern, Decorative Pattern, Bold colours, Contrast, Geometrical shapes, Geometrical pattern, Repetition, Square, round, diamond shape, Simply Geometrical, Running design, Rhythmic repetition, Applique work, Rhythmic, Fast colours, Cut slashes, Border, Phul Patti Kantha, Bright Indian colours, Reminiscent, Lady Art



5.6 Findings

The study started with an aim to find the visual characteristics of mural art forms of eastern Jharkhand. The mentioned visual characteristics are matched with the findings, and visual characteristics of mural art forms are established. Table 24 Table 25, Table 26, Table 27 & Table 28 summarises the key findings. A list of visual characteristics of visual forms is attached in Appendix P.

Table 24 Visual characteristics of *Likhan gadhan* (Mud mural)

Subject	Nature	Representation	Organization
<ul style="list-style-type: none"> ▪ Vegetative (Flower & non-flower plant, creeper, and tree) ▪ Figurative (bird, animal, and reptile) ▪ Manmade (border) 	<ul style="list-style-type: none"> ▪ Simple visual form & Order of visual form 	<ul style="list-style-type: none"> ▪ Vegetative & figurative visual form carries Natural shape ▪ Manmade visual form carries Geometrical shape 	<ul style="list-style-type: none"> ▪ The proportion of the visual form depends upon execution technique, material, and space.
	<ul style="list-style-type: none"> ▪ Natural/Vertical & horizontal direction of visual form 	<ul style="list-style-type: none"> ▪ Shape carry round tip & joinery 	<ul style="list-style-type: none"> ▪ Single layer repetition & double layer repetition
		<ul style="list-style-type: none"> ▪ Single and group visual form 	<ul style="list-style-type: none"> ▪ Mirror reflection
		<ul style="list-style-type: none"> ▪ Combination of vegetative, figurative and manmade forms 	<ul style="list-style-type: none"> ▪ Shape & Colour is used to emphasis.
		<ul style="list-style-type: none"> ▪ Personalization between the visual forms 	<ul style="list-style-type: none"> ▪ Single & multiple colours (Element of visual form and its arrangement is interlinked with colour execution)
		<ul style="list-style-type: none"> ▪ Visual form carries multiple eye view (top, front and side) 	<ul style="list-style-type: none"> ▪ Red, green and blue is the most preferable colour
			<ul style="list-style-type: none"> ▪ Placement of visual form carries multiple eye view (top and front)

Table 25 Visual characteristics of *Rong baha* (Paint mural)

Subject	Nature	Representation	Organization
<ul style="list-style-type: none"> ▪ Vegetative (Flower plant and creeper) ▪ Figurative (Insect) ▪ Manmade (band & border) 	<ul style="list-style-type: none"> ▪ Simple visual form & Order of visual form (dominating) 	<ul style="list-style-type: none"> ▪ Vegetative visual form carries Natural shape ▪ Manmade visual form carries geometrical shape 	<ul style="list-style-type: none"> ▪ Proportion of the vegetative visual form depends upon execution technique, material, space, and emphasis. ▪ Manmade visual form carries equal proportion
	<ul style="list-style-type: none"> ▪ Natural/Vertical & horizontal direction of visual form 	<ul style="list-style-type: none"> ▪ Shapes carry sharp tip & joinery 	<ul style="list-style-type: none"> ▪ Manmade visual form carries Single layer repetition & Vegetative visual form carries double layer repetition
		<ul style="list-style-type: none"> ▪ Single and group visual form 	<ul style="list-style-type: none"> ▪ Manmade visual form carries Flat & bright colour ▪ Vegetative visual form carries single & multi-color (Element of visual form and its arrangement is interlinked with colour execution)
		<ul style="list-style-type: none"> ▪ Vegetative visual forms are a combination of vegetative and manmade forms and sometimes vegetative, fugitive and manmade 	<ul style="list-style-type: none"> ▪ Manmade visual form carries contrast colour
		<ul style="list-style-type: none"> ▪ Visual form carries multiple eye view (top, front and side) ▪ Manmade visual form carry single eye view 	<ul style="list-style-type: none"> ▪ Placement of visual form effected by the structure of the architecture and elements of architecture.

Table 26 Visual characteristics of *Jaunara baha* (Rice paste mural)

Subject	Nature	Representation	Organization
<ul style="list-style-type: none"> ▪ Vegetative (non-flower plant, tree, and plant seedling) ▪ Manmade (border) 	<ul style="list-style-type: none"> ▪ Simple visual form & Order of visual form 	<ul style="list-style-type: none"> ▪ Vegetative and manmade visual form carry Natural shape 	<ul style="list-style-type: none"> ▪ The proportion of the visual form depends upon execution technique and material.
	<ul style="list-style-type: none"> ▪ Natural & horizontal direction of visual form 	<ul style="list-style-type: none"> ▪ Single and group visual form 	<ul style="list-style-type: none"> ▪ Manmade visual form Single layer repetition
		<ul style="list-style-type: none"> ▪ Combination of vegetative and manmade forms 	<ul style="list-style-type: none"> ▪ Repetition of rectangular shapes
		<ul style="list-style-type: none"> ▪ Personalization between the visual forms 	<ul style="list-style-type: none"> ▪ Single colour
		<ul style="list-style-type: none"> ▪ Visual form carries multiple eye view (top, front and side) 	<ul style="list-style-type: none"> ▪ Off white colour
			<ul style="list-style-type: none"> ▪ Placement of visual form carries multiple eye view (top and front)

Table 27 Visual characteristics of *Jadopatia* (Cow dung mural)

Subject	Nature	Representation	Organization
<ul style="list-style-type: none"> ▪ Figurative (Human) 	<ul style="list-style-type: none"> ▪ Simple visual form 	<ul style="list-style-type: none"> ▪ Figurative visual form carries Natural shape ▪ Manmade visual form carries Geometrical shape. 	<ul style="list-style-type: none"> ▪ Single colour (brownish or khaki)
	<ul style="list-style-type: none"> ▪ Natural direction of visual form 	<ul style="list-style-type: none"> ▪ Shape carry round tip & sharp joinery 	<ul style="list-style-type: none"> ▪ Placement of visual form did not follow any order
		<ul style="list-style-type: none"> ▪ Single and group visual form 	<ul style="list-style-type: none"> ▪ Placement of visual form carries multiple eye view (top and front)
		<ul style="list-style-type: none"> ▪ Combination of figurative and manmade forms 	
		<ul style="list-style-type: none"> ▪ Personalization between the visual forms 	
		<ul style="list-style-type: none"> ▪ Motifs carry multiple hand gestures (straight, downward, upward and folded). ▪ Figurative motif is drawn with bare body and with cloth (paint and shirt) 	
		<ul style="list-style-type: none"> ▪ Figurative visual form carries multiple eye view (side & front) 	

Table 28 Visual characteristics of *Guruj baha* (Cow dung mural)

Subject	Nature	Representation	Organization
<ul style="list-style-type: none"> ▪ Vegetative (Plant seedling) ▪ Figurative (Human) ▪ Manmade (border) 	<ul style="list-style-type: none"> ▪ Simple visual form & Order of visual form 	<ul style="list-style-type: none"> ▪ Figurative visual form carries geometrical shape ▪ Vegetative & manmade visual form carry natural shape 	<ul style="list-style-type: none"> ▪ Single colour (brownish or khaki)
	<ul style="list-style-type: none"> ▪ Natural direction of visual form & horizontal direction of visual form 	<ul style="list-style-type: none"> ▪ Shape carries round tip & sharp joinery 	<ul style="list-style-type: none"> ▪ Repetition of figurative visual form
		<ul style="list-style-type: none"> ▪ Single and group visual form 	<ul style="list-style-type: none"> ▪ Placement of visual form carries multiple eye view (top and front)
		<ul style="list-style-type: none"> ▪ Combination of figurative and manmade forms 	
		<ul style="list-style-type: none"> ▪ Personalization between the visual forms 	
		<ul style="list-style-type: none"> ▪ Figurative motif carries action (dancing, drumming) 	
		<ul style="list-style-type: none"> ▪ Figurative visual form carries multiple eye view (side & front) ▪ Manmade visual form carries a single view (front) 	

6 DISCUSSION & CONCLUSION

Eastern rural Jharkhand contains five kinds of mural art forms; *Likhan gadhan* (mud mural), *Rong baha* (paint mural), *Jaunara baha/phul* (rice-paste mural), *Jadopatia and Guruj baha* (cow-dung mural). All mural art forms have distinct subjects and features (i.e., *Likhan gadhan*- flower plants, creepers, trees, birds, animals and border, *Rong baha*- band, border, creepers and flower plants, *Jaunara baha/phul*- plant seedlings and border patterns, *Jadopatia* and *Guruj baha*-human forms). In these art forms, three types of visual forms (*Baha*, *Jan-janwar*, and *Hor*) are found on the mud houses of eastern Jharkhand.

Visual forms: *Baha* is associated with festival (Baha prob, Baha Sendra and flower friendship), ritual (Jaher-than rituals) and the concept of beauty (body parts and doorway decoration) among the rural people hence; *Baha* is the most popular visual form among the rural artists. In the murals, varieties of flowers plants (Hibiscus, Jasmine, Lily, and Rose) are drawn on the wall and resemblance of these flowers (shape, size, and colour) are found in village surroundings (kitchen garden and village premises). In flower plants and creepers, as of the size, shape, and colour, flowers are the most preferred form. To display each part of flowers, it has been drawn in front view with a-disk and 3-8 petals. Among all flowers, lotus Fig. 99 and the rose flower has been drawn in various views (font and side). Some of the lotus motif resemblance the motif of Ajanta murals. In Ajanta murals, lotus has been drawn in different views following various characteristics. In the ceiling, the lotus is drawn in front view, and in Padmpani's hand, it is shown in side view (Spink W. M., 2009) (Fig. 100) (Fig. 101). In Indian floor art and textile patterns, the lotus is a common flower motif (Gupta C. S., 2008).



Fig. 99 Representation of lotus in various views in mural art form of eastern Jharkhand



Fig. 100 Lotus flower at ceiling and Lotus flower in the hand of Padmapani, Ajanta

Source: <https://in.pinterest.com>



Fig. 101 Representation of lotus in *Sujni art* and in *Kond* (floor) art

In a rural mural art form, most of the flower motif is drawn with a disk. Rose is one of the non-disk flowers that is drawn in a side and front views. In comparison to other flowers, rose flower is difficult to draw (as it does not contain disk and without disk the arrangement of petals are little puzzling for the artist). However, in Santhal Pargana murals, rose flowers are drawn in various views (Fig. 102).

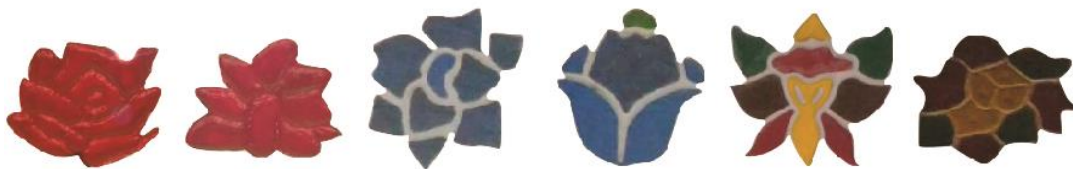


Fig. 102 Representation of Rose flower in mural art form of eastern Jharkhand

Four-petal flower is commonly found as a visual form on the wall (Fig. 103). Leaves are drawn in two views; front and side. In front leaves, veins are drawn in the middle and side vein are in the side view. In animal form, head, middle part of the body and tail is drawn in side view, but ear and horn are in front view. In bird visual form, head, middle body is in a side view but tail, foot and crest/crown in front view. These angles show the personalization between two visual forms. In *Baha*, repetition is found. The footsteps of the villagers are a typical example of repetition. They used repetition in a directional way: linear and circular. In flowers mainly the circular repetition has used and in bands, border and creeper linear repetition.



Fig. 103 Four petal flowers in mural art form of eastern Jharkhand

Pot is one of the most common artificial visual form (Fig. 104) associated with most of the natural forms other than the human form. In the locality, it is rare to find plants and creepers growing or planted in any pot or vessel. On the contrary, plants and creepers are associated with a pot in most of the murals. There are no specific reasons to draw pot motif frequently in the mural art form, but there is a common habit found among the villagers that they keep the drinking vessel near the *Baha-duar* (doorway) Fig. 105. If any person is in *kulhi* and uses the vessel for any purpose, consciously or unconsciously they keep it near the doorway either outside or inside the house. It is noticed that they do it for the accessibility purpose from inside the house and outside the home. This practice is done for each *Baha duar* both located in the interior premises of the house or the exterior *Baha duar* facing the *Kulhi*. Pot is deeply connected with their daily life chores. People mainly use earthenware, aluminium and iron utensils for cooking purpose Fig. 106. For eating purpose, they use *Kasa thali* (brass plate) and *bati*. For drinking purpose, they use utensils like *Kanda* (pot), *lota* (drinking vessel), *Kasa tari* (brass plate) *bati* (bowl). It is also used in rituals and used to make pigeons home Fig. 107. In some of the house pots are arranged in a linear sequence to make pillars Fig. 108.



Fig. 104 Representation of pot in mural art form of eastern Jharkhand



Fig. 105 Placement of pot near the doorway



Fig. 106 Use of pot in kitchen



Fig. 107 Use of pot Making pigeon's home and in rituals

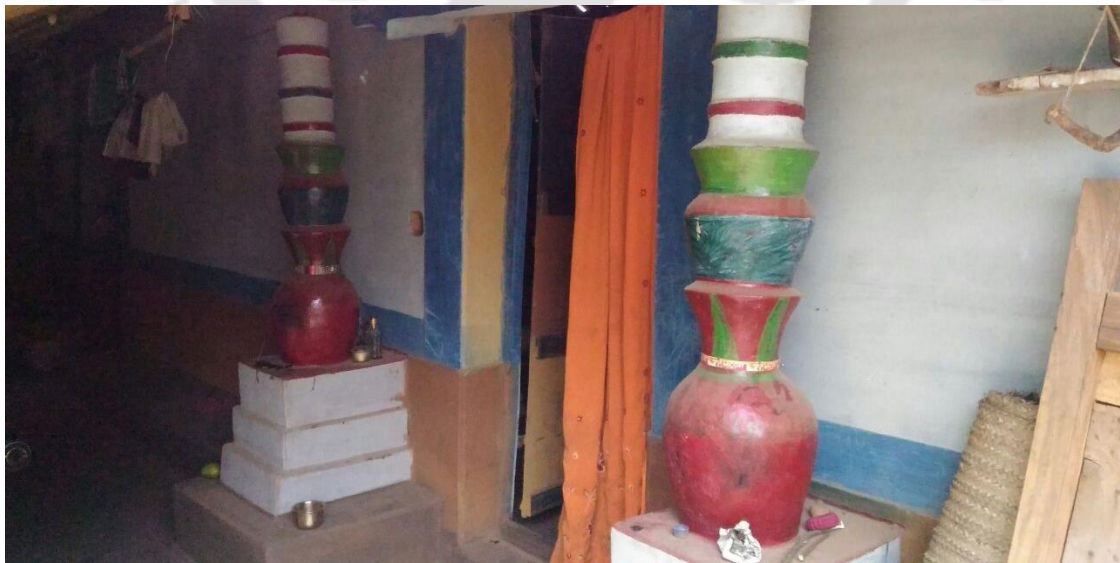


Fig. 108 Use of pot in making pillars

Applying various view in figurative forms is an age-old tradition in art history. Egyptian sculpture and cave art paintings are the best examples of that. Pre-mughal miniature paintings are also used various angle in depicting human figures. In this miniature, side face is drawn with two eyes, and one eye is out the face. Experiment with the eye is common in Indian art. In Fig. 109 Pre-mughal miniature painting and Egyptian painting is shown.



Fig. 109 Use of various eyeview in Pre Mughal and Egyptian painting

In rural mural art form, visual forms are a combination of natural and artificial forms. Natural forms such as animal, birds, creepers, plants and human forms are painted with artificial forms such as pots, word, weapons, musical instruments, band, and border. Musical instruments and weapons are made by metals, wood and fruit cells. Words are humanly constructed, and at the *Baha-duar* salutation, words are written in Ol-Chiki and Latin script. The word motif also associated with creepers (natural object). Border and bands are found in geometrical shapes, in that repetition of shapes are executed inside a limited area. For making more attractive house walls, a bunch of flowers and flower plants (natural object) are painted between the patterns.

In rural mural art form, visual forms carry two types of nature; *simple* and *repetitive*. There are an association and combination found to represent the single and group visual form. Association and combination of visual form mark personalization and interrelationship between one form to another. In individual visual forms, shape, size and colour are the main factors of emphasis. On the wall, the entrance doorway gets the emphasis to compare to other architectural elements. There are various methods and materials used to execute the art form, and the proportion of form depends upon execution technique, material and execution space. Element of visual form, its arrangement is interlinked with colour execution. In flower plant, creeper, bird, and animals' multiple colours is used in one visual form. Colours are used for emphasis and big proportion of body parts. Red, yellow, green and blue is the most preferred colour.

Placement of visual form:

The village organization and structure of the houses create an appropriate working environment for the artists. The structure of visited village is not only a cluster of houses but also defines a strong sense of social and cultural identity.

In Santhal village, houses are arranged in a sequence and separated with a narrow street. There is always a *kulhi* (long straggling street) between two houses, and there is no boundary or wall around the house. Most of the houses have their entrances open to the street. Organization of the village in a particular order indicates that before establishing village, Santhal clean that place and follow a map to organize the houses. In this process, there are fewer chances that houses are surrounded or covered by natural vegetation (creepers, grass, wild plants, etc.) (O'Malley, 1910) as it has mentioned (chapter 4) that rural people like to live surrounded by nature's creation (vegetation, birds, and animals). Nature's love and village setup motivate the rural people to make visual forms on the wall and consequently exterior walls of the dwelling (main street and courtyard facing wall) containing various visual forms.

As stated earlier, *kulhi* is the main attraction of the village and is an integral part of the village livelihood. In the *kulhi* people share, their feast, festival and host village councils. As *kulhi* is the dominating scene of the village, the wall, which faces the *kulhi*, get the attention of the viewers Fig. 110. In support of viewer's attention, the front wall of the house is the most decorated wall of the house, it contains entrance doorway and seating platform, and there is always open space in front of the wall in the form of street and courtyard. In some villages, mural execution is not done on side and backyard wall because the sidewall is adjunct with small street or *granary* stores and these portions do not get the viewer's attention. Consequently, the decoration on those walls is optional. Apart from viewer's attention colours shorted is another reason to paint the front wall at first. People give priority to the main wall of the house and ensure that they do not run short of colours. Sometimes side and backyard wall people paint with diluted colours or even left plain if they run short.



Fig. 110 Painted *Baha-bhitt*, getting viewer's attention

The wall, which faces the *kulhi* and *Racha* is known as *Baha bhitt*. The height of *Baha bhitt* is mostly that of average human height, and in certain cases, it is around 6 to 12 feet. This height is appropriate for the artist who is willing to paint the wall Fig. 111.



Fig. 111 Painting on the wall in sitting and standing posture

Baha bhitt is used for various purposes. As the height is accessible by people, the upper elevation of the wall is used to hang pitchers for the pigeons or hang ropes for drying clothes. Sometimes, the villagers keep their clothes and other household products for drying under the sun directly on the thatched roof. If the wall height is more than the average height of a human, they use a ladder for accessibility.

The upper elevation of the Baha bhitt is protected by an overhanging roof³². The slop of the roof covers the upper elevation of the wall and that portion does not visible to the viewers consequently artists avoid to decorate that portion of the wall. In front of the main street and courtyard facing wall, there is open space in the form of a main street or courtyard. People use the street and courtyard to mix the mud and cow dung for wall and floor plastering purpose and to keep mural making materials like colour mixing pot, brush, water container (bucket & lota) and other relevant articles. Protection from the rain and open space in front of the wall are two important reasons to paint *kulhi* (main street) and *Racha* (courtyard) facing wall (Fig. 112) (Fig. 113).



Fig. 112 Overhanging roof and space in front of the *Baha bhitt* (front wall)

³² In heavy rainfall (between March and May), the roofs of these houses have considerable overhangs that protect most of the painted wall from the rain (Bharat, 2015).



Fig. 113 Use of *Racha* (courtyard)

Ota (circular mud platform around the house) (opens in the main street) is frequently used by the villagers for sitting purpose in *kulhi*. The architectural elements of *Baha bhitt* and people lifestyle affect the layout of the mural. In mud mural, the upper elevation of the wall comprises of horizontal border, creeper, and motifs. On the eye level, the middle part of the wall contains creepers around the doorframe, group and single motif at the left and right side of the doorframe. People use to hand cloths at the upper elevation of the wall and use sitting platform (Fig. 114) (Fig. 115).



Fig. 114 Placement of visual form and use of *Ota* (sitting platform) and upper elevation of the wall, Dumka



Fig. 115 Placement of visual form and use of *Ota* (sitting platform), Pakur

In the paint mural layout, the middle-lower portion of the wall carries the most of the visual forms. The lower portion of the wall where the sitting platform attached to the wall is painted with plain bands. It is noticed that till the sitting height the bands are intentionally painted plain (i.e., without any motif or pattern) in rice-paste mural border and motif on the middle lower part of the outer walls of the house. As the upper elevation of the wall generally used to dry clothes or to hang pitchers for pigeons, the upper portions of the wall are not painted with any visual forms Fig. 116. The rectangular shape of the doorway also directs the artist to mark the shape with the help of visual forms and repetition of visual forms. People make murals in upper-middle and middle-lower part of the wall. While making visual forms, they care about the lower portion of the wall (which touch the back of a person while sitting) as they do not use it Fig. 117.



Fig. 116 Use of upper elevation of the wall, Saraikela Kharsawn



Fig. 117 Use of lower portion of the wall

In Jaunara baha Visual forms made on the eye level, in respect of the upper-middle part of the wall painted with agricultural pattern Fig. 118. In Jadopatia mural visual forms are randomly place on the wall without caring upper and lower portion of the wall Fig. 119. In Guruj baha

mural placement of visual forms are done at the eye level following the general habit of rural people Fig. 120.



Fig. 118 Placement of visual form and use of *Ota* (sitting platform), Giridih



Fig. 119 Placement of visual form at average human height, Deoghar



Fig. 120 Placement of visual form and use of lower portion of the wall, Bokaro

Generally, rooms are dark, but beams of light emerging from the eaves create a cosy ambience in the interiors of the house. The rooms are snug and warm in the winter and cool in summer. People care about the visibility issue and its effect on the viewer's attention. Consequently, the exterior walls of the dwelling (main street and courtyard facing wall) are painted in colours, while the interiors of rooms are rarely decorated with visual forms Fig. 121.



Fig. 121 Interior part of the house

Concept of earth: In this mural art form, spaces create special attention to the viewer. The overall composition of the wall in all three regions is not dense. In terms of group or single motifs the artists always have negative space in priorities. These spaces are mainly open nature or space like earth, sky, sea and open cornfield. They always show their awareness of the rule of nature but in an implicative way. They care that growing plants need earth, birds need sky to fly, and fish need water to swim. However, the presentation of visual forms becomes very subjective on the wall because not all visual form is presented on the wall. Some of the forms are very important, but due to the artist, it's kept invisible. According to them some relation between the visual forms are very strong, and a viewer can perceive it without mentioning. The philosophy is that the invisible or conceptual forms make similar importance with visible forms such as the shape and placement of the pots, figurative, vegetative and manmade forms. The pots, which is a common manmade visual form, which is associated with plant, creeper, birds, and animals, are found in various shapes. It is rectangular, circular, cylindrical and triangular (up & down) without any base. If we see from the usability perspective, it is not possible a funnel or egg kind of pot can be stable with a plant without any support, but it is there. It shows their strong concept of the existence of earth, which always supports any form and shape without any discrimination (the philosophy 'nature never discriminate'). The concept of visibility and invisibility is shown in Fig. 122 Fig. 123.



Fig. 122 Placement of bird, fish and animal on the wall



Fig. 123 Triangle and circular pot execution

In group motif, bird or animals are presented with pot (central motif). The pot and birds are generally not drawn in one horizon, and if the pots are not on equal line it does not mean that it is in the air, it indicates the mass or volume of earth. It means that rural people believe that earth is not flat; it has mass. Their concept of earth and its representation convey that, viewer should visualize this artwork through the invisible form. In rice paste mural some specific portion of earth has been shown that we can visualize it as a field, which is ploughed, and baby plant just born. In the same way, the field is drawn in a diminution of perspective (one of the formal art principle). Every stripe of plough field has been presented in various layers. Making a stripe in the field in a specific distance as with agricultural practices. The paddy field is formed construct to conserve water between two stripes and the same concept drawn on the wall without any form overlapping.

Concept of heaven: The doorway of the main entrance area of the house is considered as a doorway of heaven. This doorway is a link between external and internal space. It is one of the most important architectural elements which specifies the concept of making a house. A house should define the internal and external world. The doorway is a medium to cross the world and enter in another. In Indian art, it was an old practice to decorate the doorways with various visual

forms. In temple architecture, doorway contains creeper³³ (Kalp lata) and figure of Ganga and Yamuna Fig. 124 (Krishna Kumari, 2018) (Chatterjee, 2001).



Fig. 124 Decorated temple doorway with creeper and Ganga Yamuna Source: <https://www.sahapedia.org>

In Santhal community, the path of heaven Chawdali Ol³⁴ is drawn in front of doorways with the help of rice paste Fig. 125. The zigzag paths of heaven are little puzzled, but if you once cross it, you will be inside the house passing through the decorated doorway. Inside the house the family member welcome you holding one pot full of water and make their salutation in a respectful manner.

³³ The creepers are known as Kalp lata (wish fulfilment tree) which bring out from the while Samudra Manthan. According to Hindu scriptures, it stabled in Indra court in heaven.

³⁴ Chawdali Ol is floor art done on the second day of the Sohrai festival to welcome the household bonga and divine cows. This is very sacred for the community, and they do not cross it unless cattle entre the house after grazing. The rhythmic motif symbolises the ladder from heaven or thread. With the help of a ladder, cows come to the earth to attend the festival.



Fig. 125 Chawdali Ol floor art

The doorways visual motifs are generally vegetative motif, which mostly combined with pot, word motif, and sometimes birds. The creepers are often drawn in a mirror reflection divided by the central motif (flower, plant or word). The pot drew at the lower part of the doorframe associated with plant or creepers. The pots are also known as Akshaya Patra (wish fulfilment pot) in Hindu scripture. These notes only trying to draw attention on the concept of Kalp-lata & Akshay Patra for depicting the prosperity and its association with heaven doorway (Agrawal V. S., 1965) (Gupta S. P., 1931). Two mirrors reflected creeper make a resemblance of garland too, which fulfills the concept of welcoming the guest. It also shows the connection of the doorways with the concept of heaven. It is noticed that welcoming the guest keeps a special place in their lifestyle. In the entrance of their houses, they use to make creepers or flower plants. They believe that a guest is a form of Bonga. For their salutation, it is not possible to arrange garland quickly, so they paint it on the entrance. Raycroft mentions that oughter entrance it is known as Baha-duar and it is the most decorated place in Santhal house (Rycroft D. J., 2010). They also hang Sal leaf, fish and head of horse³⁵ at the main entrance of the house following the concept of prosperity (Fig. 126) (Fig. 127).

³⁵ As it is believed that horse is related to Santhal's supreme god *Thakur Jiu*



Fig. 126 Hanged Sal leaf and fish at the doorway



Fig. 127 Wooden horse head at the doorway

Concept of expanse: People believe that, in this nature, there is always an expanse between two objects. Nothing is overlapped, nature has enough space to give everyone their own space to be born and grow. Every molecule has its expanse. It must be happening with another creature of the world. There is always an order between each creature like tree, grass, plants, mountain river, field, birds, animals, and human, they always survive. They are dependent on each other but never overlap. They state that; in our living world, we are bound with a food chain. We are dependent on each other, if one will take the wrong step, it will affect us. We should not go beyond the law of nature how the seed is grown in the field in the same way we should respect the expanse. In murals, every visual form has its own space of breathing space (Fig. 128) (Fig. 129). We can divide it into positive or negative space. Negative space always makes a positive expanse for positive object and positive space vice versa. This is how we respect each other.



Fig. 128 Likhan gadhan, placement of visual form following the concept of expanse



Fig. 129 Jadopatia, placement of visual form following the concept of expanse

Concept of infinity: In this mural making tradition, the involved communities are followers of various religions like Sarna, Hindu, and Christian. The followers of Sarna, worship nature; for them the cosmic space is the spirit world. Bir Bonga is the forest spirit. Jaher era is the spirit of the sacred grove, Dadi bonga is the spring spirit, Marang Buru is the spirit who dwelt with the first Santhal, Pargana Bonga is the spirit of the region, Sima Bonga is the boundary spirit, and Manjhi Haram is the spirit of the founder of the village. They worship bull, cow, cock, tree, farm barn and also other symbols of nature like sun, moon, stars, rivers, and mountains. In a conversation, rural people mention that, “this cosmos is infinite, we don’t know the starting or ending point of earth. We don’t know what is up and what is down, everything on the same plane. We perceive wall in same way. As a result, every visual form we have tried to put on the same plane either that is plant, bird, fishes or human”. In mud mural layout, wall is always seen as an infinite space or boundless conceptual cosmos. They depict animals, birds, flower plants, creepers on their wall and show their gratitude to *Mother Nature*. Sometimes animals are placed upper part of the wall and the birds are in the middle. These arrangements clarify their view of seeing this wall as earth in top view. In paint mural layout, horizontal geometrical bands never framed with vertical border. It defining that they do not want to limit their earthen canvas within their own wall of the house, in fact they want to create their conceptual space consistency beyond it. It also shows their social unity in which, symbolically they want to bind each other in one band. In rice paste mural layout, agricultural motifs are painted in layers without perspective. In this mural art form, rather than considering the wall as a vertical canvas they considered it as an agricultural field. In support of that they place their motifs in layers. They do not use any border to bind the wall and they do not use any pot motif to represent the earth. Through this mural, they thank the mother land before working on field and paint their houses with agriculture related motif. For them it helps to increase their prosperity and wealth. These aspects show that in rural mural art forms, conceptual space is deeply connected with the socio-cultural aspects of the rural communities. It represents various information about the invisible objects in the cosmos (Bonga and spirit) and their symbolic representation in the mural.

It can be concluded that physical and conceptual space are essential aspects of space while designing the mural on the mud houses in eastern rural Jharkhand. At the physical level, the vertical earthen canvas can be visualised as two opposing groups: working space and empty space. The visual forms like border and motifs cover the working space of the layout and the space around the visual forms are empty space of the layout. In mural layouts, the depth of the architectural elements is treated as a figure and as empty space. At the conceptual level, the placement of visual forms does not follow a conventional understanding of space for instance. Here the visual space defines the infinite space. In the mural layouts, rural people arrange visual forms in an infinite space at the conceptual level and at the same time, they show their

consciousness for doorframe, roof shed and seating platform for placing visual forms as physical level. This compositional aspect gives valuable clues of equal importance of conceptual and physical space in rural mural art forms. It can be concluded that, in these mural art forms, the physical concept of space defines the visual space beyond the frame and at the same level; conceptual space defines it within the frame. It can be mentioned that the shape of the wall, order of houses, daily life style, nature attachment, and superstitions encourage the villagers to organize visual elements in a certain layout.

Artist and artwork: The women like to live and walk in a group for bathing, for collecting water (use for cooking), for fuel collection and gathering food from the forest. Women's mobility in village premises helps to conceptualise the visual form as a result similar visual forms are found on more than one house wall. Artistic practices and mobility of these peoples spread motifs to other community dwellings as well. If women see interesting designs being executed by other women, they are likely to modify their plans and paint new designs immediately. It is noticed that neighbouring villages murals may not influence each other because women rarely interact with other villages except their maternal homes. Consequently, design developments are similar within and largely limited to the vicinity of individual villages alone (Bharat, 2015).

Following their lifestyle, rural people get enough time to paint the wall with visual form. In mural making season (typically in October or November) women begin painting their walls while simultaneously managing their other domestic and agricultural responsibilities. Before the actual painting, women plan the designs and procure necessary material such as colours, thread, brush, etc.

In Santhal Pargana and North Chhotanagpur, industrial activities are in the form of mining or heavy metallurgical industries. In these regions, mainly women are involved in making mud mural on the wall once in a year or two years. As making mud mural is a time taking process people do not change it every year. Layers of mud applied to execute the visual form. This process does not need whole day dedication on the work, which helps the artist to involve in other works. People follow the characteristics of mud and shape it by their fingers smoothly. Use of finger as a tool effect the shape of visual form and consequently tip and joinery of the visual form are blunt or round. Homemade brush is used frequently, and sometimes professional brush is also used to paint shape on the wall. In Giridih region agriculture continues to be the main occupation among the Kurmi community; they eat maize and wheat. Maize-cob is used as a tool to make an impression on the wall. In this region, *Jaunara-baha/phul* is drawn with the repeated impression of *jaunra* (maize cob). Impression is mostly taken from left to right horizontally. This type and method of application create rectangular shapes on the wall. In Deoghar and Bokaro region cow dung murals are made following the rituals and superstitions of rural people. People execute

mural in short time like before going in the field (morning), and before getting dark (evening) or before coming the ghost³⁶. In result of that easily available material (cow dung) is applied on the wall with the help of finger or homemade brush. Use of finger as a tool make the shape tip round and joinery sharp. In Kolhan region mural is made by paint known as *Rong-baha*. Compare to other districts Purbi Singhbhum and Saraikela- Kharsawan is an industrial belt and have therefore seen significant construction activity. There is a possibility that wage labour uses artificial paint and brushes in frequent construction work. In the Kolhan region weekly markets are held at various locations on different days of the week. Brushes and artificial paints are easily available in this market. Exposure of brushes, artificial paints in terms of use and availability makes it popular among rural people, and it becomes the part of wall art tradition in Kolhan region. In this art form, as synthetic colour and brushes are used to execute the visual forms, therefore the application of brushes gives a sharp tip and joinery to geometrical and natural shape. In this region, men are involved in mural making process more than any other regions.

In *Likhan-gadhan*, the rural artist gives the priority to documentation as a result, the natural forms are painted on the wall. In *Rong-baha*, rural artists give priority to decoration or making things more beautiful and attractive; as a result, they are colourful with bold geometrical bands. In *Jaunara-baha/phul* salutation of mother earth and Lakshmi goddess is the main concern while painting the visual form. In *Jadopatia*, human figures are associated with weapons, created with the idea of repelling evil spirits. In *Guruj-baha* some of the human figures are painted in dancing posters. Protection and documentation are the purpose of making the human forms in various actions of *Jadopatia* and *Guruj-baha*. Each house has a *bhitar* (which is a sanctified corner in any room of the house).

The inspirations behind the visual forms are from natural and constructed object. Both objects are equally sacred and play a significant role in social and cultural life of rural communities. The visual forms are executed combining natural and manmade object in form of single and group motif. It can be concluded that the rural people of eastern Jharkhand respect nature's creativity and at the same time they give respect to human's creativity as a human is nature's creativity. The creativity of rural people and their representation make them significant from others.

Rural people are nature lovers and nature conserver. They respect nature's creatures and their creation. For nature's greetings, they celebrate various festivals, performs many rituals, and follow some taboos to conserve it. The festival is assigned with, unity, representation, awareness for nature, man and animal relationship and social status. The social rituals, including, marriage

³⁶ In Deoghar region there is misconception of ghost among the rural people. In the village, if any person affected by unusual situation then by hearing this other people start to draw the mural on the wall. It is a concept that the human visual form protects them from evil eye or unusual situation.

and children ceremony connotes to good or bad omen, fear, prosperity, fertility, and love. Their dance form represents attires, competition, mood, and documentation. In their wall art practice, the traditional value of their lifestyles is represented in various visual forms.

6.1 Conclusion

Literature provides several reasons to appreciate or value the mural artwork in a various context like cultural, material, intrinsic, religious, nationalistic and psychological. It reveals that there is a lack of investigation on the physical and visual aspects of the art form. Eastern rural Jharkhand contains five kinds of mural art forms; *Likhan gadhn* (mud mural), *Ronga baha* (paint mural), *Jaunara baha/phul* (rice-paste mural), *Jadopatia and Guruj baha* (cow-dung mural) and not many resources or documentation are found about these art forms. To start the enquiry, three objectives and related research questions were raised. The research questions were intended to,

1. What are the visual characteristics of mural art forms of eastern rural Jharkhand?
2. What are the types of visual forms are painted on the mud houses?
3. What are the purposes and inspirations of these art forms?

The study uses a qualitative method using photo-documentation, ethnographic study, and formal analysis method. The study addresses all the research questions and realized all the objectives proposed at the beginning of this research work. Table 29 Summarises major results from this thesis related to each objective and research questions.

Table 29 Major results from this thesis

1. **Research question**

What are the visual characteristics of mural art forms of eastern rural Jharkhand?

Objective:

To identify the visual characteristics of visual characteristics of the mural art form of eastern rural Jharkhand.

Results

- There is always a personalization and interrelationship between one form to another.
- In individual visual forms, shape, size and colour are the main factors of emphasis. On the front wall, the entrance doorway gets the emphasis, compare to other architectural elements.

- In visual forms, proportion depends upon execution of technique, material, space and emphasis.
 - The element of visual form, its arrangement is interlinked with colour. In flower plant, creeper, bird, and animals' multiple colours are used in one visual form. Colour is used for emphasis and a large proportion of body parts as well. Red, yellow, green and blue is the most preferred colour.
 - While designing the murals, rural artists, the decision regarding visual space (e.g., space division, view of visual form) affect two significant aspects of the space; one is physical space, and another is conceptual space.
 - Visual forms carry two types of nature; *simple* and *repetitive*.
 - There are multiple views used to draw visual forms.
 - Repetition of visual form carries single layer translation and double layer translation.
-

2. **Research question**

How many types of visual forms are painted on the mud houses?

Objective:

To document the rural mural art forms of eastern Jharkhand.

Results

- There are five kinds of mural art forms that were documented; *Likhan gadhn* (mud mural), *Rong baha* (paint mural), *Jaunara baha/phul* (rice-paste mural), *Jadopatia and Guruj baha* (cow-dung mural). In these art form, three types of visual forms; *Baha*, *Jan-janwar*, and *Hor* are found on the mud houses of eastern Jharkhand.
 - *Baha* is the most popular visual form among rural artists. There are two kinds of *baha* was documented; Vegetative and manmade. Vegetative visual forms (flower and non-flower plant, creeper, tree and plant seedling) is considered as *Baha(1)*, and manmade visual form (border, band and religious symbol) is considered as *Baha(2)*.
 - *Jan-janwar* and *Hor* consider are figurative visual form. *Jan-janwar* is combined with bird, animal, insects, and reptiles. *Hor* categories mainly contain human forms.
 - There are 22 kinds of *Baha(1)* and 25 kinds of *Jan-janwar* documented.
-

3. *Research question*

What are the purposes and inspirations of these art forms?

Objective:

To study the rural lifestyle of eastern Jharkhand

Results

- The concept of beauty, fear, pleasure and displeasure, conservation of nature lead the rural communities to paint their mud houses with various visual forms. They derive the inspirations for the visual forms from their forefathers, folk tales and local habitat and represent it in a very simplified way.
 - They respect nature and creation. For nature's greetings, they celebrate various festivals, performs many rituals, and follow some taboos to conserve it. The festival is assigned with, unity, representation, awareness for nature, man and animal relationship and social status. The social rituals, including, marriage and children ceremony connotes with, good or bad omen, fear, prosperity, fertility, and love. Their dance form is assigned with, representation of attires, competition, mood, and documentation. Their wall art, practice the traditional value of their lifestyle represented in various visual forms.
 - These executed visual forms justify the purposes (decoration, salutation, protection, documentation, and identity) of mural-making tradition among the rural communities of eastern Jharkhand. These purposes are about the daily life activities, myths, and traditions of rural communities. Purposes of executing the visual art form are interlinked with each other. Purpose of decoration signify salutation, protection, identity and documentation signify identity.
-

6.2 Major contribution

- The mud houses of rural eastern Jharkhand are slowly vanishing due to the replacement of concrete homes. The study remains huge documentation of the rural mural art form of eastern Jharkhand. That will preserve the *Likhan gadhan*, *Rong baha*, *Jaunara baha*, *Jadopatia*, and *Guruj Baha* art form.
- The study builds a body of literature related to visual forms which are hardly found in the present literature. This study is an initiative to understand the visual characteristics and grammar of the original art form of eastern Jharkhand. Subject, nature, representation, and organization of visual art forms are elaborated in this study.
- The study proposes a collection of visual characteristics of *Likhan gadhan*, *Rong baha*, *Jaunara baha*, *Jadopatia*, and *Guruj Baha* art form.

6.3 Limitation

- In this study, some of the villages of Godda, Deoghar, Sahibganj, and Purbi Singhbhum visual forms could not be documented properly because of social (a rumour of child kidnapping, robbery, police fear regarding rural superstition) and political (Naxal attack) reasons. Because of these reasons, the visual forms painted on the walls were removed before the documentation and some of them did not allow to document. It may be possible that these visual forms may add more or different visual characteristics to this study. Therefore, it is likely that the collected data is not exactly the representative data of eastern rural mural art form of Jharkhand.
- In Santhal Pargana region *Likhan gadhan* the art works are made by mud once in two or three years mainly by the women. For the interview, finding the artist of the particular artwork was difficult because some of them got married and some of them passed away. In some of the cases, interviews were taken from the family members and friends of the artist.

6.4 Future scopes

- Identified visual characteristics may help to reproduce the original art form with the same artistic essence.
- The developed analysis methodology can be used to study other new rural art forms. The extracted visual characteristics of art forms may help to create a *culture-specific design*.
- Comparative analysis can be done between other rural mural art form of Jharkhand.



This page is intentionally left blank

7 BIBLIOGRAPHY

- Aanand, M. (n.d.). *Karam Vinti*. Folk Artist, Dumka.
- Adams, D. (1979). *Basic Floral Design*. Extension Service, Oregon State University.
- Agrawal, B. (1991). *Bhartiya Chitrakala ke mul shrot*. Varanasi: Fine Printing Press.
- Agrawal, B. (1991). *Bhartiya Chitrakala ke mul shrot*. Varanasi: Fine Printing Press.
- Agrawal, V. S. (1965). *Studies in Indian art*. Varanasi: Banaras Hindu University Press.
- Aleaz, K. P. (2002). A tribal theology from a tribal world view. *IJT*, 20-30.
- Aljamali, A. M. (2004). Grid method classification of Islamic geometric patterns. *Geometric Modeling: Techniques, Applications, Systems and Tools* (pp. 233-254). Netherlands: Springer .
- Amirthalingam, M. (2016). Sacred Groves of India – An Overview. *International Journal of Current Research in Biosciences and Plant Biology*, 64-74.
- Anker, P. (2004). The Economy of Nature in the Botany of Nehemiah Grew. *Archives of Natural History*, 191-207.
- Archer, W. G. (1012). *The loves of Krishna in Indian painting and poetry*. New York: Dover Publication.
- Archer, W. G. (2013). *The Hill of flutes Life, Love and Poetry in Tribal India*. Delhi: Isha Books.
- Arnheim, R. (1997). *Art and visual perception*. London: University of Californiya Press .
- Arur, S., & Wyeld, T. (2016). Exploring the Central India Art of the Gond People: contemporary materials and cultural significance. *20th International Conference Information Visualisation* (pp. 380-383). IEEE.
- Azarpay, G. (1959). Some Classical and Near Eastern Motifs in the Art of Pazyryk. *Artibus Asiae*, 313-339.
- Baglari, H. (2015). The Magic Art of Witchcraft and Black Magic. *International Journal of Scientific and Research Publications*, 1-6.
- Bailey, G. A. (1998). The Indian Conquest of Catholic Art. *Art Journal*, 24-30.

- Baldinger, W. S., & Green, H. B. (1960). *The Visual Arts*. New York: Holt, Rinehart and Winston.
- Banerjee, A. (2014). Traditional Nature-based culture and forest festivals of Chotanagpur Plateau areas, India. *Traditional Knowledge and Social Practice Promoting Biodiversity Conservation* (pp. 169-176). Kolkata: Zoological Survey of India.
- Banerji, S. (2016). *Elephants in Indigenous Art and Changing Society in Jharkhand, India*. Centre for Asian Studies, University of Kelaniya, Sri Lanka.
- Bayly, S. (1999). *Caste, Society and Politics in India from the Eighteenth Century to the modern age*. Cambridge University Press.
- Beach, M. C. (1992). *Mughal and Rajput painting*. Cambridge University Press.
- Bhakat, R. K., & Sen, U. K. (2012). Sacred grove as an institution of culture and conservation. *Indian Journal of Biological Sciences*, 38-40.
- Bharadwaj, K. (2014). Colors in Gond Tribal Art: An interpretation and critical evaluation of Colors in Gond Paintings of Madhya Pradesh. *International Journal of Research Granthaalayah*, 1-5.
- Bharat, G. (2015). An Enquiry into Santal Wall Painting Practices in Singhbhum. *Journal of Adivasi and Indigenous Studies*, 35-50.
- Bhatala, N., Mukherjee, T., & Singh, G. (1984). Plants: traditional worshipping. *Indian Journal of History and Science*, 37-42.
- Biography.com Editors. (2019, February 23). *Paul Gauguin Biography*. Retrieved from The Biography.com website: <https://www.biography.com/people/paul-gauguin-9307741>
- Bisgrove, R. (2013). The colour of creation: Gertrude Jekyll and the art of flowers. *Journal of Experimental Botany*, 5783-5789.
- Biswas, P. C. (1956). *Santhals of Santhal Parganas*. Delhi: Bhartiya Adimjati Sevak Sangh.
- Blochmann, H., & A., M. (1878). *Ain i Akbari: 1*. Calcutta.
- Bockhoff, C. R. (2001). Plant Morphology: The Historic Concepts of Wilhelm Troll, Walter Zimmermann. *Annals of Botany*, 1153-1172.

- Bodding, P. (2016). *Traditions and Institutions of the Santhals*. New Delhi: Gyan Publishing House.
- Bohm, A. (2004). Theoretical Coding: Text Analysis in Grounded Theory. *A companion to qualitative research*, 270-275.
- Bovill, C. (2000). Fractal Geometry as Design Aid. *Journal for Geometry and Graphics*, 71-78.
- Brett, D. (1988). The Interpretation of Ornament. *Journal of Design History*, 103-111.
- Brett, D. (1993.). On the interpretation of design. *Temes de disseny* , 134-136.
- Brett, D. (1995). Design Reform and the Laws of Nature. *Design Issues*, 37-49.
- Brett, D. (2005). *Rethinking decoration: pleasure and ideology in the visual arts*. Cambridge University Press.
- Brett, D. (1986). Drawing and the Ideology of Industrialization. *Design Issues*, 59-72.
- Brown, P. (1920). *Indian Painting*. Calcutta: The Association Press.
- Brown, P. (1937). Monuments of the Mughal Period. In R. Burn, *The Cambridge History Of India Vol- iv The Mughul Period* (p. 560). Cambridge.
- Brown, P. (1956). *Indian Architecture (Islamic period)*. Bombay: D. B. Taraporevala Sons & Co.
- Busatta, S. (2013). The Tree of Life Design. *Cultural Anthropology*, 205 – 220.
- Bush, S. (1976). Floral Motifs and Vine Scrolls in Chinese Art of the Late Fifth to Early Sixth Centuries A.D. *Artibus Asiae*, 49-83.
- Campbell, B. (2003). *Mexican murals in times of crisis*. Tucson: University of Arizona Press.
- Campbell, P. J. (1989). The geometry of decoration on prehistoric pueblo pottery from starkweather ruin. *Computers & Mathematics with Applications*, 731-749.
- Chaitanya, K. (1982). *History of Indian Painting: Rajasthani Traditions*. New Delhi: Abhinav Publication.
- Chaitanya, K. (1992). *History of Indian Painting: Rajasthani Traditions*. Abhinav Publications.
- Chakrabarti, A. (2009). *DRM, a Design Research Methodology*. London: Springer.

- Chakrabarti, J., Kumar, R. S., & Nag, A. K. (1995). *The Santiniketan Murals*. Calcutta: Seagull Books.
- Chatterjee, G. (2001). *Sacred Hindu Symbols*. Abhinav Publications.
- Chattopadhyay, P. (2014). *Redefining Tribal Identity*. New Delhi: Primus Books.
- Chavan, K. (1999). Maratha Painting. *Bulletin of the Deccan College Post-Graduate and Research Institute*, 181-196.
- Choudhary, V., & Gupta, V. (2014). Tradition of Sacred Groves in India – A Review. *Globall Journal for Research Analysis*, 185-187.
- Collier, J. (1957). Photography in Anthropology: A Report on Two Experiments. *American Anthropologist*, 843-859.
- Collier, J., & Collier, M. (1986). *Visual anthropology: Photography as a research method*. UNM Press.
- Cooke, C. K. (1957). The Occurrence of Circle-and-Dot in Southern Rhodesian Rock Art. *The South African Archaeological Bulletin*, 62-66.
- Coomaraswamy, A. (1917). Indian Music. *The Musical Quarterly*, 163-172.
- Coomaraswamy, A. K. (1910). Originality in Mughal Painting. *The Journal of the Royal Asiatic Society of Great Britain and Ireland*, 874-881.
- Coomaraswamy, A. K. (1927). *History of Indian and Indonesian art*. New York: Dover publications New York.
- Coomaraswamy, A. K. (1958.). *The Dance of Shiva*. Owen.
- Coomaraswamy, A. K. (1969). *Introduction to Indian art*. Madras: Munshiram Manoharlal.
- Coomaraswamy, A. K. (1972). A Figure of Speech, or a Figure of Thought? *Studies in Comparative Religion*, 1-16.
- Cooper, I. (1986). The painted walls of Churu, Jhunjhunu and Sikar districts of Rajasthan. *South Asian Studies*, 21--35.
- Cooper, I. (1992). Man Singh to Maonda: Murals of North-East Rajasthan. *South Asian Studies*, 21--31.

- Cooper, I. (1997). Vijayanagar or Victoria? The Ceiling of the Virupaksha Temple at Hampi. *South Asian Studies*, 67-69.
- Corbin, J., & Strauss, A. (1990). Grounded Theory Research: Procedures, Canons, and Evaluative Criteria. *Qualitative Sociology*, 3-21.
- Crowe, D. W. (1975). The Geometry of African Art. *Historia Mathematica*, 253-271.
- D'Alleva, A. (2004). *The fundamental of art history*. Upper Saddle River, NJ : Prentice Hall.
- D'Alleva, A. (2010). *Look!: The Fundamentals Of Art History*. Pearson Prentice Hall.
- Dalmia, Y. (1984). The Warli Chawk: A World-View. *Design: Tradition and change*, 79-90.
- Dalmia, Y. (1984). The Warli Chawk: A World-View. *India International Centre Quarterly*, 79-90.
- Dalton, E. T. (1973). *Tribal History of Eastern India*. Cosmo Publications.
- Das, N. (2013). Madhubani Paintings: Its Existence and Possibility. *International Journal of Scientific and Research Publications*, 1-7.
- Dasgupta, S. N. (1954). *Fundamentals of Indian art*. Bhartiya Vidya Bhavan.
- Day, A. (2015). An Ancient History: Ethnographic Study of the Santhal. *International Journal of Novel Research in Humanity and Social Sciences*, 31-38.
- Dehejia, H. V. (1996). *The advaita of art*. Motilal Banarsidass .
- Dehejia, H. V. (2010). *Akriti to Sanskriti: The Journey of Indian Forms*. New Delhi: Niyogy Books.
- Dhavalikar, M. (1969). Sri Yugadhara- A master-artist of Ajanta. *Artibus Asiae*, 301-308.
- Dissanayake, E. (2008). "The arts after Darwin: Does art have an origin and adaptive function.". *World art studies: Exploring concepts and approaches* , 241-263.
- Dresser, C. (1858). Botany, as adapted to the arts and art-manufacture. *Art Journal* .
- Dresser, C. (1871). Ornamentation considered as a high art. *Journal of the Society for Arts*, 217-226.
- Elias, H. (2015). From squares to walls: contemporary murals. *Street Art & Urban Creativity Scientific Journal: Places and non Places*, 42-48.

- Endress, P. K. (1999). Symmetry in Flowers: Diversity and Evolution. *International Journal of Plant Sciences*, S3-S23.
- Endress, P. K. (2001). Evolution of floral symmetry. *Current opinion in plant biology*, 86-91.
- Fatima, W. (2012). Roghara Parve: A Festival or a Custom Related to Health and Pollution among Mundas. *Ethno Med*, 35-38 .
- Fergusson, J. (1869). Tree and Serpent Worship in India. *The Anthropological Review*, 217-230.
- Fischer , E., & Pathy , D. (2002). Drawings for the Renewal of Murals: Notes on Documents for Murals of the Kālikā Temple near Jayapur in the Koraput District, Orissa (India. *Artibus Asiae*, 139-177.
- Fischer, E., & Pathy, D. (1996). *Murals for goddesses and gods: the tradition of Osakothi ritual painting in Orissa, India*. New Delhi: Indira Gandhi National Centre for the Arts.
- Fishman, S. (1963). *Interpretation of art*. Berkeley and Los Angeles: Univ of California Press.
- Frater, J. (2002). "This is ours: Rabari tradition and identity in a changing world. *Nomadic Peoples*, 156-169.
- Freyd, J., & Tversky, B. (1984). Force of Symmetry in Form Perception. *The American Journal of Psychology*, 109-126.
- Gadgil, M., & Vartak, V. D. (1974). Sacred groves of India- A plea for continued conservation. *Journal Bombay Natural History Society*, 313-326.
- Gadhavi, B. (2017). *Study of mud and mirror craft of Kutchh region & Identifie Mumbai city as a new market for the craft*. Mumbai: NIFT.
- Gauguin, P. (1985). *The intimate journals of Paul Gauguin*. London and New York: Routledge.
- Gaur, U., & Das, A. (2013). *Recent Indigenous Art of India*. Art Asia publicationsR.
- Giannouli, V. (2013). Visual symmetry perception. *Encephalos 50*, 31-42.
- Goebel, K. R. (1935). Plant Physiology. *Plant Physiology*, 203-208.
- Gombrich, E. H. (1984). *The sense of order:A study in the psychology of decorative art*. New York: Phaidon Press Limited.

- Gonosova, A. (1987). The Formation and Sources of Early Byzantine Floral Semis and Floral Diaper Patterns Reexamined. *Dumbarton Oaks Papers* 41, 227-237.
- Goswamy, B. N., & Dallapiccola, A. L. (1978). More Painting from Kutch. Much Confirmation, Some Surprises. *Artibus Asiae*, 283-306.
- Gottlieb, L. D. (1984). Genetics and Morphological Evolution in Plants. *The American Naturalist*, 681-709.
- Gould, S. J. (1971). D'Arcy Thompson and the Science of Form. *New Literary History*, 229-258.
- Graham, J. H., Raz, S., Hel-Or, H., & Nevo, E. (2010). Fluctuating Asymmetry: Methods, Theory, and Applications. *Symmetry*, 466-540.
- Green, A. (2018). *Buddhist Visual Cultures, Rhetoric, and Narrative in Late Burmese Wall Paintings*. Hong Kong: Hong Kong University Press .
- Grunbaum, B., & Grunbaum, Z. (1986). Symmetry in Moorish and other ornaments. *Computers & Mathematics with Applications*, 641-653.
- Gulzar, S. (2016). Glazed Tile Ornamentation in Mughal Monumental Architecture. *Journal of Research in Chemical, Metallurgical and Civil Engg.*, 114-117.
- Günter Berghaus. (2004). *New perspectives on prehistoric art*. London: Greenwood Publishing Group.
- Gupta, C. S. (2008). *Indian Folk and Tribal Paintings*. New Delhi: Roli Books.
- Gupta, C. S. (2007). *Folklore: literature, art craft and music*.
- Gupta, S. P. (1931). *Elements of Indian art*. New Delhi: D. K. Printworld.
- Haan, M. (2012). *Structure and Form in Design*. London: Bloomsbury.
- Haldar, A. K. (1952). *Art and tradition*. Lucknow: The Universal Publishers.
- Hall, L., Jones, S., & Richard, J. (2007). Inspiring Design: The Use of Photo Elicitation and Lomography in Gaining the Child's Perspective. *Proceedings of the 21st British HCI Group Annual Conference on People and Computers: HCI*. British Computer Society.
- Hann, M. A. (2003). Conceptual Developments in the Analysis of Pattern Part One: The Identification of Fundamental Geometrical Elements.

- Hann, M. A. (2003). The Fundamentals of Pattern Structure: Part III: The Use of Symmetry Classification as an Analytical Tool. *The Journal of The Textile Institute*, 81-88.
- Hann, M. A., & Thomas, B. G. (2007). Beyond black and white: A note concerning three-colour-counterchange patterns. *The Journal of The Textile Institute*, 539-547.
- Hann, M. A., & Thomas, B. G. (2007). Beyond The Bilateral - Symmetry in Two-Dimensional Design. *International Association of Societies of Design Research*, The Hong Kong Polytechnic University.
- Hannapha, P., & Thonglert, G. (2011). The Integration of Image and Text for Communication in the Mural Paintings of Potharam Temple in Nadoon District, Maha Sarakham Province. *2nd World Conference on Psychology, Counselling and Guidance*. (pp. 53 – 57). Elsevier.
- Haron, H. (2014). Motifs of Nature in Malay Traditional Craft. *Middle-East Journal of Scientific Research*, 169-180.
- Harper, D. (2002). Talking about pictures: a case for photo elicitation. *Visual Studies*, 13-16.
- Hartel, J., & Thomson, L. (2011). Visual Approaches and Photography for the Study of Immediate Information Space. *Journal of The American Society For Information Science And Technology*, 1-11.
- Haselberger, H. (1961). Method of Studying Ethnological Art. *Current Anthropology*, 341-384.
- Hauser, B. (2006). Frenz, A. and KK Marar. Wall Paintings in North Kerala/India: 1000 Years of Temple Art. *Asian Folklore Studies*, 123--126.
- Heinz, C. B. (2006). Documenting the Image in Mithila Art. *Visual Anthropology Review*, 5-33.
- Hembram, R., Ghos, A., Nair, S., & Murmu, D. (2016). A Visual Journey into Santhal Village Life. *Journal of Adivasiand Indigenous Studies*, 17-36.
- Herringham, L. (1998). *Ajanta Frescoes*. Aryan Books International.
- Hofmann, W. (1983)). Picasso's "Guernica" in Its Historical Context. *Artibus et Historiae*, 141-169.
- Hogan, S. (2012). Ways in which photographic and other images are used in research: An introductory overview. *International Journal of Art Therapy*, 54-62.

- Hudson, A. (2000). Development of symmetry in plants. *Annual review of plant biology*, 349-370.
- Hurt, A. (n.d.). Theophrastus: Enquiry into Plants.
- Imam, B. (2003). *The Santal Hound*. Hazaribagh: Sanskriti Publishing.
- Imam, B. (2011). Comparative traditions in village painting and prehistoric. In *Art and Communication in Pre-Literate Societies, Papers presented in The XXIV Valcamonica Symposium* (pp. 70-81).
- Imam, B. (2011). Comparative traditions in village painting and prehistoric rock art of Jharkhand. *Art and Communication in Pre-Literate Societies, Papers presented in The XXIV Valcamonica Symposium*.
- Imam, B. (2014). *Antiquarian remains of Jharkhand*. New Delhi: INTACH.
- Imam, B. (2015). India: Hazaribagh and the North Karanpura Valley/Threatened Sites in Hazaribagh Plateau." *Heritage at Risk*. pp. 107-112.
- Imam, B. (2017, May 2). *The Painted Houses of Hazaribagh*. Retrieved from Tribal Art of Hazaribagh: <http://tribalartofhazaribagh.blogspot.com/>
- Ishii, H. (1993). Seasons, Rituals and Society : The Culture and Society of Mithila, the Parbate Hindus and the Newars as seen through a Comparison of their Annual Rites. *Senri Ethnological Studies*, 35-84.
- Israel Oliver King, E. D., & Viji, C. (1997). Sacred groves: Traditional ecological heritage. *International Journal of Ecology and Environmental Sciences*, 463-470.
- Jablan, S. (1992). Periodic antisymmetry tilings. *Symmetry: Culture and Science*, 281-291.
- Jain, J. (1997). *Tradition and Expression in Mithila Painting*. Ahmedabad: Mapin Publishing Pvt. Ltd.
- Jain, S. K. (1998). Some aspects of biodiversity and Indian tradition. *Indian Journal of History of Science*, 51-62.
- Jaitly, J. (2018). *Unit-20 Craft and Folk Arts*. IGNOU.
- Jayanta Chakrabarti, R. K. (1995). *The Shantiniketan Murals*. Calcutta: Seagull Books Private Limited.

- Jespersen, J. K. (2008). Originality and Jones' The Grammar of Ornament. *Journal of Design History*, 143-153.
- Jha, M. (1997). *Anthropology of Ancient Hindu Kingdoms: A Study in Civilizational Perspective*. New Delhi: M D Publications.
- Jha, V. (2002). Indigenous colours in Mithila(North Bihar) A historical perspective. *Indian Journal of History of Science*, 37-55.
- Jharkhand, G. o. (n.d.). *East Singhbhum*. Retrieved from <https://jamshedpur.nic.in/about-district/>
- Jones, O. (1868). *The grammar of ornament*. London: B. Quaritch.
- Joshi, P. C., Kaushal, S., Katewa, S., & Devi, O. H. (2006). Witchcraft Beliefs and Practices among Oraons. *Stud. Tribes Tribals*, 145-149.
- Kala, C. P. (2011). Traditional Ecological Knowledge, Sacred Groves and Conservation of Biodiversity in the. *Journal of Environmental Protection*, 967-973.
- Kalpan, D. R. (2001). The Science of Plant Morphology: Definition, History, and Role in Modern Biology. *American Journal of Botany*, 1711-1741.
- Kandeler, R., & Ullrich, W. R. (2009). Symbolism of plants: examples from European-Mediterranean culture presented with biology and history of art. *Journal of Experimental Botany*, 1-14.
- Katiyar, A. (2011 , July 11). *Kurmi History*. Retrieved from Kurmi History: <http://kurmihistory.blogspot.com/>
- Kaur, R., & Gupta, I. (2014). Phulkari and Bagh folk art of Punjab: a study of changing designs from traditional to contemporary time. *American International Journal of Research in Humanities, Arts and Social Sciences*, 35-43.
- Keifenheim, B. (1999). Concepts of perception, visual practice, and pattern art among the Cashinahua Indians. *Visual Anthropology*, 27-48.
- Keyser, B. W. (1998). Ornament as Idea: indirect imitation of nature in the Design Reform Movement. *Journal of design History* , 127-144.

- Khan, M. L., Khumbongmayum, A. D., & Tripathi, R. S. (2008). The Sacred Groves and Their Significance in Conserving Biodiversity. *International Journal of Ecology and Environmental Sciences*, 277-291.
- Kharazmi, M., Afhami, R., & Tavoosi, M. (2012). A Study of Practical Geometry in Sassanid Stucco Ornament in Ancient Persia. *Nexus Network Journal*, 227-250.
- Kisku, A. K., Bakhat, R. K., & Guha, A. (2010). A Santhal Jaher: Rituals and biodiversity conservation. *Indian Anthropol*, 143-151.
- Kisku, B. (2000). *The Santhals and their ancestors*. Kolkata: Kranti Press.
- Kisku, D. B. (2004). *Mantras and the spirit world*. Dumka: D. Barka Kisku.
- Klee, P. (1953). *Pedagogical sketchbook*. London: Faber & Faber.
- Knapp, J. F. (1989). Primitivism and Empire: John Synge and Paul Gauguin. *Comparative Literature*, 53-68.
- Knobler, N. (1980). *The visual dialogue*. New York : Holt, Rinehart, and Winston.
- Kochar, V. K. (1966). Village Deities of the Santal and Associated Rituals. *Anthropos*, 241-257.
- Kossak, S. (1997). *Indian Court Painting, 16th-19th Century*. Metropolitan Museum of Art.
- Kothari, C. (2004). *Research methodology: Methods and techniques*. New Delhi: New Age International.
- Kramrisch, S. (1928). *The Vishnudharmottara*. Kolkata: Calcutta University Press.
- Kramrisch, S. (1937). *A Survey of Painting the Deccan*. The India Society.
- Krishna Kumari, M. (2018). *Iconography of Ganga and Yamuna*. B. R. Publishing Corporation.
- Krishna, N. (2010). *Sacred animals of India*. Haryana: Penguin Random House India.
- Krishna, N., & Amirthalingam, M. (2014). *Sacred plants of India*. Haryana: Penguin Random House India.
- Kumar, S. (2014). Study of Some Wild Flowers as Possible Food-supplement to the Mal-nutritioned People of Jharkhand. *Indian Journal of Plant Sciences*, 42-45.

- Kumar, S. (2014). Use of plants as colour material Pytkar and Jadopatiya folk arts of Jharkhand. *Indian Journal of traditional Knowledge*, 202-207.
- Kumbaric, A., Savo, V., & Caneva, G. (2013). Orchids in the Roman culture and iconography: Evidence for the first. *Journal of Cultural Heritage*, 311-316.
- lablan, S. (n.d.). *Symmetry and Ornament*.
- Lancaster, C. (1952). Keys to the Understanding of Indian and Chinese Painting: The "Six Limbs" of Yaşodhara and the "Six Principles" of Hsieh Ho. *The Journal of Aesthetics and Art Criticism*, 95-104.
- Langer, S. K. (1953). *Feeling and form*. New York: Scribner.
- Lapenta, F. (2011). Some Theoretical and Methodological Views on Photo-Elicitation. In E. Margolis, & L. Pauwels, *Visual Research Method* (pp. 201-213). London: SAGE.
- Laurie, A. P. (1967). *The painter's methods & materials*. Courier Corporation.
- Lechler, G. (1937). The Tree of Life in Indo-European and Islamic Cultures. *Ars Islamica*, 369-419.
- Leroi-Gourhan, A. (1967). *Treasures of prehistoric art*. New York: H. N. Abrams.
- Leymarie, F. F. (2011). *On the Visual Perception of Shape Analysis and Genesis through Information Models*.
- Magnini, V. P. (2006). Photo-elicitation as a tool to alleviate international marketing mistakes. *Journal of Global Competitiveness*, 75-83.
- Maiti, S. (2001). A Study among the Tharu of Uttar Pradesh. *orgIndian Anthropological Association*, 69-74.
- Maity, D., Dey, K. S., Chatterjee, S., & Maiti, G. G. (2015). Ethnobotany and environmental management by the tribal community of Patratu, Hazaribagh district, Jharkhand. *Exploratory Animal and Medical Research*, 44-61.
- Mandi, A. K. (2015). *Jangal Mahal ki Pukar*. Ranchi: Pyara Kerketta Foundation.
- Manu, Gupta, I., & Kumar, N. (2015). The Application of Lotus Motif According to Shadhanga of Indian Art: Case Study of Fatehpur Sikri. *American International Journal of Research in Humanities, Arts and Social Sciences*, 302-307.

- Margolis, E., & Pauwels, L. (2011). *Visual Research Methods*. SAGE.
- Margolis, E., & Rowe, J. (2004). Images of assimilation: photographs of Indian schools in Arizona. *History of Education*, 199-230.
- Marshall, J. (1928). Monuments of Muslim India. In *Cambridge History of India, Vol III*, (pp. 135-157). London: Cambridge .
- Mathpal, Y. (1984). *Prehistoric Rock Paintings of Bhimbetka*. New Delhi: Hans Raj Gupta & Sons.
- Mathur, N. (2001). *Santhal Worldview*. New Delhi: Concept Publishing Company.
- Mcmanus, I. C. (2005). Symmetry and asymmetry in aesthetics and the arts. *European Review*, 157-180.
- Meena, K. P. (2015). *Adivasi Vidroh*. Delhi: Jaimaya Offset.
- Meyer, F. S. (1892). *Handbook of Ornament A Grammer*. Leipzig: Verlag Von Seemann & Co.
- Mini, P. (2016). *Preparation techniques of pigments for traditional mural paintings of Kerala*. NISCAIR-CSIR.
- Mishra, J. (2018, October 29). *Osakothi Rituals in Ganjam – An Anthropological Journey*. Retrieved from Virasat-E-Hind: <https://blogvirasatehind.com/2018/10/29/osakothi-rituals-in-ganjam-an-anthropological-journey/>
- Mishra, J. (2018, October 29). *Osakothi rituals in Ganjam- An anthropological Journey*. Retrieved from Virasat-E-Hind Foundation: <https://blogvirasatehind.com/2018/10/29/osakothi-rituals-in-ganjam-an-anthropological-journey/>
- Mitra, R., & Kapoor, L. D. (1976). Kamala-The National Flower of India: Its Ancient History and Uses in Indian Medicine. *Indian Journal of History of Science*, 125-136.
- Mohan Ram, H. Y. (2009). A Leaf from Nature. *India International Centre Quarterly*, 122-131.
- Monika, Z. (2001). The Identification of the Bagh Painting. *East and West*, 299-322.
- Murmu, S. (1996). Understanding the concept of God in Santhal traditional myths. *Indian Journal of Theology*, 47-50.

- Nair, P. (2016, April 17). *Osakothi – A folk ritual painting from the annals of Southern Orissa*. Retrieved from Nazariya: <http://store.nazariya.in/2016331osakothi-a-folk-ritual-painting-from-the-annals-of-southern-orissa/>
- Nardi, I. (2007). *The Theory of Citrasutras in Indian Painting: A Critical Re-evaluation of Their Uses and Interpretations*. Routledge.
- Nathan, D., Kelkar, G., & Xiaogang, Y. (1998). Women as Witches and Keepers of Demons: Cross-Cultural Analysis of Struggles to Change Gender Relations. *Economic and Political Weekly*, WS58-WS69.
- Nayar, W. S., Bindu, S., & Pushpangadan, P. (1999). Uses of plants and plant products in traditional Indian mural paintings. *Economic botany*, 41-50.
- Neeraj, J. S., & Niraja, J. (1991). *Splendour of Rajasthani Painting*. Abhinav Publications.
- Neuhaus, E. (1915). *Personal Impressions of the Architecture, Sculpture, Mural Decorations, Color Scheme & Other Aesthetic Aspects of the Panama-Pacific International Exposition*. P. Elder.
- Office of the Registrar General, India. (2011). *Jharkhand Data highlights: The Scheduled Tribes Census 2011*. Government of India.
- O'Malley, L. (1910). *Bengal District Gazetteers Santhal Pargana*. New Delhi: Logos Press.
- O'Malley, L. (1910). *Sinhbhum, Saraikela and Kharsawan*. New Delhi: Concept Publishing Company.
- Orienti, S., & Matisse, H. (1972). *Matisse*. London, New York: Hamlyn.
- Pal, P. (2016, January 26). *The Splendor of Wall Paintings in Bundi*. Retrieved from asianart.com: <http://asianart.com/articles/bundi/index.html>
- Pallavi, R. (2013). *Taru*. Varanasi: Banaras Hindu University.
- Pallavi, R. (Director). (2017). *Mural making Techniques* [Motion Picture]. Retrieved from <https://drive.google.com/open?id=1UDaVAwtN7sP12QC4fa-X-M1MP6UK9a0t>
- Pallavi, R. (Director). (2017). *Purpose of mural making* [Motion Picture]. Retrieved from <https://drive.google.com/open?id=1K3Dxe6xhZ9G2yVZUxpgQ8ZDpxudd69rg>

- Pallavi, R., & Udaya Kumar, D. (2017). Study of Flower Motifs in Mural Art Forms From Eastern Rural Jharkhand. *First International Conference on Creativity and Cognition in Art and Design*. Bangalore.
- Pallavi, R., & Udaya Kumar, D. (2019). Defining the concept of visual space in mural art tradition of rural eastern Jharkhand. *Springer*. Bangalore.
- Pallavi, R., Bora, S., & Udaya Kumar, D. (2015). A Study on the Rural Mural Painting. *2nd International Conference on Arts and Humanities* (pp. 220-22). Colombo: The International Institute of Knowledge Management.
- Pallavi, R., Udaya Kumar, D., Tudu, S. R., & Bora, S. (2016). Rural Women Artists: A Visual Analysis of the Mural Art Forms of Santhal Pargana, Jharkhand. *Journal of International Women's Studies*, 73-86.
- Pandey, H. S. (2000). Early political history of Chotanagpur in historical perspective. *Proceedings of the Indian History Congress* (pp. 169-173). Indian History Congress.
- Pandya, V. (2004). Rathwa Pithoro: Writing about Writing and Reading Painted Ethnography. *Visual Anthropology*, 117-161.
- Paramasivan, S. (1939). Technique of the painting process in the rock-cut temples at Badami. *Proceedings Mathematical Sciences*, 145--149.
- Paramasivan, S. (1939). The Pallava paintings at Conjeevaram - An investigation into the methods. *Indian Academy of Sciences*, 77-84.
- Paramasivan, S. (1939). The wall paintings in the Bagh caves—An investigation into their methods. *Proceedings of the Indian Academy of Sciences-Section A* (pp. 85-95). Springer.
- Pareek, A. (2017). Rajasthan's rich cultural tradition of folk paintings. *International Journal of Humanities & Social Science: Insights & Transformation*, 30-38.
- Parikh, V. P. (2002). Pithora: Survey of a living socio-cultural tradition in Gujrat. *Proceedings of the Indian History Congress*, 203-208.
- Parker, A. C. (1912). Certain Iroquois Tree Myths and Symbols. *American Anthropologist*, 608-620.
- Patel, G. D. (1071). *Gujarat State Gazetteers: Kutch District*. Ahmedabad: Director, Government Printing, Stationery and Publications, Gujarat State.

- Patel, H. H. (2017, March 17). <https://www.sahapedia.org/pithora-painting>. Retrieved from Sahapedia: sahapedia.org/motifs-pithora-painting
- Patel, P., Mohanti, S. S., & Samantray, P. (2014, January). *Gond Art: A Traditional Art Form*. Retrieved from Research Gate: <http://www.researchgate.net/publication/264506032>
- Patil, K. (2017). Warli art: Diversification of traditional painting creating future, hope & happiness. *International Journal of Home Science*, 451-456.
- Pentland, A. P. (1986). Perceptual Organization and the Representation of Natural Form. *Artificial Intelligence*, 293-331.
- Peter, B. (2014). Mural Painting as a Medium: Technique, Representation and Liturgy. *Image and Christianity: Visual Media in the Middle Ages*, 136-151.
- Pink, S., & Mackley, K. L. (2012). Video and a sense of the invisible: Approaching domestic energy consumption through the sensory home. *Sociological Research Online*.
- Poyil, M. (2011). Thodikalam mural paintings: Features, meanings and techniques. *Proceedings of the Indian History Congress*, 1239-1246.
- Qasim, S. (1997). Wall Art of Kachchh. *India International Centre*, 125-132.
- Rahman, R. (2009). *A comprehensive study of Bengal School of Art*. Aligarh: Department of fine arts aligarh Muslim university.
- Rajyora, M., & Choudhary, A. (2014). Nawalgarh Haveli Wall Paintings: the theme Depended on Mahabharata. *Indian Journal of Research*, 175-178.
- Ramaseshan, S. (1989). The History of paper in India upto 1948. *Indian journal of History of Science*, 103-121.
- Renugadevi, R. (2012). Environmental ethics in the Hindu Vedas and Puranas in India. *African Journal of History and Culture*, 1-3.
- Rose, G. (2008). Using Photographs as Illustrations in Human Geography. *Journal of Geography in Higher Education*, 151-160.
- Rose, G. (2012). *Visual methodologies: An introduction to researching with visual materials*. SAGE.

- Rose, G., & Tolia-Kelly, D. P. (2012). Visuality/Materiality: Introducing a manifesto for practice. *Visuality/Materiality: Images, Objects and Practices* , 1-11.
- Rycroft, D. J. (2006). Santalism: Reconfiguring 'the Santal' in Indian art and Politics. *Indian Historical Review* , 150-174.
- Rycroft, D. J. (2010). Born from the soil: The indigenous mural aesthetic of Kherols in Jharkhand, Eastern India. *South Asian Studies*, 67-81.
- Rycroft, D. J. (2010). Born from the soil: The Indigenous Mural Aesthetic of Kherols in Jharkhand, Eastern India. *South Asian Studies*, 67-81.
- Saha, S., & Goswami, N. (2013). Religious Life and Belief System of The Santhal-A Case Study in Solageria Village. *Man In India*, 313-332.
- Sarah, P. (2014). Digital-visual-sensory-design anthropology: Ethnography, imagination and intervention. *Arts and Humanities in Higher Education*, 1-14.
- Sarma, J. (1993). Changes in Tribal Culture in India. *Anthropos*, 504-08.
- Saxena, A. (2017). An account of dots and lines- The Gond tribal art of Madhya Pradesh, their tradition, relevance and sustainability in contemporary design domain. *International Journal of Current Research*, 61128-61135.
- Schattschneider, D. (1978). The Plane Symmetry Groups: Their Recognition and Notation. *The American Mathematical Monthly*, 439-450.
- Seastrand , A. L. (2013). *Praise, Politics, and Language: South Indian Murals*. Columbia University.
- Seth, R. (2013). *Warli folk paintings: an insistent expression*. Agra: Dayalbagh Educational Institute, Dayalbagh, Agra.
- Shaffeea, N., & Saidb, I. (2013). Types of Floral Motifs and Patterns of Malay Woodcarving in Kelantan and Terengganu. *Procedia-Social and Behavioral Sciences*, 466-475.
- Shah, H., & Sen, G. (1984). On Art and Ritual: Haku Shah interviewd by Geeti Sen. *India International Centre Quarterly*, 15-34.
- Shah, P. (1961). *Shri Vishnudharmottara*. Baroda: Oriental Institute.
- Sharma , R., & Gupta, I. (2012). Mughal Seed in Modern Architectural Decoration. *Bonfring International Journal of Industrial Engineering and Management Science*, 112-116.

- Sharma, E. (2015). Tribal folk arts of India. *Journal of International Academic Research for Multidisciplinary*, 300-308.
- Sharma, K. (2011). *Chaumasa*. Bhopal: Shaskiy Kendriy Mudranalay.
- Sharma, N. (1966). *The Samarangana Sutradhara Of Maharajadhiraja Bhoja*. Baroda: Oriental Institute.
- Sharma, R., & Gupta, I. (2012). Mughal Seed in Modern Architectural Decoration. *Bonfring International Journal of Industrial Engineering and Management Science*, 112-116.
- Shekhar, H. S. (2017). *The Adivasi will not dance*. New Delhi: Speaking Tiger Publishing PVT. LTD.
- Shekhar, S. (2018, 8 31). *Naxalism in Jharkhand: Causes and Analysis*. Retrieved from abhipedia: <https://abhimanuias.com/state/Searchdetail.aspx?type=BL&id=8179>
- Shrigondekar, G. K. (1925). *Mansollasa Vol.-1*. Baroda: Central Library.
- Simon, B. (2013). Mondrian's Search for Geometric Purity:. *American Imago*, 515-555.
- Singh, A. K. (1982). *Tribal Festivals of Bihar: A Functional Analysis*. New Delhi: Concept Publishing Company.
- Singh, D. (2007). *Thathi- The Heritage*. Ranchi: Setu Printers.
- Singh, K., Kumar, A., & Sharma, N. (2013). The Mathematical Aspects in Art to Create Decorative Effect in Design Patterns. *International Journal of Innovative Technology and Exploring Engineering*, 36-39.
- Singh, N. (2015). An Analytical Study on Reintegration of the Jhunjhunu Frescoes in the Contemporary era. *Ascent International Journal for Research Analysis*, 58.1-58.5.
- Singh, R. (2003). The Writings of Stella Kramrisch with Reference to Indian Art History: The Issues of Object, Method and Language within the Grand Narrative. *East and West*, 127-148.
- Sinha, A. P. (2014). *Tulika*. Delhi: Vikalp Prakashan.
- Sinha, A. P. (2016). *Jharkhand ki Janjatiya Lok Sanskriti, Parv aur Tyohar avam Devi-Devta*. Delhi: Vikalp Prakashan.
- Sivaramamurti, C. (1970). *Indian Painting*. New Delhi: National Book Trust.

- Skrefsrud , L. O. (1968). *Horkoren Mare Hapramko Reak Katha*. Santhal Mission Press.
- Smith, W., & Ewing, L. (2006). *Kiva mural decorations at Awatovi and Kawaika-a: with a survey of other wall paintings in the Pueblo Southwest*. Harvard University Press.
- Sodhi, s., Arya, N., & Yadav, N. (2016). Development of Designs by Adaptation of Warli Painting Motifs. *International Journal of Scientific Research*, 179-181.
- Sontheimer, G.-D. (1990). The Painted World of the Warlis. Art and Ritual of the Warli Tribes of Maharashtra by Yashodhara Dalmia. *Anthropos*, 584-586.
- Sparavigna, A. C., & Baldi, M. M. (2016). A Mathematical Study of a Symbol: the Vesica Piscis of Sacred Geometry. *PHILICA*, 1-5.
- Spink, W. (1958). On the Development of Early Buddhist Art in India. *The Art Bulletin*, 95-104.
- Spink, W. M. (2006). *Ajanta: History and Development, Volume 5 Cave by Cave*. Brill.
- Spink, W. M. (2009). *Ajanta: History and development Volume 4 Painting, sculpture, architecture yera by year*. Brill.
- Srisarankullawong, N. (2014). The Design of Decorative Flower Patterns from Suansunandha Palace. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 1572-1577.
- Srivastava, M. (2007). The Sacred Complex of Munda Tribe. *Anthropologist*, 323-330.
- Srivastava, R. P. (1983). *Punjab Painting*. Abhinav Publications.
- Stella, K. (1928). *The Vishnudharmottara Part III*. Calcutta : Calcutta University Press.
- Stewart, I., & Golubitsky, M. (2010). *Fearful symmetry: is God a geometer?* Blackwell.
- Subramanyam, K. G. (1987). *The Leaving Tradition*. Calcutta: Seagull Books.
- Subramanyan, K. (1987). *The Living Tradition*. Calcutta: Seagull Books.
- Suchar, C. S. (1997). Grounding Visual Sociology Research In Shooting Script. *Qualitative Sociology*, 33-55.
- Tagore, A. (1915). Sadanga or The Six Limbs of Painting. *The Modern Review*, 338-345.

- Thakur, M. (2017, January 27). *Madhubani wall murals in Jharkhand depict everyday struggle of villagers* . Retrieved from Edyminds: <http://www.edgyminds.com/madhubani-wall-murals-in-jharkhand-depict-everyday-struggle-of-villagers/>
- Thakur, U. (2003). *Madhubani Painting*. New Delhi: Abhinav Publications.
- The Getty Conservation Institute. (1995). *Historical Painting Techniques, Materials, and Studio Practice*. United State of America: The J. Paul Getty Trust.
- Theodor, B. S. (2007). Mural technique in medieval Tamil Nadu. *Journal of Tamil Studies*, 93-104.
- Thomas, B. G., & Hann, M. A. (2007). *Patterns in the plane and beyond: Symmetry in two and three dimensions*. University of Leeds.
- Thompson, A. F. (1998). Book Review: "The Santals, Anthropological-Theological Reflections on Santali and Biblical Creation Traditions". *Journal of Hindu Christian Studies*, 56-68.
- Tiwari, M., & Parashar, R. (2017). Jargons of traditional architecture in India. *International Journal of Creative Research Thoughts* , 1525-1530.
- Tiwari, S. (2002). *Tribal roots of Hinduism*. New Delhi: Sarup & Sons.
- Tribe, M., Jana, R., & Grosenick, U. (2006). *New media art*. Taschen Los Angeles.
- Tudu, K. C. (2008). *Sakhuaa*. Ranchi: Setu Printers.
- Vatsyayan, K. (1991). *Concepts of space, ancient and modern*. Abhinav Publications.
- Vatsyayan, K. (1997). *The square and the circle of the Indian arts*. Abhinav Publications.
- Vedika, Grover, E., & Paul, S. (2014). Adaptation of Warli art for the development of blocks for printing of apparels. *AJHS*, 417-421.
- Verma, A., & Gupta, I. (2014). Indian Rasa Manifestation in the Motifs of Saharanpur Woodcraft. *American International Journal of Research in Humanities, Arts and Social Sciences*, 16-22.
- Verma, S. P. (2000). Mughal Painting, patrons and painters. *Proceedings of the Indian History Congress* (pp. 510--526). Indian History Congress.
- Vidyarthi, L. P. (1978). *The sacred complex in Hindu Gaya*. Delhi: Concept Publishing Company.

- Vidyarthi, L. P. (1981). *Tribal Development and its Administration*. New Delhi: Concept Publishing Company.
- Vidyarthi, L. P. (1993). *Art and Culture of North-East India*.
- Vidyarthi, L. P., & Rai, B. K. (1976). *The Tribal Culture of India*. New Delhi: Concept Publishing Company.
- Vilhat, A. (2019, February 12). *The history and origin of Warli painting* . Retrieved from Medium: <https://medium.com/@anandvilhat75/the-history-and-origin-of-warli-painting-9f6e9ae182f2>
- Wallert, A., Hermens, E., & Peek, M. (1995). *Historical Painting Techniques, Materials, and Studio Practice*. Getty Publications.
- Ward, W. E. (1952). The Lotus Symbol: Its Meaning in Buddhist Art and Philosophy. *The Journal of Aesthetics and Art Criticism*, 135-146.
- Washburn, D. K. (1986). Pattern Symmetry and Colored Repetition in Cultural Contexts. *Computers & Mathematics with Applications*, 767-781.
- Washburn, D. K. (2004). *Symmetry Comes on Age: The Role of Pattern in Culture*. London: University of Washington Press.
- Washburn, D. K., & Crowe, W. D. (1988). *Symmetries of Culture: Theory and Practice of Plane Pattern Analysis*. London: University of Washington Press.
- Wong, W. (1972). *Principles of two-dimensional design*. New York: John Wiley & Sons.
- Wong, W. (1993). *Principles of form and design*. New York: Van Nostrand Reinhold.
- Zaidel, D. W., & Hessamian, M. (2010). Asymmetry and Symmetry in the Beauty of Human Faces. *Symmetry*, 136-149.
- Zakir, M. (2015). An Analysis of Relationship between Tribes and Forest. *Anusandhanika*, 46-50.



APPENDIX A.

Table 30 Locations of rural mural art forms of eastern Jharkhand

Administrative divisions		Districts		Blocks		Villages	
1. Santhal Pargana	1.	Deoghar	1.	Mohanpur	1.	Dangri	
					2.	Pathargarha	
					3.	Lutiyatari	
			2.	Sarwan	4.	Lerwa	
			3.	Deoghar	5.	Badiya	
	2.	Dumka	4.	Jama	6.	Baramasia	
					7.	Dudhani	
			5.	Jarmundi	8.	Amarpani	
					9.	Bairbana	
	3.	Godda	6.	Shikaripara	10.	Bhagwanpur	
			7.	Poreyahat	11.	Raghunathpur	
					12.	Sakri Phulwar	
			8.	Pathargma	13.	Machhitntr	
	4.	Jamtara	9.	Sundarpahadi	14.	Bansjori	
			10.	Boarijor	15.	Baghmara	
	5.	Pakur	11.	Jamtara	16.	Barakera	
					17.	Sukhjora	
	6.	Sahibganj	12.	Pakaur	18.	Ranidih	
					19.	Gopalpur	
	2. North Chotanagpur	7.	Dhanbad	20.	Pathna	20.	Gobindpur
					21.	Birgaon	
8.		Giridih	13.	Pathna	22.	Bishunpur	
			14.	Gobindpur	23.	Laherdi	
			15.	Purbi Tundi	24.	Sarkardih	
9.		Bokaro	16.	Bengabad	25.	Chankiari	
			17.	Chas	26.	Manjori	
			18.	Chandankiyari	27.	Kalhnatanr	
			19.	Nawadih	28.	Dhabni	
					29.	Kunarpur	
					30.	Partanr	
3. Kolhan		10.	Saraikela Karsawan	20.	Rajnagar (Govindpur)	31.	Damudi
						32.	Nawadih
						33.	Baghraisai
						34.	Govindpur
						35.	Murumdih
		11.	Purbi Singhum	21.	Saraikela	36.	Gangdesai
						37.	Namibeda
22.				Ghatshila	38.	Bada Daona	
			23.	Potka	39.	Chota Daona	
				40.	Kalapathar,		
				41.	Mahalidi		
				42.	Rasunchapa,		



APPENDIX B.

Jharkhand map





APPENDIX C.

Rural mural art forms of eastern Jharkhand





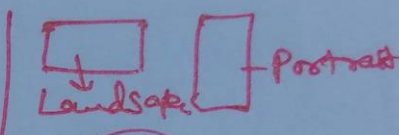
APPENDIX D.

Shooting script

Shooting Script 3-1-14

Photography in the villages of Jharkhand
↓
Eastern Jharkhand

1. Photography of Mud houses
2. Photography of demising mud houses.
 Some photos of concrete houses

3. Day time 10AM to 3PM. 


Permission


Updated 1-3-15

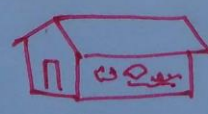
1. Photos should be taken from each side of house. internal + external wall
2. Zoom shot of visual forms should be taken
3. Photos of villages and communities.
4. Documentation of their life activities.
5. Photography of other art forms.


Art & craft

Most Preferred
Pattern/Wall





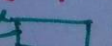




Approximate
No. of
Documented
mud houses

Note → Before where required take permission
Don't force anyone to pose.
High resolution clear photography
Fix a certain size of photo frame

Long house



Normal house

Fig. 130 Shooting Scripts



APPENDIX E.

Consents

Study of mural art forms of rural Jharkhand

The purpose of this study to understand the visual characteristics of mural art forms of rural Jharkhand. The records of this study will be kept private. In any sort at report we make public we will not include any information that will make it possible to identify you. If you decide to take part, you are free to withdraw at any time.

Pallavi Rani
Research Scholar, Department of Design
IIT Guwahati, Assam

I understand that the data collected from my participation will be used primarily for a Ph.D. thesis, and it will also be used in summary form for journal publication. By signing below I am indicating my consent.

Name:	Signature	Date	
Sumita Mardi		26-10-016	27 (Graduate)
Maya Kisku		"	21 (9th)
Shila Rani Mardi	Shila Rani Mardi	"	19 (Student/ma)
Malho Kisku	Malho Kisku	"	20 (10th)
Basanti Mardi	Basanti Mardi	"	15 (Student)
Mahi Mardi	Mahi Mardi		25 (Housewife)
Telko Mardi			25 (Housewife)
Hiramuni Hembrom	Hiramuni Hembrom		14 (Student)
Saumila Hembrom			16 (Student)
Singo seron			40 (5th)
Himanti Tudu	Himanti Tudu		25 (9th)
Rahmat Mardi			
Pungi Kisku			50 (No)

Fig. 131 Participants detail, Kolhan

Study of mural art forms of rural Jharkhand

The purpose of this study to understand the visual characteristics of mural art forms of rural Jharkhand. The records of this study will be kept private. In any sort at report we make public we will not include any information that will make it possible to identify you. If you decide to take part, you are free to withdraw at any time.

Pallavi Rani

Research Scholar, Department of Design

IIT Guwahati, Assam

I understand that the data collected from my participation will be used primarily for a Ph.D. thesis, and it will also be used in summary form for journal publication. By signing below I am indicating my consent.

Name:	Signature	Date	
Phulo Hansda Hasta	पुलो हंसदा	12/03/17	Matladih (Kilaga) Kandih (Blok)
Parbati Hembrom	पार्वती हेमब्रम)	
Koyana Mardi	Koyana mardi	"	
Samrendra Patap Hansda	Samrendra Patap Hansda	"	
Mukesh Sardar	Mukesh Sardar	"	
Churamami Muram		"	
Mano Mardi			
Bagun Kik	बागुन किक		
Randi Hembrau	रान्दी हेमब्रम		
Lalita Devi			

Fig. 132 Participants detail, North Chotanagpur

Study of mural art forms of rural Jharkhand

The purpose of this study to understand the visual characteristics of mural art forms of rural Jharkhand. The records of this study will be kept private. In any sort at report we make public we will not include any information that will make it possible to identify you. If you decide to take part, you are free to withdraw at any time.

Pallavi Rani

Research Scholar, Department of Design

IIT Guwahati, Assam

I understand that the data collected from my participation will be used primarily for a Ph.D. thesis, and it will also be used in summary form for journal publication. By signing below I am indicating my consent.

Name:	Signature	Date
Sarfa Tudu	सारा तदु	07-07-2017
Manko Mardoh	मनको मरदो	
Malti Mahto		
Lekhumi'a Mahto	लखुमिया मरदो	
Sheela Sharni		
Payal Kumari		
Kalyani Sinha	कल्यानीसिन्हा	
Phulo Rani	फूलो रानी	
Devyani Devi	देवयानी देवी	
Leela Devi		

Fig. 133 Participants detail, Santhal Pargana



APPENDIX F.

Questionnaire

1. Why do you paint your houses?
2. What will happen, if you do not paint your houses?
3. How do you decide what to paint?
4. How do you decide where to paint?
5. How do you decide the features of visual forms?
6. Do you know when this art form started?
7. Have you seen other form?
8. How many hours do you spend to paint one mud houses?
9. Why multiple colours has been used in one single motif?
10. Why do you paint Baha-duar?
11. How did you learn these art form?
12. How many members in your family involve in mural making tradition?

Answer of some of the question are mentioned below.

Why do you paint your houses?

Because it looks beautiful. Because my mother or grandmother has started this tradition. Everyone is painting, so I am painting. I like to paint. It is one opportunity to clean my house. It shows happiness of our family. It brings wealth. For welcoming Laxmi goddess. It protects us from evil eyes. It marks that our houses are safe. Without asking anyone you can understand that we belong to which community. From the painted visual form anyone can understand we are Christian. I was free, so I have painted it. If we will paint before going field, we will get good amount or good quality of harvest. This is our tradition. This is our duty. This is part of our daily routine. Because it looks colourful. In festivals, my relatives come from Dumka, Godda and Giridih they will see. Because houses are our ma aka aanchal and we need to decorate it. If any girl is good in painting, she will be prised by everyone and get groom quickly.

What will happen, if you do not paint your houses?

Our houses will not look beautiful. Our villages will look colourless. We will be unsafe. This is not possible. It would not be good fortune. How people will understand this is our village. How people will understand we are Santhal Christian. Our houses will look like others houses. We will not feel happy. Nothing will happen. We will feel bore. We will feel something important is left to do. Family members and relatives will think we are not following the traditions. Bonga or god will be unhappy. We cannot keep our maa ka aanchal plain. Before festival we paint our houses with visual forms, if not do how our festivals will start.

How do you decide what to paint?

I have seen it on others wall. While going forest, river, market, fair I have seen it. I have copied it from my saree, dupatta, bedsheet. I have copied from children book. My mother has made it so I have drawn the same. This is our clan symbol. This is our religion symbol. Birds are beautiful so it will make our house beautiful. Couple birds will bring good fortune. If I will paint unattractive figures, evil eyes will not harm us. Plants will bring more greenery. Flowers look very beautiful. If we will decorate our houses with natural flowers, it will dry, but if we will paint or execute it will live for a long time. Patterns will give illusion of royal architecture. I have seen Pandal in marriages and festivals and I like the pattern and colours. It will make appearance of greenery. Many times wild animals come out from the forest, I just made this to remember their attitude. I like their actions. Animals and birds are like our family members. Paddy motif is our traditional motif, so I have painted. Creepers look like garland. Animals belong to one family and same in behaviour so I have drawn wild and pet animals together.

How do you decide where to paint?

We like to sit on the platform and in sitting position our back touch to the wall. If we will paint on upper part of the wall it will not visible. Baha dwar is the main entrance of the house, we paint the visual forms here to welcome the guest or bonga. I have painted here because it is easy to paint. If couple birds would be painted near the entrance, it will bring good fortune. Welcome word written above the doorway, will visible while entering in the house. Pot is like earth. Everyone know, pot always draw lower part of the plant. If two birds draw facing each other and draw a pot in the centre it will make a narration. We do

not use ladder because the working area is accessible. Who will see, at this portion. We feel happy when anyone praise our mural while passing through the street. If I will use little upper part of the wall it will not accessible for the children to bring out mirrors. This portion is accessible for children also. In occasions, we use courtyard for celebration and our baha duar praise by others. The unattractive figures if painted near the entrance it will stop the ghost quickly. Earth has no discrimination with their creature, we can put anywhere any creature. If will make border of window or doorway if will be more visible. It creates outline of window. Wall is like mother's aanchal, in that there is not upward and downwards. I like to arrange the leaves in alternate.

How do you decide the features of visual forms?

I will make a circle and arranged petals around that it is easy to draw. If there is plant, there will be leaf. Whatever we see in nature we paint it. I have seen baingan, bhindi, tamatar and sarso ka phul and I have tried to draw the same. Lotus flowers are easy to draw. In marigold there are lots of petals. How it is possible to draw the rose flower like sunflower both are different. I know human being's hand never connected with head. Everyone knows elephant has one trunk, one tail and four legs but cow don't have trunk. Paddy plants look like this only after growing. Our fields are like this and it contains ploughing strips. Lota has neck to hold but flower pots doesn't have. I know flowers are red. I like to paint flowers in red or yellow colour. Leaves are always green. Red and green is more bright colour. We do not paint human figure with colour, because it will look good. Most of the leaves look like eye, betel leaf, spoon and hook shape. Flowers petals are oval, leaf, hook and comb shape. Flower is most attractive part of the plants and creepers so it is drawn little bigger. Cruel figures are good for us.



APPENDIX G.

Identification of visual forms



Fig. 134 Photographs marked with numbers

1. डामिया, सूर्यमुरवी, चंचा, कदम्ब फूल, गुलाबफूल
2. कुजब बघा
3. घास फूल, कुता, कबूतर, मोर, गुलाब, कुता भोंकवाडुआ, तोता
4. कुमैरा फूल
5. लीला, संख, गुलाब, जीवा, कुडहल, बूध फूल (लोकाला बघा) मछली
6. Dancing Pose, मञ्जाल, Axe, Protection, कमल फूल
7. मुगी, लोमड़ी, घिरण, मोर, बकरी (पहाडी बकरी), बैल, कमल, बिच्छु, अँडिया, हाथी, गाय (जंगली गाय)

Fig. 135 Scan copy of the list of visual forms identified by rural people



APPENDIX H.

Santhal and other tribal festivals by Ajit Singh (1982).

Table 31 List of Santhal festivals

Table 32 List of Santhal festivals

Sl. No.	Name of the Festival/Ritual	Time/ Period	Duration	Dieties Worshipped	Purpose
1.	Mak More	In every five year	3 days	Marang Buru, Jaher era, Moreko Turuiko, Purudhul, Sima bonga	Health and protection of the village from outside intervention, community solidarity and happiness
2.	Baha Parab	In Baha chando(falgun), expect the year in which Mak more is practiced	3 day	Marang Buru, Jaher era, Moreko Turuiko, Purudhul, Sima bonga	Health and protection of the village from outside intervention, community solidarity and happiness
3.	Magh Sim	In Maghi Purnima (full moon day of Magh)	1 day	Marang Buru, Jaher era, Moreko Turuiko, Purudhul, Sima bonga, Manjhi Bonga, Paranaik Bonga, Nei Poram Gada Param Bongako	Well being of the villagers throughout the year
4.	Erok Sim	Er Sit Chando (Ashar)	1 day	Marang Buru, Jaher era, Moreko Turuiko, Purudhul, Sima bonga, Manjhi Bonga, Gosain era	Praying for good crop and also good health
5.	Got Jom	Saharai Chando(Kartik)	1 day	Marang Buru, Jaher era, Moreko Turuiko, Purudhul, Sima bonga, Manjhi Bonga, Paranaik Bonga, Nei Poram Gada Param Bongako	Well being of the domesticated animals

Sarna Festival	Tanr Land Festival	Priddy Field Festival	Village Lane Festival	House Festival	Courtyard Festival	Cattle Shed Festival	
1	2	3	4	5	6	7	
Sarhul or Ba-Parab	Santhal Hariari	Orson	Bangari	Oraon Fagu Oraon	Aszdhi Birjia	Karam Munda	Sohrai Munda
	Oraon Saoni Puja	Asur	Ropa or Rohayat	Birjia	Munda Nawa-khani	Oraon	Korwa Birjia
	Munda Kadleta	Oraon		Karam Santhal	Munda Birjia		Korwa Asur
	Birjia Khari-hani	Oraon	Sohrae	Santhal	Korwa Birhor		
Janthar Haribar-Sim	Santhal Karam	Birjia					
Batauli	Munda Kharwaij	Birjia			Maghe Munca		
Kadleta	Dodh-Kharia	Asur			Fagund Birjia		
Sohrai	Oraon						

Fig. 136 Places of celebration of festivals tribal festival

Sowing festival	Paddy shoots have just germinated and pushed and into new shoots	Paddy seedlings transplantation
1	2	3
Erok Sim—Santhal (Asarh) Dhanbuni—Oraon (Baisakh) Bedeah—Birjia Kit Bhagao Pujil—Korwa	Harihar Sim—Santhal (Sraban) Hariari—Oraon (Asarh) Batauli—Munda (Asarh) Asarhi Puja—Birjia (Asarh) Hariari—Asur (Sraban)	Bangari—Oraon (Asarh) Soso Bonga—Birhor (Asarh) Ropa or Rohayat—Birjia (Bhadra)
Eating of New Rice (Gora Dhan)	Rice grain are forming in stalk	Harvest festival
4	5	6
Jantbar—Santhal (Bhadra and Agahan) Nawakhani—Oraon (Bhadra) Jom Nawa—Munda (Aswin) Nawakhani—Birjia (Bhadra) Nawajom—Birhor (Bhadra) Dhan Nawakhani—Korwa	Kadleta—Oraon (Bhadra) Kadleti—Birjia (Bhadra)	Sobrae—Santhal (Pous) Kharihan—Oraon (Agahan) Kharwaj—Birjia (Pous) Bandna—Maler (Fagoon) Kharwaj—Asur Maghe—Munda, Ho

Fig. 137 Agricultural cycle and the festivals of tribals

TABLE 3 : Levels of Celebration of Festivals

Family level festivals		Village level festivals		Region level festivals	
Festivals	Tribes	Festivals	Tribes	Festivals	Tribes
1		2		3	
Bangari	Oraon	Harihar Sim	Santhal	Tusu	Major tribes of Chotanagpur
Asadhi	Birjia	Hariari	Oraon	Munda	
Nawakhani	Oraon, Munda, Birjia, Korwa, Birhor	Batauli	Munda	Rath Yatra	
Maghe	Munda	Saoni	Asur		
Fagund	Birjia	Ropa	Birjia		
Karam	Santhal, Munda	Soso-Bonga	Birhor		
Jitia	Oraon	Kadleta	Oraon, Dudh Kharia		
Sohorai	Birjia, Korwa	Janthar	Santhal		
Bail Puja	Asur	Sahrai	Santhal		
		Kharihani	Oraon		
		Khorse Pijje	Maler		
		Kharwaj	Birjia		
		Sarhul	Santhal, Oraon, Munda, Birjia, Korwa		
		Fagu	Oraon, Munda, Korwa		
		Karam	Oraon, Birjia, Korwa		
		Sohorai	Santhal, Oraon, Munda		
		Disom Sendra	Santhal		

Fig. 138 Levels of celebration of tribal festivals in India

APPENDIX I.

List of *Baha* visual forms



Fig. 139 *Baha* (flower plant, non-flower plant and tree), Santhal Pargana

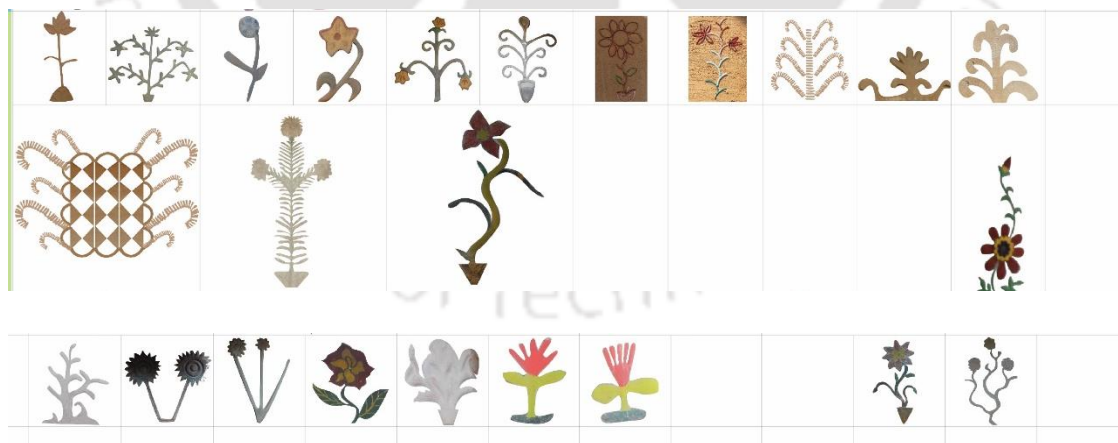


Fig. 140 *Baha* (flower plant, non-flower plant and tree), North Chonanagpur



Fig. 141 *Baha* (flower plant, non-flower plant and tree), Kolhan



Fig. 142 *Baha* (bird with plant), Santhal Pargana

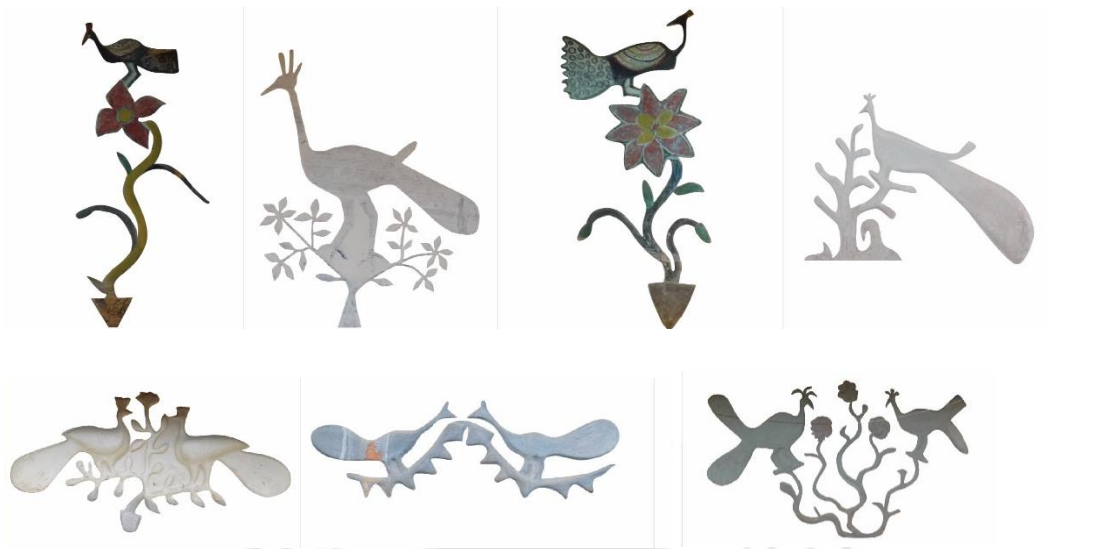


Fig. 143 *Baha* (bird with plant), North Chonaganpur



Fig. 144 *Baha* (Vertical creeper), Santhal Pargana



Fig. 145 *Baha* (Vertical creeper), North Chotanagpur



Fig. 146 *Baha* (Vertical creeper), Kolhan



Fig. 147 *Baha* (Horizontal creper), Santhal Pargana



Fig. 148 *Baha* (Horizontal creper), North Chotanagpur



Fig. 149 *Baha* (Horizontal creeper), Kolhan





Fig. 150 *Baha* (Bands and Borders), Kolhan



Fig. 151 *Baha* (Border), Santhal Pargana

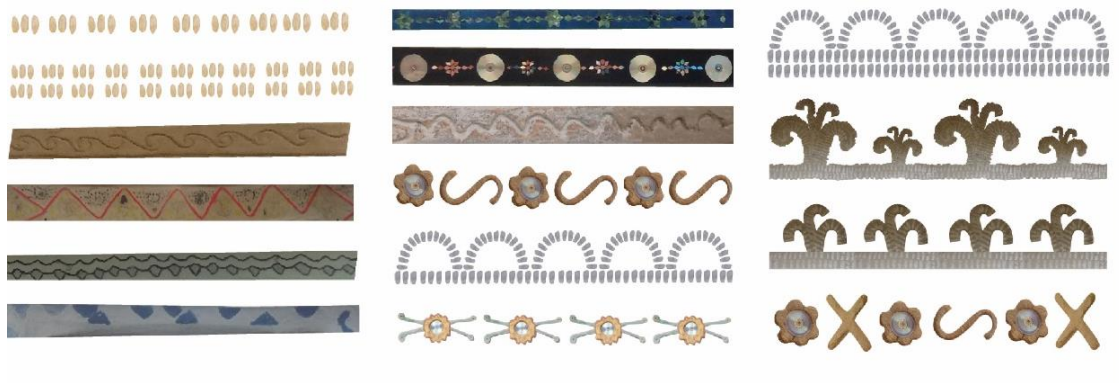


Fig. 152 *Baha* (Border), North Chotanagpur



Fig. 153 Baha (religious symbol), Santhal Pargana

WELCOME	ᱵᱚᱠᱷᱚᱨᱚᱵᱚᱨ
WEL:COME	ᱵᱚᱠᱷᱚᱨ-ᱵᱚᱠᱷᱚᱨ
WEL COME	ᱵᱚᱠᱷᱚᱨᱚᱵᱚᱨ
WEL - COME	SUBHASH BERA
WEL COME	ᱵᱚᱠᱷᱚᱨ ᱵᱚᱠᱷᱚᱨ
	M ★ R:MO
	5-5-99

Fig. 154 Baha (Salutation words), Santhal pargana, North Chotanagpur and kolhan

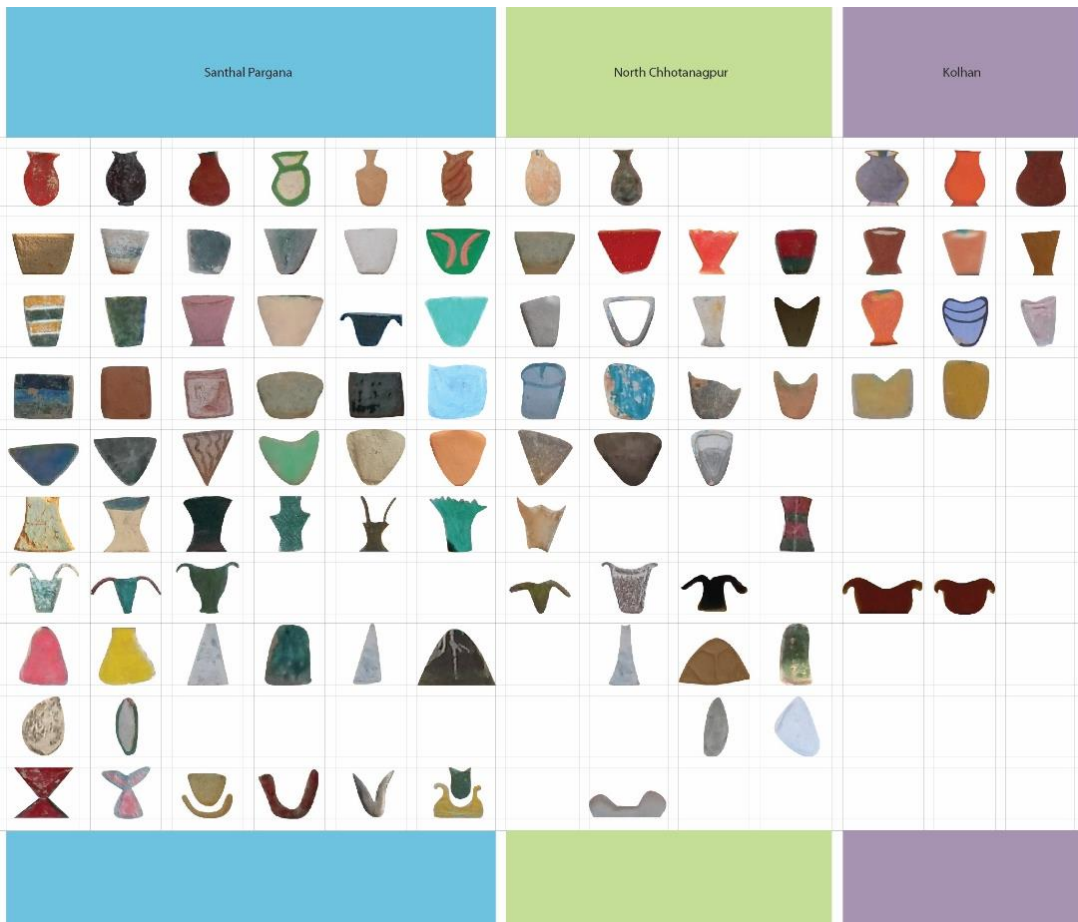


Fig. 155 Pot visual form, Santhal Pargana, North Chhotanagpur and kolhan

APPENDIX J.

List of *Jan janwar* visual forms



Fig. 156 *Hati or Marang hor* (Elephant)

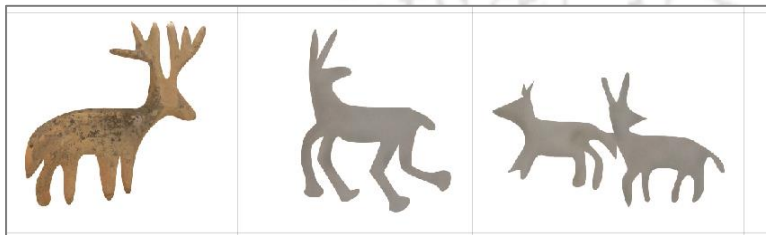


Fig. 157 *Jeel* (Deer)

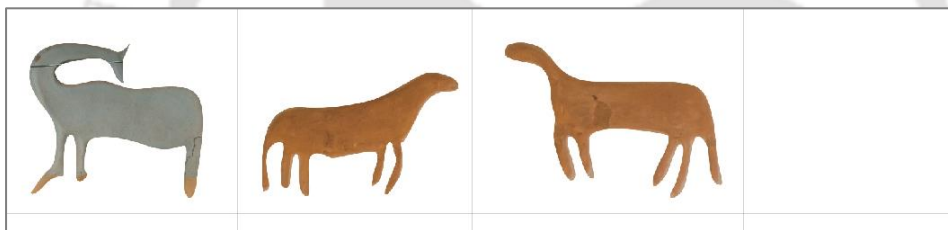


Fig. 158 *Murum jeel* (Blue bull)



Fig. 159 *Gai* (Cow) and *Dangara* (Ox)



Fig. 160 *Seta* (Dog)



Fig. 161 *Merong* (She goat)



Fig. 162 *Kula* (Rabbit)



Fig. 163 *Sukari* (Pig)



Fig. 164 *Unt* (Camel)



Fig. 165 Unknown



Fig. 166 *Rote* (Frog)

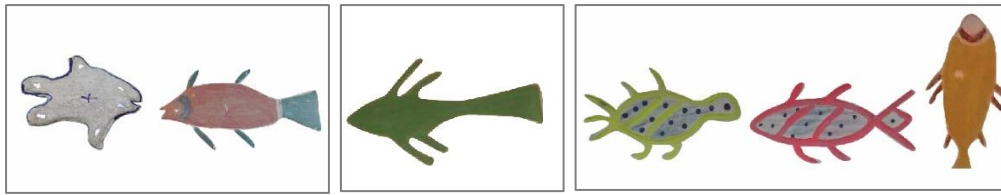


Fig. 167 Hanku (Fish)

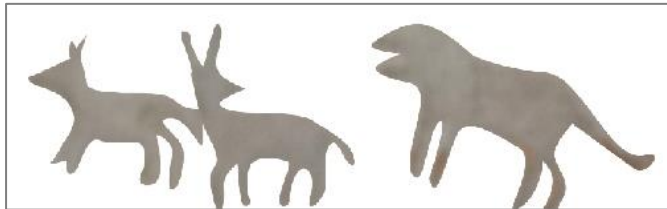


Fig. 168 Chetara (Tiger) and Jeel (deer)

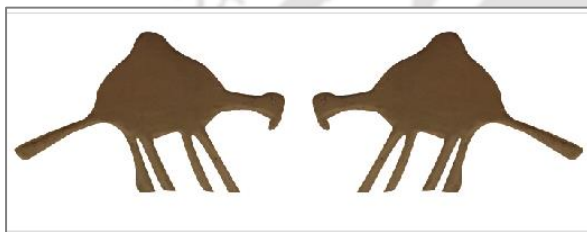


Fig. 169 Unknown



Fig. 170 Tiger eating food



Fig. 171 Bir merong (Goat which found in forest), Marang hor (Elephant) and Gai (Cow)

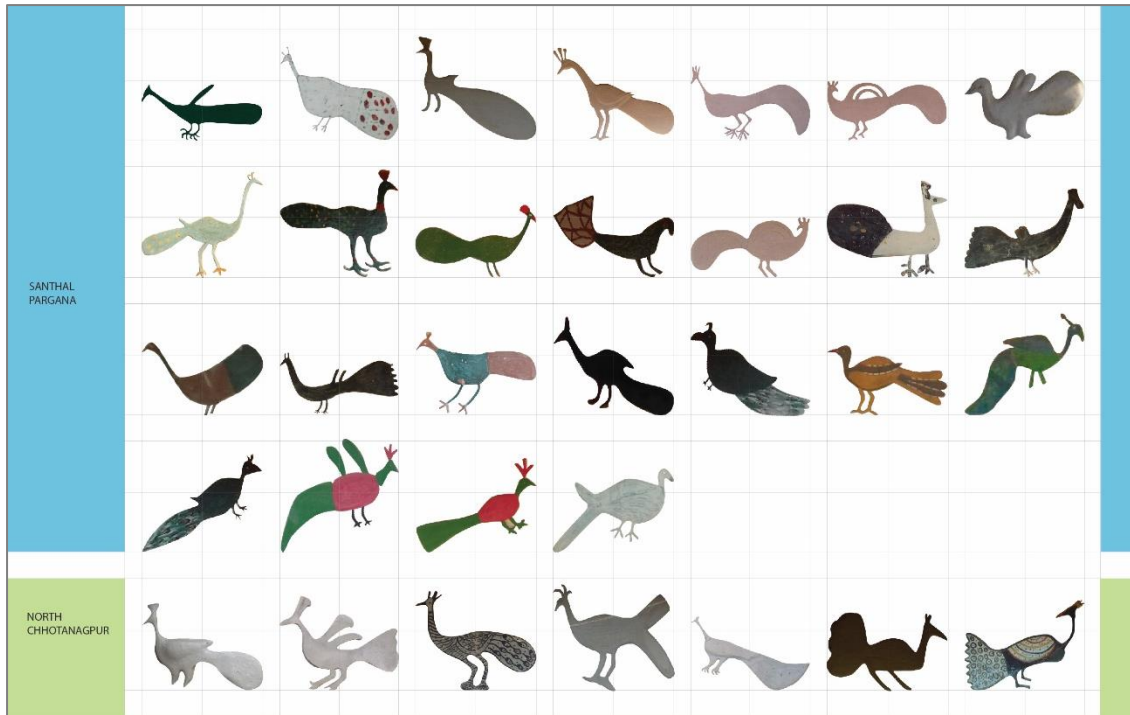


Fig. 172 *Marah* (Peacock) and *Martu marah* (Peahen)



Fig. 173 *Sim* (Cock and Hen)



Fig. 174 *Miru* (Parrot)



Fig. 175 *Potam or Parva Pigeon*



Fig. 176 *Gede (Duck)*



Fig. 177 *Koh (Heron)*



Fig. 178 *Unknown*



Fig. 179 *Haas (Goose)*



Fig. 180 *Pipirhiyarg (Butterfly)*



APPENDIX K.

List of *Hor* visual forms





Fig. 181 *Hor* (Human) visual form, North Chotanagpur



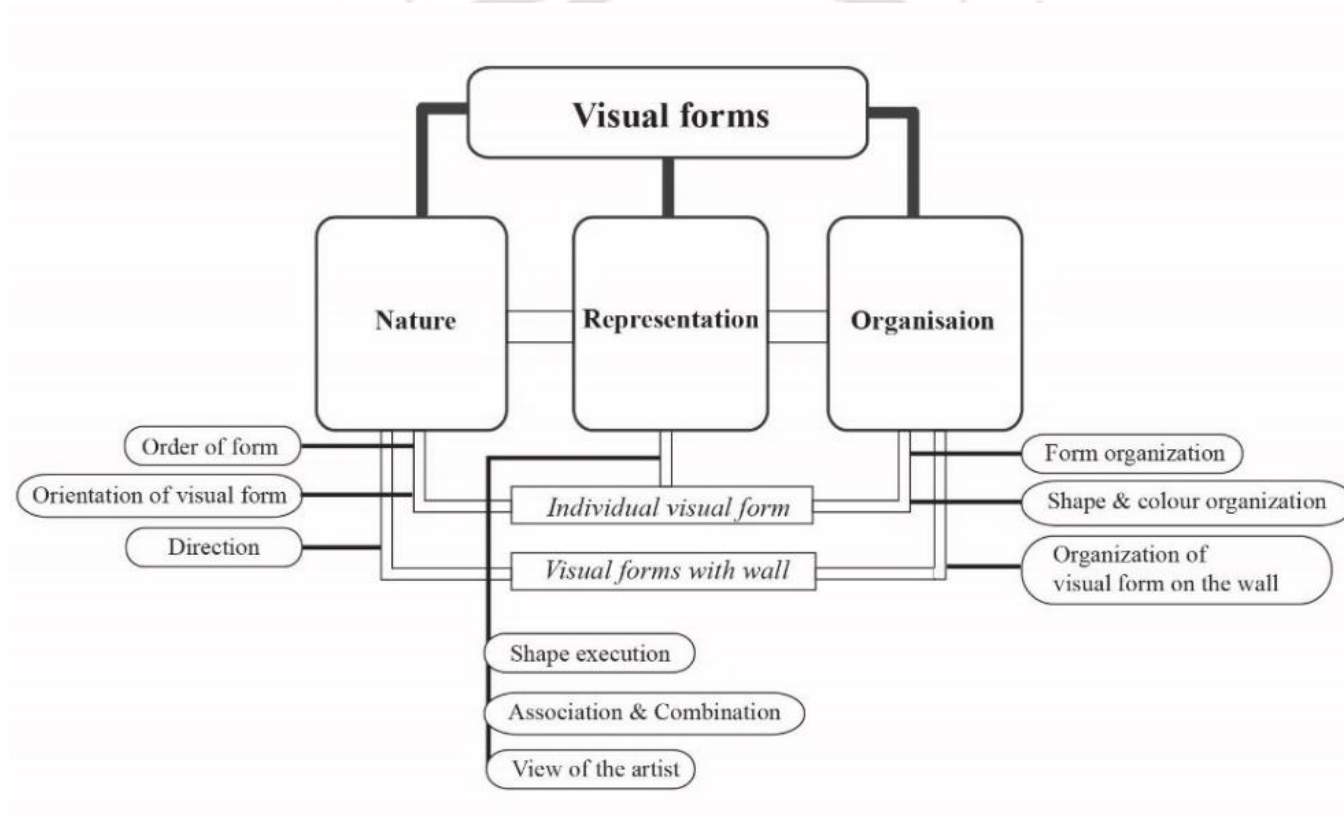


Fig. 182 *Hor* (Human) visual form, Santhal Pargana



APPENDIX L.

New formal analysis model





APPENDIX M.

Shape resemblance: The villagers discussed the resemblance of shape with any natural and manmade object during the photo interview. The resemblance of shape helps to identify the features of the shapes like, leaf shape resemblance with eye shape means in both case the concave shape is important. A list of resembling shapes is made identifying the feature.

Baha

Table 33 Shapes used in flower plant







































A		B		C	
Petal		Leaf		Pot	
 Tooth	 Cow tail	 Spoon	 Fountain	 Wooden grinder	
 Eye	 Comb teeth	 Water drop	 V shape	 Flower pot	
 Egg	 Hook	 Cow tail	 U shape	 Bucket	
 Water drop	 Eye	 Rose bud		 Water drop	
 Spearhead	 Spoon	Stem		 Water Jar	
 Disk	 Water drop	 Stick		 Cooking vessel	
 Bread slice	 Heart			 Water vessel	
 Hook	 Flame	 River wave		 Bowl	
 Comb teeth		 Hook		 Clay mountain	
				 Funnel mouth	
				 Square Triangle	

Table 34 Shapes used in Non-flower plant and Plant seedling











SHAPE (Non-flower plant)		SHAPE (Plant seedling)	
A	B	A	B
Branch	Pot	Leaf	Ground
 V shape	 Flower pot	 Hook	 River wave
 U shape	 Bucket		
Leaf			
 Eye	 Clay mountain		
 Flame			

Table 35 Shapes used in Religious symbol








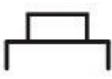












A	B	C
Tip	Stem	Platform/ Pot
 Round	 Fountain	 Funnel mouth
 V shape	 U shape	 Clay mountain
 Mountain		 Step
 Square		

Table 36 Shapes used in Border and Band

A	B
Border	Band
 Rectangle	 Rectangle
Pattern	Pattern
 Diamond	 Arch
 Disk	 Pillar
 Rectangular	 Opposed triangle
	 Triangle
	 Diamond
	 Square

Jan-janwar

Table 37 Shapes used in Janwar (Animal)









































SHAPE (Animal)		
A	B	C
Horn	Hump	Tail
 Hook	 Water drop (blunt)	Stick
 Grass	 Clay mountain	 Hook
Ear	 Spearhead (blunt)	 River wave
 Eye	Leg	 Spoon
 Grass	Stick	
Trunk	 Hook	
Stick	Foot	
 Hook	 Clay mountain	
 River wave		
Eye		
 Disk		

Table 38 Shapes used in Chena (Bird)

SHAPE (Bird)		
A	B	C
Neck	Wing	Tail
Stick	 Water drop	 Egg (blunt)
 River wave	 Spearhead	 Bread slice (blunt)
Beak	 Hook	 Water drop (blunt)
 Hook	 Comb teeth	 Eye (blunt)
 Triangle	Leg	 Hand
Crest/ comb	Stick	 Fist
 Cadle	 V shape	 Paddy
 Spoon	 Hook	 Comb
 Paddy	Claw	
 Bread slice	 Paddy	
 Grass	 Cross	
Eye		
 Disk		

APPENDIX N.

Shape and colour organization in visual forms

Baha

Table 39 Shape and colour organization in flower plant

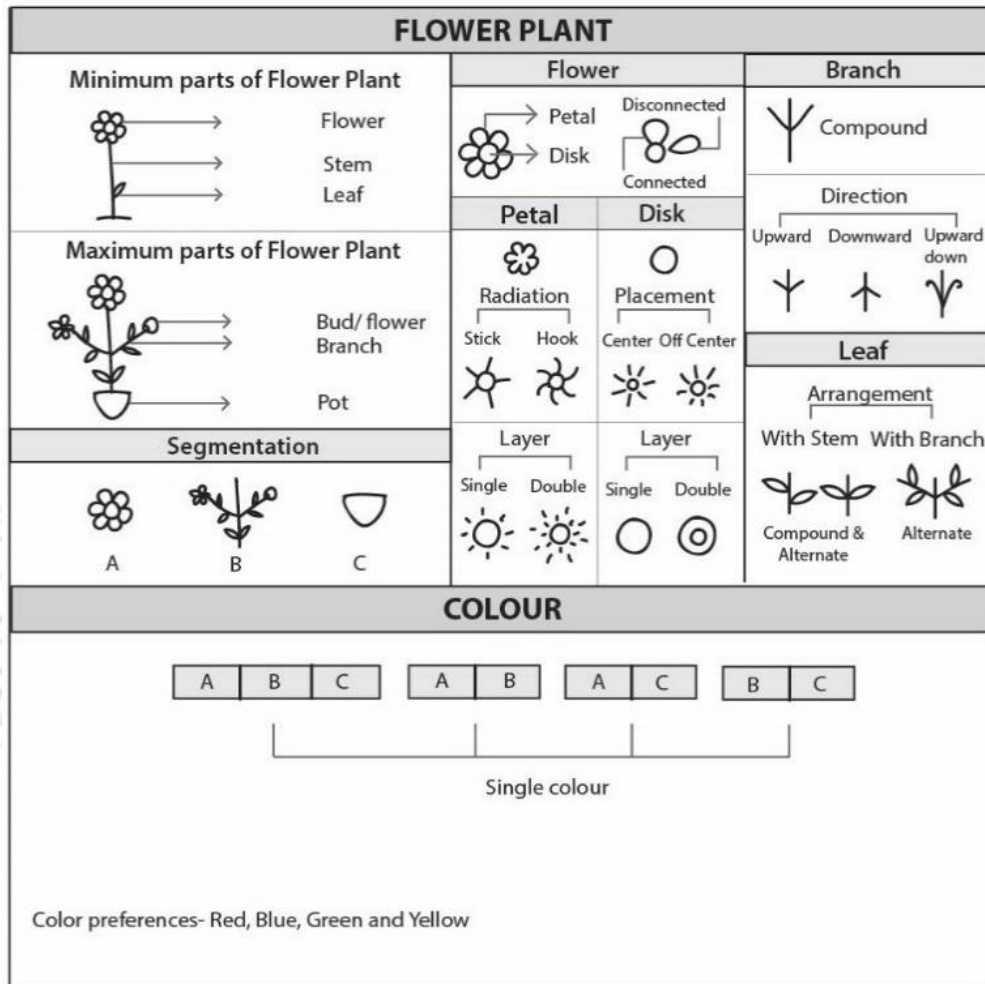


Table 40 Shape and colour organization in Non-flower plant and Plant seedling

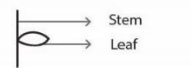

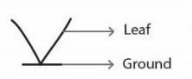
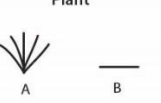
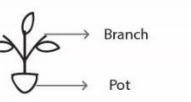


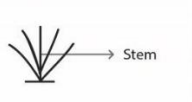


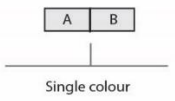
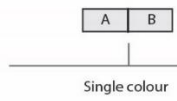
NON FLOWER PLANT & TREE		PLANT SEEDLING	
Minimum parts of Leaf Plant 	Segmentation Plant 	Minimum parts of Plant 	Orientation Plant 
Maximum parts of Leaf Plant 	Branch Arrangement  Compound Direction  Upward down	Maximum parts of Plant 	Branch Arrangement  Compound Direction  Upward down
COLOUR		COLOUR	
			
Color preferences- Green , off white and Yellow		Color preferences- Off white and Brownish	

Table 41 Shape and colour organization in Creeper

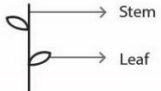

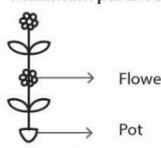
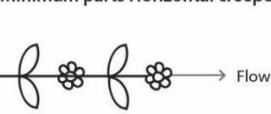

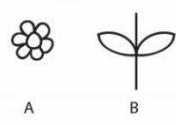








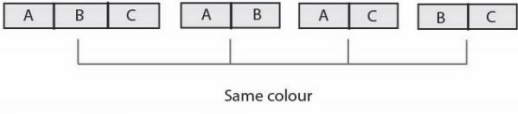
CREEPER			
Vertical creeper		Horizontal creeper	
Minimum parts Vertical creeper 	Minimum parts Horizontal creeper 		
Maximum parts Vertical creeper 	Minimum parts Horizontal creeper 		
Segmentation		Segmentation	
			
Leaf		Leaf	
Arrangement Compound  Alternate 	Petiole With  Without 	Arrangement Compound  Alternate 	Petiole With  Without 
COLOUR			
			
Color preferences- Red, Blue, Green and Yellow			

Table 42 Shape and colour organization in Band & Border

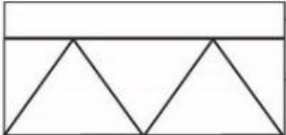
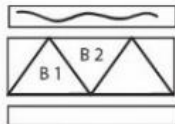
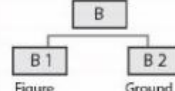
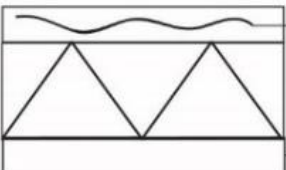
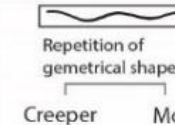

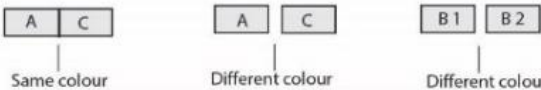

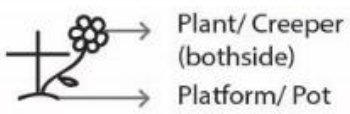
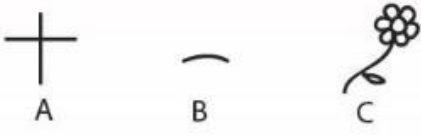
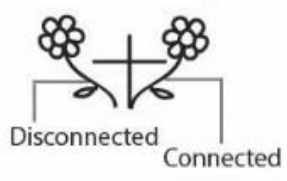

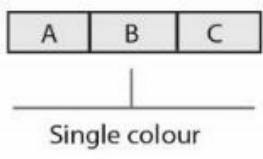
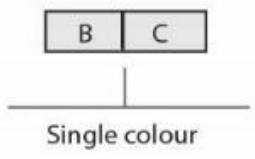
BAND & BORDER	
<p>Minimum parts Vertical creeper</p>  <p>→ Horizontal plain border</p> <p>→ Horizontal geometrical band</p>	 <p>A</p> <p>B</p> <p>C</p>  <p>Figure Ground</p>
<p>Maximum parts Vertical creeper</p>  <p>→ Horizontal decorative border</p> <p>→ Horizontal plain border</p>	 <p>Repetition of geometrical shapes</p> <p>Creeper Motif</p> <p>Shape arrangement</p>  <p>Disconnected Connected</p>
Colour	
 <p>Same colour Different colour Different colour</p>	
<p>Color preferences- White, Black, Blue, Green and Yellow</p>	

Table 43 Shape and colour organization in Religious symbol

RELIGIOUS SYMBOL	
<p>Minimum parts of symbol</p> 	<p>Segmentation</p>
<p>Maximum parts of symbol</p> 	
Shape	
<p>Plant/ creeper</p> 	<p>Stem</p> <p>Direction</p> <p>Upward Upward down</p> 
Colour	
	
<p>Color preferences- Red, Blue, Brown</p>	

Jan-janwar & Hor

Table 44 Shape and colour organization in Bird

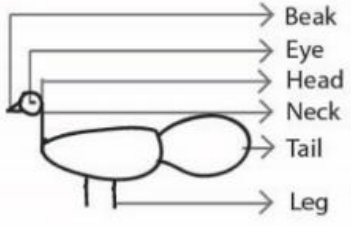
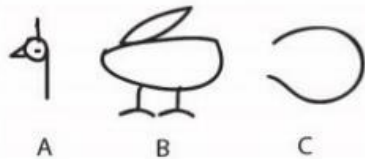
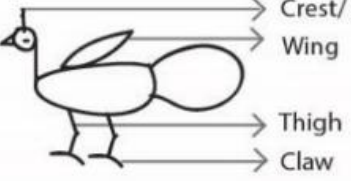
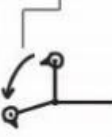

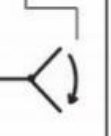
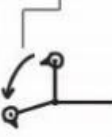

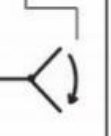
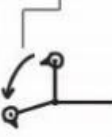

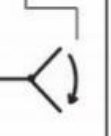
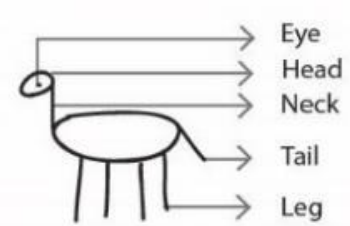
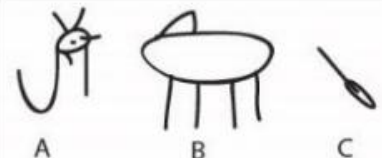
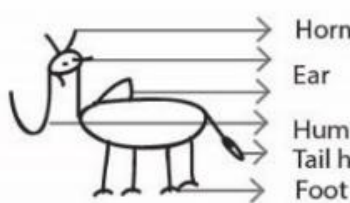
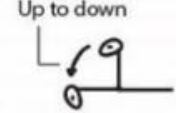
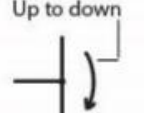
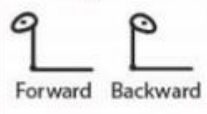


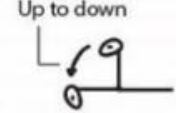
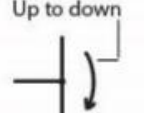
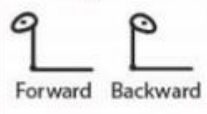


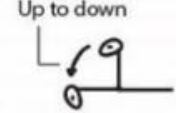
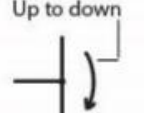
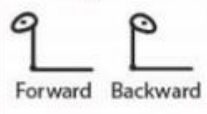


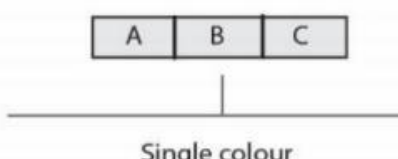
BIRD															
Bird's minimum body parts 		Orientation 													
Bird's maximum body parts 		Movement <table border="1"> <thead> <tr> <th>A Neck/ head</th> <th>B Wing</th> <th>C Tail</th> </tr> </thead> <tbody> <tr> <td>Up to down</td> <td>Up to down</td> <td>Up to down</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td>Forward</td> <td>Backward</td> <td></td> </tr> </tbody> </table>		A Neck/ head	B Wing	C Tail	Up to down	Up to down	Up to down				Forward	Backward	
A Neck/ head	B Wing	C Tail													
Up to down	Up to down	Up to down													
															
Forward	Backward														
COLOUR															
A	B	C													
A	B	A	C												
		B	C												
Single colour															
Peacock- Green , Red															
Parrot- Green															



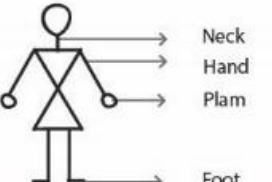
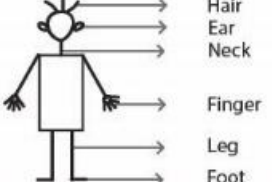
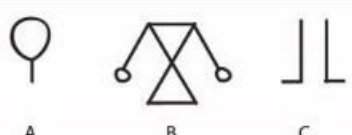
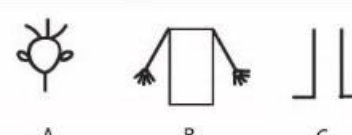
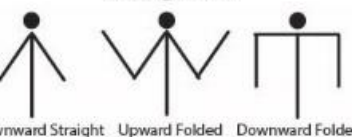
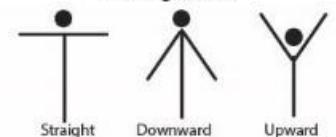
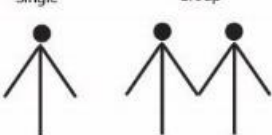

Table 45 Shape and colour organization in Animal

ANIMAL							
<p>Animal's minimum body parts</p> 	<p style="text-align: center;">Orientation</p> 						
<p>Animal's maximum body parts</p> 	<p style="text-align: center;">Movement</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 50%;"> <p>A Neck/ head</p> <p>Up to down</p>  </td> <td style="width: 50%;"> <p>C Tail</p> <p>Up to down</p>  </td> </tr> <tr> <td> <p>Forward Backward</p>  </td> <td> <p>Leg</p> <p>Separate Pair</p>  </td> </tr> <tr> <td> <p>Upward Downward</p>  </td> <td></td> </tr> </table>	<p>A Neck/ head</p> <p>Up to down</p> 	<p>C Tail</p> <p>Up to down</p> 	<p>Forward Backward</p> 	<p>Leg</p> <p>Separate Pair</p> 	<p>Upward Downward</p> 	
<p>A Neck/ head</p> <p>Up to down</p> 	<p>C Tail</p> <p>Up to down</p> 						
<p>Forward Backward</p> 	<p>Leg</p> <p>Separate Pair</p> 						
<p>Upward Downward</p> 							
COLOUR							
 <p style="text-align: center;">Single colour</p>							
<p>Elephant - Black, Red</p>							

anati • 15

ite of Technology

Table 46 Shape and colour organization in Human

HUMAN				
<p>Minimum parts</p> 	<p>Minimum parts</p> 			
<p>Maximum parts</p> 	<p>Maximum parts</p> 			
Segmentation				
				
Hand gesture				
				
<p>Single Group</p> 	<p>Hand placement</p> 			
COLOUR				
<table border="1" style="margin: auto;"> <tr> <td>A</td> <td>B</td> <td>C</td> </tr> </table> <p style="text-align: center;"> Same colour</p>		A	B	C
A	B	C		
<p>Color preferences- Brownish</p>				



APPENDIX O.

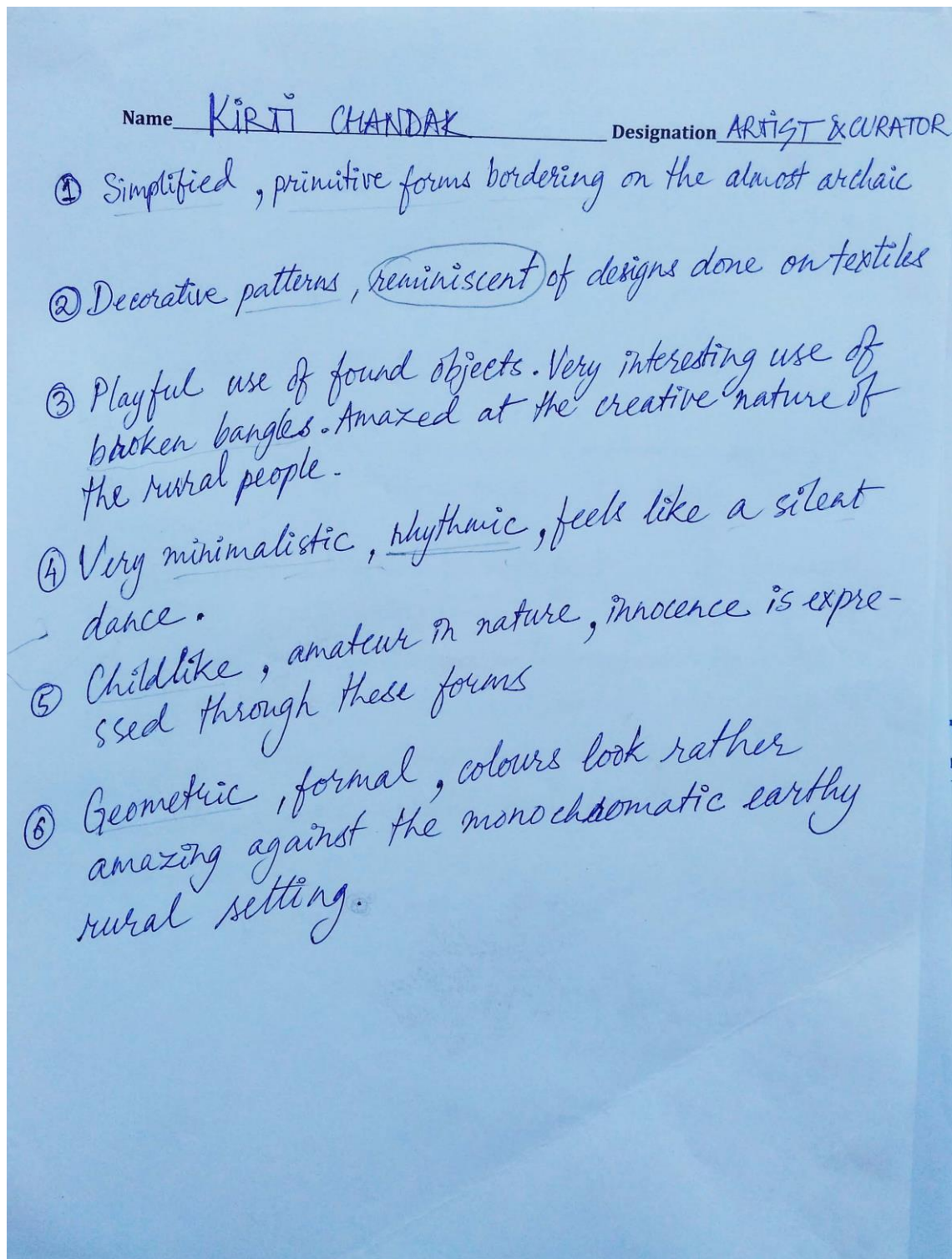


Fig. 183 Expert review; Kirti Chandak Artist & Curator

On this day 27 Dec 2017, I met and interacted with Ms. Pallavi Rani, IIT Guwahati.

She is a student of Visual Communication and doing Ph.D in 'RURAL MURAL ART FORM OF JHARKHAND'.

It's quite interesting to note that she is documenting this fast disappearing tradition. Usually I find many people doing design interventions but Ms. Pallavi Rani's effort is more noble. Her research I believe will be very useful for future generations who might not have a better reference.

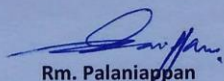
My best wishes for her success.

V.K. Jeyaraj
27.12.2017.
ASSO. PROF. - TEXTILE &
DESIGN
NIFT - Chennai.

Fig. 184 Expert appreciation

This is to advise Ms. Pallavi Rani to take up her above said research work in the direction of:

1. Finding value of aesthetics and meaning of images
2. History, practices, ritual and celebration
3. Transition of practices in the context of materials
4. Documenting the oral discussion which she is going to have with the locals in detail.
5. Tracing the relation and practices between the communities.



Rm. Palaniappan

Email: rmpalaniappan1957@gmail.com

mobile: +91 9444040220

Fig. 185 Expert comment

APPENDIX P.

List of visual characteristics of rural mural art forms of eastern Jharkhand





GLOSSARY

- *Ato*- village
- *Aayo/agat*- Mother
- *Baba/Aapat*- Father
- *Bahar*- Out side, without, beyond
- *Bahu*- Bride
- *Bahu jawae*- Damad
- *Bapla*- A wedding
- *Bhitar*- Private family shrine
- *Bhoj*- Feast
- *Bir*- Forest
- *Bir sendra*- Annual hunt
- *Bonga*- Spirit/god
- *Buru*- Hill or mountain
- *Burusengel*- Burnt straw
- *Cgir pirthimi*- The completely round earth.
- *Caco chatiar*- Ceremonial purification of young children; the tribal induction ceremony.
- *Chatiar*- Ceremonial purification
- *Chasi*- Farmer
- *Chaka*- Wheel
- *Chando*- Chand
- *Daka Orah*- Kitchen
- *Dahar*- Road
- *Dah*- Rain
- *Dadi*- Spring
- *Dahar*- A quick-step dance
- *Dan*- Witch
- *Datani*- A twig of a Sal tree
- *Dibi*- Santhal term for Hindu goddess, the Devi
- *Diku*- Upper caste Hindu
- *Disom*- Country
- *Don*- The wedding dance
- *Don seren*- Wedding songs
- *Dhon*- Wealth

- *Doyol doyol*- Rising and falling, ascending and descending, heaving.
- *Eaj Made*- Lavatory
- *Epil*- Star
- *Enec'* - Dance
- *Erok'* - Sowing festival
- *Eukhi*- The womb.
- *Gada*- River
- *Ganda*- Dirt
- *Gajarh*- Bush
- *Ghas*- Grass
- *Gidra*- Child
- *Golwari*- A type of social dance with pantomime gestures
- *Guru*- Religious teacher or preceptor
- *Gai pal*- A herd of cattle.
- *Gora*- A cowshed, a cattle-shed.
- *Hadam hudum*- Early in the morning, before day light, before sun rise.
- *Handha*- A large earthenware jar.
- *HandL*- The Santal national liquor prepared from rice
- *Hasli*- A metal ornament worn round the neck.
- *Hunar*- Skill, art.
- *Haram*- Old man
- *Haram budhi*- Old woman; an old man's wife
- *Hapram*- Ancestor
- *Hat/ bajar*- Market
- *Hudin*- Small/little
- *Haram*- Old
- *Hosor*- Abortion
- *Hoy*- Wind
- *Jaher*- Sacred grove
- *Jaher Era*- Lady of the Grove
- *Jan bah*- Flowers of bone
- *Jarh/ita*- Seed
- *Jiu*- Life principle; soul
- *Juan*- Youth
- *Johar*- Salutation

- *Jonom*- Birth
- *Jom raja*- The king of the dead
- *Juri*- Friend, companion
- *Jatra*- A good omen, a sign or omen.
- *Johar*- Salutation.
- *Poboff johar*- Bowing down in saluting an elder person.
- *Jopohar*- Mutual salutation.
- *Kunami*- Fool-moon
- *Karamdar*- 'Karam twig; a form of friendship among girls
- *Kat*- Wood
- *Kurhkal*- Potter
- *Kocha Barhge*- Garden
- *Khode*- Particles of grain
- *Khunt*- Sept
- *Kulhi*- The village street
- *Kulhi enec*'- A street dance
- *Kapat*- A door
- *Karam binti*- Traditions recited during the observance of the Karam porob
- *Lagre*- The standard social or recreational dance
- *Lita*- Maran Buru
- *Manjhi*- Headman
- *Marich*- Chilli
- *Manjhithan*- Shed dedicated to village founder
- *Marang*- Big
- *Moreko Turuiko*- 'The five-six', a leading bonga
- *Murut*- An image, an idol, a statue.
- *Naeke*- Priest
- *Naihar bonga*- Spirit of the wife's parents house
- *Nava*- New
- *Nakia*- A comb, to comb the hair.
- *Nanuar*- Beautiful, pretty.
- *Perej*- Full
- *Puja*- To worship
- *Purus*- Husband
- *Rat birat*- During the night.

- *Sagarh*- Blockcart
- *Sendra*- Hunt
- *Seren*- Song
- *Serma*- Heaven
- *Sohrai*- Harvest festival
- *Sajbaj*- Equipment, implements, harness, tools, materials, machinery.
- *Sari*- A dress for a woman, consisting of a piece of cloth from 8 to 12 cubits in length and two in breadth
- *Than*- Place, usually a sacred place
- *Tile*- Tiles
- *Thakur-jiu*- The creator
- *Tusu*- Local folk deity
- *Tatka*- New, fresh, recent.
- *Upas*- Fasting
- *Umuh Orah*- Bath room

Animals

- *Jan janwar*- A living creature
- *Janwar*- An animal.
- *Bir janwar*- A wild animal.
- *Ato janwar*- A domesticated animal.
- *Chene*- Bird
- *Chupi*- Tail of birds
- *Fankanah*- Wing
- *Pipirhiyarg*- Butterfly
- *Kahu*- Crow
- *Gede*- Duck
- *Has*- Goose
- *Koh*- Heron
- *Marah*- Peacock
- *Kudbur potam*- A species of wild pigeon.
- *Sim*- Cock
- *Martu marat*- The peahen.
- *Pilior marak*- The peacock.
- *Miru*- Parrot
- *Parva*- Pigeon

- *Gharwa*- Sparrow
- *Has hSsil*- Two mythical birds
- *Gai*- Cow
- *Haku*- Fish
- *Chaylom*- Tail of animal
- *Kada*- Buffalo
- *Unt*- Camel
- *Kubudh*- Hump
- *Jeel*- Deer
- *Hanku*- Fish
- *Thonta*- Beak
- *Tula*- Nest
- *Koel*- Koel
- *Hati*- Elephant
- *Sundh*- Trunk
- *Sadom*- Horse
- *Tarub*- Lion
- *Dangara*- Ox
- *Gai*- Cow
- *Chetara*- Tiger
- *Seta*- Dog
- *Mero*- Goat
- *Sukari*- Pig
- *Kulay*- Rabbit
- *Chutu*- Rat
- *Rote*- Frog
- *Seta*- Dog
- *Merong*- She got
- *Marang horh*- Elephant
- *Caowar*- The long hairs of the tail of the cow or horse.
- *Murum jeel*- Blue cow.

Flower

- *Baha*- A flower
- *Ba sala*- Floral motif
- *Baha mala*- A garland of flowers.

- *Sarjom baha*- Sal flower (*Shorea robusta*)
- *Matkom baha*- Mahua flower (*Madhuca longifolia*)
- *Gulanj flower*- Gulechi flower
- *Chameli*- Jasmine
- *Dalim Suraj mukhi*- The Sunflower, Heli- Suruj tnukhi. *Janthua annuua*, Linn,
- *Murud baha*- Palash flower
- *Upol baha*- Lily flower
- *Porayani baha*- Lotus
- *Khushbi baha*- Marigold
- *Gulap baha*- Rose
- *Mirju baha*- The tree and flower of *Mirdju baha*- The Indian Laburnum, *Cassia Fistula*, Amaltas
- *Sikiom baha*- A large lily (*Crinum*, nov. sp. Watt), found as yet only in the Santal country.
- *Bengarh baha*- Brinjal
- *Bherawa baha*- Ladyfinger
- *Karuyala*- Bittor gourd
- *PuMuii baha*- A favourite flower with Santal girls, *Oomphrena globosa*, Linn.
- *Joba baha*- Hibiscus flower
- *Bare baha*- A flowering plant found in the gardens of the Santals, *Pentapetes phasnicea*, Linn.
- *Karam baha*- *Adinia cordifolia*, Hook. A tree is associated with good luck.
- *Bokom baha*- An ornamental tree, the Persian lilac, *Melia Azadarach*, Linn.
- *Narhi baha*- Lata phul, A creeping, trailing, twining or scandent plant
- *Sakam*- Leaf
- *Cak*- A representation of a flower, or some other design, made with rice flour on the ground near the mandwa khunti at a marriage.

Plant

- *Cara*- A young plant, a seedling.
- *Karam*- *Adinia cordifolia*, Hook. A tree is associated with good luck
- *Sirom*- *Andropogon muricatus*, a grass
- *Hudu*- Paddy
- *Iri*- *Panicum crusgalli*,.A cultivated millet
- *Jonorha*- Maize
- *Guhum*- Wheat

- *Dhubi ghas*- A grass *Cynodon dactylon*
- *Dar*- Branch or twig
- *Dare*- Tree

Colours

- *Aara*- Red
- *Hende*- black
- *Lil*- Blue
- *Pund*-White
- *Rong*- Colour
- *Potao*- White washing
- *Jered*- Lipna
- *Lunda*- Gobar se nipana
- *Guruj*- Cowdung
- *Hariar*- Green
- *Sasan daK*- Yellow, the colour of turmeric.
- *Chiribiri*- Colourful
- *Esel*- Fair, light coloured.
- *Gahir*- Deep
- *Gamcha hasa*- A kind of earth with which cloth is dyed a light reddish brown colour. This is the Hindu and Buddhist sacred colour.
- *Pond hasa*- White silt, used as whitewash for houses.
- *Jenged jenget'*- Bright red, pleasing to the senses.
- *Masharl*- Light
- *Molso*- Greyish, of a greyish colour.
- *Eairi*- Brownish coloured
- *Hasa*- Earth, soil, land,

Design elements

- *Ankurbankur*- Zigzag
- *Bhog*- The centre, the middle
- *Bhogteta-e ubpe*- Empty it in the centre
- *Chit*- Spotted, variegated, coloured, and stained
- *Chuk chuk*- Bright, glossy, clean, smooth, beautiful
- *Cuila*- Sharp, pointed
- *Dagi*- Spotted, stained, marked, blemished, branded, blemished in character or reputation.
- *Eatba6 kutbu*- Irregular, crooked.

- *Gajar*- Dense, close together.
- *Gurmuria*- Bound, spherical
- *Tika phokka*- Dotted
- *Karhbud*- Crooked
- *Karhbarh-Kurbur*- Zigzag
- *Khond*- A square
- *Nanha*- Thin
- *Nangoyalc*- Very black, extremely, applied to blackness
- *Onol*- A stripe
- *Praise Osar*- Wide
- *Sidha*- Straight
- *Sunuj*- Narrow
- *Sima*- Boundary
- *Jerer*- To plaster and smooth, to plaster, to daub
- *Jora*- A pair.
- *Likhon gadhon*- Carving, representations of men, animals, trees, &a., &o., drawn on the walls of houses
- *Pond bhit*- A white wall
- *Potao*- To white wash, with lime or white earth.
- *Sada*- White, plain, clean, without admixtura
- *Orak*- House, home
- *Khirhki*- Window
- *Duar*- Door
- *Racha*- Courtyard
- *Potav*- To paint
- *Safa*- Clean
- *Sirju*- To create
- *Khokrao*- To carve, cut out, wear Kokrao. J away, scrape, gouge, hol- low out.
- *Chitar*- Portrait/painting
- *Chut*- Dark
- *Harop*- A letter of the alphabet.
- *Khodai*- Tattoos
- *Chenel*- Picture
- *OL*- Write