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Chawalgatha: Creating awareness about the indigenous rice crops of India through communication design

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This paper illustrates the communication design project, Chawalgatha, that attempts to showcase how indigenous knowledge plays a vital role in sustainability. The project encourages people for its significance in protecting, preserving and promoting them to address climate change. The study employs the qualitative research approach with one of the grassroots environmentalists from the region, Padma Shri Babulal Dahiya. The paper focuses on the practices from Central India's Baghelkhand, where the wide varieties of rice are still available and practised on the field, which Dahiya has highlighted through his unique activism. Dahiya is known for his initiative to preserve rice and other food crops through his investigation of Bagheli folk literature. The research aims to create awareness of indigenous knowledge systems within environmental education and communication design discourse. It underscores the sustainable indigenous practices and folktales related to rice from India.

The paper first explains the need for the project and the methodology of understanding the context through narrative research. It then develops the design through product ideation and development. It constructs the visual language through the rooted pragmatics of the Gond art tradition from Central India, along with employing a papercraft technique to develop a unique visual design on ecological conservation.

KEYWORDS: Agricultural sector, systemic design, sustainable practices, indigenous knowledge, Gond art, Communication design, Indigenous rice, indigenous practices, Central India, Bagheli

RSD TOPIC(S): Cases & Practice, Learning & Education, Society & Culture,

Introduction

The ecological crisis and climate change result from several anthropocentric activities and policies by the several nation-states in the world, including those that ignore the Indigenous knowledge systems. One such field is agriculture in India, which has overridden centuries of wisdom in the name of science and its tenets in efficiency, productivity and profit. India, which has been home to thousands of varieties of rice cultivation, is now dominated by a few capitalistic seeds unsuitable to many climatic regions. Depleting the water table and overdependence on fertilisers and pesticides are some of the challenges the agrarian and rural economy faces today.

The project explores the vast area of indigenous knowledge systems and their potential for a sustainable environment. It presents a case study contributing to sustainability and communication design discourse. This project is centred around an individual, Babulal Dahiya, a grassroots environmentalist, to pitch an initiative to create awareness about the indigenous rice crops of India. The deliverables are made through experimental techniques employing rooted visual language. It builds on the folk poems by Babulal Dahiya, which portray the qualities of local, traditional and indigenous rice varieties in central India. It responds to the cultural perspectives around the consumption of rice in India.

Aim and Objective

To create awareness about rice and its diminishing varieties in present-day agricultural activities with the help of indigenous knowledge. The project explores the sustainable indigenous practices and folktales related to rice. It highlights its significance in protecting, preserving and promoting them to address climate change. The research

aims to create awareness of indigenous knowledge systems within environmental education and communication design discourse.

Conceptual Components

Babulal Dahiya's unique environmentalism

Babulal Dahiya,¹ a farmer, poet, and native of Satna in the Indian state of Madhya Pradesh, is protecting and conserving the environment through his unique knowledge of spanning through literature and agriculture. On the one hand, his environmentalism attempts to protect various crops, esp. rice, which are slowly getting lost due to modern agricultural practices and capitalistic takeovers. On the other, his articulations in the Bagheli, a Hindi dialect prevalent in central India, display his grounding in the Bagheli culture.

¹ Dahiya is affiliated with the non-profit organisation Sarjana Samajik Sanskratic Evam Sahityatik Manch, Pithaurabad in Satna.

Dahiya started conserving ten rice species and now conserves more than a hundred varieties of rice species in his agricultural fields and around Satna. He also develops his seed collections of rare species, rice being the main, and distributes them to interested farmers. He returns new grain to continue the seed bank during harvest. Besides this, Dahiya has written several poems and documented local songs of tribal festivals, rituals, customs and traditions in the Bagheli Language. For his contribution to the tribal and rural community in Central India. He is recognised by different government and non-governmental institutions for his work in rice conservation, including India's fourth highest honour, Padma Shri, in 2019. Dahiya's work has found interest in several governmental agencies and institutions² (Parampara Project, 2019).

Rice and indigenous knowledge

The value of indigenous knowledge and beliefs, such as songs, tales, drama, puppetry, and proverbs, have a strong potential for communication to take environmental messages to the public across the audience in rural and urban contexts (Ogbebor 2011). Indigenous knowledge includes spiritual experiences, philosophies, politics, technologies, subsistence activities and external relations of all forest-dwelling people whose lifestyle is strongly influenced by their traditions (Senanayake, 2006). This knowledge has been preserved in human memories and passed down with each generation without being written anywhere. The current political systems have created a lack of recognition of the need to preserve and promote the further use of indigenous knowledge.

Rice is the staple crop of the tropical world and crucial in all sectors, be it medicinal, cultural or environmental. There are innumerable ceremonies, rituals, fairs and festivals, taboos, and folklore that penning is beyond the restriction of pages. Through its irreplaceable utility, it has attained a unique status in the culture of most rice-growing countries through its importance in the sustenance of human life (Ahuja & Ahuja, 2017). In India, rice has been mentioned in folklore and is often associated with

² He has been financially supported by institutions like Madhya Pradesh State Biodiversity Board, SGP, GEF and the Paryavaran Mitra Project of the Center for Environment Education to continue and promote his work across the globe.

prosperity and fertility. Considering its vital position, the United Nations designated 2004 as the "International Year of Rice". (National Food Security Mission, n.d.).

Along with its cultural importance, Ancient Ayurvedic treatises laud the Raktashali (red rice) as a nutritive food and medicine. The medicinal value of other rice such as Sashtika, Sali, and parched rice have been documented in the Charaka Samhita (c. 700 BC) and the Sushruta Samhita (c. 400 BC) in the treatment of various ailments such as diarrhoea, vomiting, fever, haemorrhage, chest pain, wounds, and burns. Different varieties of rice and rice cultivated in different climatic conditions have been used for different purposes because they affect the human body differently, as they possess different inherent qualities (Sharma, 2018).

Unfortunately, the most benefits of rice, as a product, process and culture, are now getting extinct other than its value as a modern food for the current world. There is a need to look beyond the value of rice just as a food product to align practices with grounding (Thackara, 2017) (Tewari, 2018) and sustainability (Tewari and Jyoti, 2017) (Tewari et al., 2020).

Gond art

"Gond" is an Indian tribal art of painting practised by "Pradhan's and Gond "and the largest Adivasi community of Central India. Most of the Gond Community population resides in Madhya Pradesh, Andhra Pradesh, Maharashtra, Chhattisgarh and Orissa. The word "Gond" derives from the Dravidian expression "Kond", meaning green mountains (Rao, 2019). The paintings are done from earlier times. They are just to decorate the walls and floors or surroundings but to express their thoughts and feelings, their observations on daily life activities and occasional events or festivals (Gond Painting: A Visual Narrative of Voiced Traditions, 2019). One of the critical elements in Gond painting is the Signature pattern which is unique to all the practising artists. The artists infill the more prominent forms with their signature patterns on the canvas. The motifs of Gond art are inspired by the trees, animals, human figures, birds, rivers, folklores and daily life activities like farming and cooking. The illustrated Folklores are passed from generation to generation and represent the earlier life of Gond tribes. It evolves with time and surroundings as it is mainly the depiction of things happening

around, illustrated in the form of a story. The materials used are naturally acquired, such as natural base walls and floors and natural organic colours, which also evolve with time. Now, it is practised on paper and other materials. The Forms are free-flowing with intricate patterns and contrasting colour combinations. Jangarh Singh Shyam was one of the first artists to use canvas for Gond paintings.

Methodology

Visual language and ideation for concepts

The idea to interpret the poems into visuals was inspired by the Gond art. One of the reasons is that both the poems, folk tales and Gond paintings talk about daily life activities in different forms. Both are from Central India and are being practised among different communities. The process followed in interpreting these poems into visual forms included different boards of Brainstorming, Mood, Pattern, and Technique/Look of the Final Deliverables. The keywords are dots, lines, intricate patterns, free-flowing forms, contrast colours, human figures, and flora and fauna motifs. The paintings show the evolution of the application of the art form in different mediums and forms. All the compositions are hand-drawn and then profile cut and pasted. The terms highlighted the key elements used in the visual metaphors for the outcomes. This process noted the details and elements relevant to the final implications.



Fig 2: Gond Art Tree of life. Source: Author.

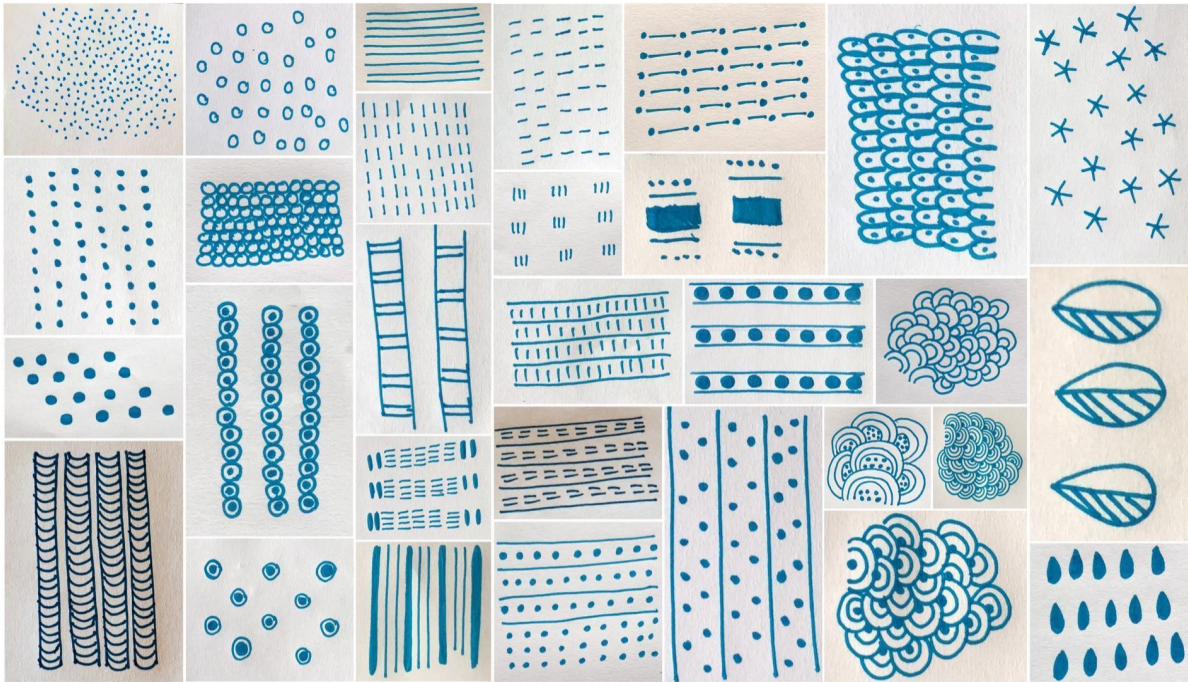


Fig 4: Pattern board inspired by Gond Art.



Fig 5. Colour, Material Board and Tool Board. Source: author.



Fig 6. Paper-cut technique illustration. Source: author.

Composition through transliteration

The final composition of the spreads and illustrations is constructed through transliterated elements and description. One of the poems shared by Babulal Dahiya is displayed in the table below to show the process of developing the illustrations in Visual Language created for this Design project.




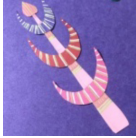


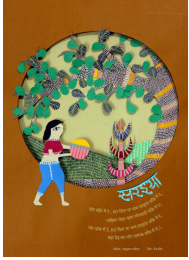
Step	Action	Visual Interpretation
1	Sketching of the final motifs, here Eg: Trishul	
2	Tracing the sketch on selected coloured papers and cutting into profiles.	
3	A motif is assembled through layering and pasted with glue.	
4	Then, suitable patterns in combinations are drawn over these motifs. One motif is completed.	
5	Similarly, all the motifs of one poem are combined to form a visual composition.	
6	In composition, a title is added and created following the same technique.	
7	The final step is adding the poem text with digital tools and completing it into the final layout of Visual poem posters.	

Table 1: Steps followed in making Visual Compositions.

Chawalgatha: The design project

The series of explorations include the visual representation of the poems shared by Babulal Dahiya with the authors to represent them through hand-drawn and digitally processed explorations. The book includes a series of posters explaining rice varieties with Dahiya's Bagheli poems, such as the following.

Saraiya

सरइया	Saraiya
मोर पाकी गेरे, साठ मा धान सरइया गै रे, छेहर खांय गोलहथी गै रे। मोर पाकी गैरे, साठ मा धान सरइया गै रे, बड़ा देवका भोग लगाऊ गैरे।।	Mor paki ge re, saath dina me Saraiya dhaan paki ge re, ladke chehar khaayn golhathi pavi ge re. Mor paki ge re, saath dina me Saraiya dhaan paki ge re, Bada Dev ka bhog lagau paki ge re.

Table 2: 'Saraiya' in Bagheli and its meaning. Source: Babulal Dahiya.

This verse simply means that the rice named Saraiya, a long and bold variety (Kujur et al., 2019), is cultivated in sixty days and is the first rice to start the new farming season. To show their gratitude towards nature and god, they offer it to their god, Bada Dev, who resides on the tree.



Fig 7: Poem Saraiya: Final Poster Layout. 12 X 18 inches.

Interestingly, the verses include some basic information, including the crop cycle of sixty days, which is significantly lesser than the dominant ones in the region. Also, the reference to its offering to the god makes it special within the group.

Kargi

करगी	Kargi
धान बोई खेतबा पहरहा म करगी। खाय नही सुमरा न खाय ओही समधी॥	Dhaan boi khetba, parha ram kargi, Khaay nahi sumra, na khaye ohi samdhi.

Table 3: 'Kargi' in Bagheli and its meaning. Source: Babulal Dahiya.

The Kol community mainly sings this verse for Red rice named Kargi, which has medicinal values. It is bitter, so they do not offer it to the in-laws or relatives. It has thorns and grows on a mountain, so pigs do not even go near it.



Fig 8: Poem Kargi: Final Poster Layout. 12 X 18 inches.

The poem here the properties and utility of a variety which can be judiciously employed in the fields. For its readers, it not just offers an embedded pun; it suggests a potential for looking at this variety as a cash crop or a medicinal crop.

Chawalgatha, the book

The explorations are compiled into a book named Chawalgatha (Rice Story), which attempts to emerge as a communication design contribution to Babulal Dahiya's environmentalism.



Figure 9: Sketches, Coptic Binding and Final Photoshoot of Chawalgatha

Epilogue

Different beliefs and usage of rice have made it a significant crop in Indian agricultural history. The various parts of India not just represent geological or agricultural geography but also the cultural viewpoint of the region. In the rural and agrarian economies, these cultural viewpoints and paradigms have a significant role in contributing to sustainability and organic revolution through Indigenous Knowledge

systems. One such system, folk literature and indigenous agricultural practice, is illustrated here with Babulal Dahiya as a protagonist. Dahiya's initiative and his perspective on indigenous knowledge and rice varieties is a significant step toward contributing to a sustainable environment through rice crop conservation.

The project suggests there are wide indigenous rice varieties on the verge of extinction that need to be preserved to maintain the soil balance can be creatively saved. This project supports Shiva's Designing with Nature (2020) approach, which would reclaim the earth as a complex but self-regulating system. As an academic project, the book looks into the new paradigms of design (Tewari, 2021) and employs a decolonised visual framework (Singh and Tewari, 2021). Through Chawalgatha, the project argues that indigenous knowledge's importance must be preserved and shared among generations. Save Rice, Save Life!

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