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Cultural, Spatial & Sensory Futures of Art, Design and Architecture

Editors

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Cultural, Spatial & Sensory Futures of Art, Design and Architecture

(Book of Abstracts of ZEITGEIST -
An International Conference of the World University of Design 2026)

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FOREWORD

In every era, architecture, design, and art do more than shape the space. They mirror our collective consciousness. They articulate how societies live, aspire and respond to the challenges and opportunities of their time. It is in this dynamic interplay between idea and action, between tradition and innovation, that the true spirit of our age “the Zeitgeist” is manifested.



ZEITGEIST 2026 is convened at a critical moment in history. Our world is facing unprecedented global transformation, from the rapid integration of digital technologies and the profound urgency of climate resilience to renewed questions about cultural heritage, equity and human-centred environments. These shifts are not abstract; they reverberate through the places we inhabit, the tools we use and the dialogues that shape future pathways. Architecture, art and design are the active agents that interpret, anticipate, and shape it.

That more than 200 outstanding submissions were received in response to the call for papers is a testament to the vibrancy and relevance of this discourse. It reflects a community not content with passive observation but eager to contribute, critique and co-create knowledge that matters. The rigorous selection of abstracts for this publication highlights work that is not only intellectually robust but speaks of the pressing concerns of our time - from technological integration and sensory experience, to sustainability, heritage and cultural identity. Each abstract represents a unique perspective, yet together they form a chorus of inquiry that acknowledges complexity and imagination.

ZEITGEIST 2026, the International Conference on Cultural, Spatial & Sensory Futures of Art, Design and Architecture is built on the belief that creative practices must be at the heart of societal transformation. Hosted at Bharat Mandapam, New Delhi, and convened by the World University of Design in partnership with leading academic and cultural institutions, this conference invites participants to explore where tradition meets innovation, where material meets meaning and where localized wisdom enriches global dialogues.

What makes this conference truly special is its interdisciplinary ethos. It brings together architects, designers, urbanists, cultural theorists, artists, educators, and students; spanning practice and scholarship, craft and computation, community engagement and critical theory. ZEITGEIST embraces a holistic approach to understanding why and how we design, not merely what we design. The diversity of voices represented here is a reflection of a discipline attuned to inclusivity, plurality and ethical responsibility.

To the partners, organisers and volunteers whose dedication has made this event possible, I extend heartfelt appreciation. Your commitment to excellence, collaboration and scholarly integrity has set the stage for meaningful exchange and discovery. To our contributors, reviewers, and delegates, I wish that this conference be a confluence of ideas and intentions, a space where creative inquiry expands into action, and where new connections are forged that extend well beyond these pages.

To the broader art, architecture, and design community connected with the World University of Design, I encourage you to engage deeply with the rich insights presented here. Let these abstracts stimulate conversation, catalyse new collaborations, and inspire work that responds to our times with rigor, care, and optimism.

The spirit of our times demands no less.

Prof. (Dr.) Sanjay Gupta
Vice Chancellor, WUD
Conference Chair, ZEITGEIST 2026

EDITOR'S NOTE

The **Book of Abstracts** for the **Zeitgeist 2026- International Conference on Art, Design and Architecture** aims to serve as a vital compendium of ideas that probe the spirit of the age, reflecting perspectives rooted in the past, engaging with the present, and envisioning the future. Derived from the German term meaning "**spirit of the age**," **Zeitgeist** encapsulates the invisible yet pervasive cultural, technological, ecological, and socio-political currents that shape our collective consciousness and creative output in the present moment. Hence, the conference intended to shift the lens of exploration inwards- into the **SELF** that is adapting and evolving in this era of rapid digital transformation, climate urgency and evolving social identities. As a designer one is always dictated by the contemporary **Zeitgeist** influencing our personal relationship with the spaces we inhabit, the objects we use, and the visual languages we consume.

The contributors reflected on the self as designers and users, questioning traditional hierarchies between creator and audience. In **architecture**, papers explored how built environments can foster introspection, resilience, and sensory well-being amid a chaos of urbanism and digitalisation. In **art**, abstract submissions investigated personal narratives in an age of curation. In **design**, meanwhile, papers brought out how everyday objects can turn into active participators in shaping the future. Over all this book of abstracts prioritize "Conscious Design"—blending history, natural materials, adaptive technologies and human values—highlighted as responses to a **Zeitgeist** craving innovation and connection. By foregrounding the self, the conference established a profound re-evaluation of **art**, **architecture**, and **design** as not merely products of their time but tools for personal and collective evolution, enabling us to envision a future that nurtures the human spirit.

Through rigorous scholarship, this book urges readers to see themselves as active agents in the unfolding narrative of our age and shaping the parameters for **Zeitgeist 2027**.

With regards,

Dr. Shaleen Sharma
Prof. Harmanpreet Kaur
Dr. Rajat Verma
Arzoo Kadian

ABOUT WORLD UNIVERSITY OF DESIGN, HARYANA

The World University of Design (WUD), established in 2018 at Rajiv Gandhi Education City, Sonipat, is India's first university dedicated exclusively to the creative disciplines. It was founded to address a critical national need for design, architecture, and creative leadership within higher education. Recognised with a QS I-Gauge Platinum Rating in Design Education and an A+ Grade for Outcome Based Education, WUD has emerged as a leading institution in the Indian and international design education landscape.

Established under the Haryana Private University Act, 2006, and recognised under Sections 2(f) and 22(1) of the UGC Act, WUD offers undergraduate, postgraduate, and doctoral programmes across architecture, design, fashion, communication, visual arts, performing arts, and design-led business. It has the largest and most diverse portfolio of design programmes in India, structured to promote interdisciplinary learning, technological integration, and real-world engagement.

WUD's academic model is grounded in a "campus without walls" philosophy that connects studio learning with industry, culture, and community. The University integrates advanced digital tools, fabrication facilities, and research-led pedagogy across its schools. Its emphasis on sustainability, social responsibility, and creative innovation is reflected in student projects, funded research initiatives, and international collaborations. WUD also publishes the Journal of Art, Architecture and Design (JAARD), which supports the dissemination of scholarly and practice-based research in the creative fields.

The World School of Planning and Architecture at WUD is committed to architectural education that is critically grounded in context. It approaches design as a cultural, environmental, and social act, rather than a purely technical exercise. The School emphasises place-based inquiry, material understanding, ecological responsibility, and human experience as central to architectural thinking.

At WSPA, quality of life is understood as emerging from the relationship between people, environment, and culture. Design education therefore begins with careful reading of site, community, climate, and history. Students are trained to develop architectural responses that are responsible, adaptive, and meaningful to the contexts in which they operate. Through this approach, the School seeks to prepare architects who are not only technically competent, but also ethically grounded and socially engaged.



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UX/UI Design of Online Learning Platforms for Gen Z Learners: A Post-2021 Global Review

Manpreet Kushwaha, Jay. Y. Patel

Generation Z learners, as digital natives, bring unique psychological traits—short attention spans, multitasking, preference for personalization, and a strong orientation toward interactivity—that shape their engagement with online education. This extended review paper analyses post-2021 evidence on UX/UI design in online learning platforms, synthesizing insights from both academic research and practitioner sources. A narrative thematic synthesis was conducted, coding for recurring design priorities and learner outcomes. The analysis identifies five core UX/UI factors critical to Gen Z engagement: (1) mobile-first and low-bandwidth optimization, (2) microlearning and modular content design, (3) gamification and instant feedback, (4) visual clarity and accessible information architecture, and (5) personalization via adaptive dashboards and analytics. Emerging technologies such as AI-driven personalization and AR/VR experiences are promising yet constrained by infrastructure in many contexts. Results indicate that UX/UI features supporting autonomy, competence, and relatedness, consistent with Self-Determination Theory, enhance the motivation, persistence, and learning outcomes of Gen Z learners. However, gaps remain: rigorous cross-cultural usability trials with Gen Z cohorts are scarce, geographic coverage of empirical studies is uneven, and much practical guidance comes from practitioner literature of variable methodological rigor. This review presents a conceptual framework that links Gen Z psychology to UX/UI strategies, offering practical design recommendations for inclusive, effective, and future-ready online learning platforms.

Keywords:

UX/UI Design, Generation Z, Educational Technology, Psychological Patterns, Cognitive Engagement, Indian EdTech

References:

- [1] Miya TK and Govender I 2022 UX/UI design of online learning platforms and their impact on learning Int J Res Bus Soc 11 2236.
- [2] Kashive N 2023. Understanding the antecedents of intention for using mobile learning Smart Learn Environ 10 12.
- [3] Tarhini A, Abbasi MS, Alalwan AA, Baabdullah AM, Algharabat RS and Shammout AB 2024. What drives the adoption of mobile learning services among college students: SEM-neural network modeling J Bus Res 181 113456.
- [4] Naveed QN, Qureshi MRN, Shaikh A, Alsayed AO, Ibrahim NA and Alghamdi AA 2023. Mobile learning in higher education: A systematic literature review Sustainability 15 13566.
- [5] Ghai A 2022 Analyzing the impact of aesthetic visual design on usability of e-learning [thesis]. Walden University.
- [6] Choudhary H and Pandita D 2023 Maximizing learning outcomes in the digital age: the role of microlearning for Gen Z Dev Learn Organ 37 5.
- [7] Shah FM, Bakri MZ and Bakrin S 2025 The role of microlearning in enhancing learning engagement among Gen Z students Int J Mod Educ [Internet]. Available from: <https://gaexcellence.com/ijmoe/article/view/5388>.
- [8] Laht J 2024 Designing fulfilling online learning experiences for Gen Z [master's thesis] Aalto University. Available from: <https://urn.fi/URN:NBN:fi:aalto-202406234683>.
- [9] Moldez C, Soriano C, David CC, et al. 2024 Innovation in education: developing and assessing gamification in the University of the Philippines Open University MOOCs arXiv preprint. Available from: <https://arxiv.org/abs/2409.03309>.
- [10] Figueroa RB Jr, et al. 2025 Integrating emerging technologies in virtual learning environments: a comparative study of perceived needs among open universities in Southeast Asia arXiv preprint. Available from: <https://arxiv.org/abs/2506.00922>.
- [11] Sumatra EJ 2025 Understanding Gen Z preferences for features of online learning platforms through conjoint analysis Eurasian J Manag Res [Internet]. Available from: <https://mtiformosapublisher.org/index.php/eajmr/article/view/120>.
- [12] Brodacz-Geier M and Jalilov A 20.

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Implications of Various Stimuli on Immersion, Perception, Understanding and Appreciation of Virtual Reality in Cultural Heritage

Sneha Maji, Akhil Das

As inherited history, most archaeological sites exhibit remarkable instances of ancient structures and objects from bygone cultural activities, a facet frequently acknowledged by contemporary civilisation. Visitors to these sites are typically provided with written materials and visual aids to enhance their comprehension of the exhibits. Recent technological advancements, including virtual reality (VR), have been pivotal in drawing increased visitor numbers and improving their experiences at cultural heritage sites. While audiovisual methods remain the primary answers in previous implementations and research, multisensory alternatives have surfaced, showing potential to improve user experiences in cultural heritage contexts. This study aims to evaluate the influence of various sensory conditions on the user's presence, enjoyment, knowledge, and perceived worth of the experience through the integration of visual, auditory, and olfactory stimuli. Regrettably, there has been sparse research regarding the interaction of various inputs in multisenses in virtual reality experiences centred on cultural heritage. The research was conducted at the Red Fort cultural heritage site in Old Delhi, India. Thirty participants were randomly allocated to one of five multisensory conditions: visual, visual plus auditory, visual plus olfactory, visual plus auditory plus olfactory, and a control condition termed None. For this study, the virtual reality prototype of Red Fort complex was developed in Metaverse platform. We observed that various stimuli exert distinct impacts on the examined variables; hence, their utilisation should be contingent upon the intended objectives. In accordance with the literature recommendations for assessing and analysing the sensation of presence in virtual reality environments, we incorporated ethnographic research into our study to evaluate behavioural presence. This qualitative method was employed alongside the offered questionnaires to enhance our comprehension of user's sentiments towards presence, as well as the dependent variables of enjoyment, knowledge, and value of the encounter. We assessed behavioural presence through direct observation of user reactions, exchanges, and enquiries that emerged during and after the event. The challenges of evaluating an outdoor multisensory system based on VR with end-users are vast. Previous literature does not provide solid guidelines to carry out the implementation and evaluation of a VR multisensory system for CH (cultural heritage) contexts. Therefore, the present work suggests a potential method to achieve this objective. This research aims to elucidate the advantages and disadvantages of employing various sensory inputs in immersive technology to generate authentic spatial experiences.

Keywords:

Sensory experience, immersion, virtual reality, cultural heritage, architecture pedagogy The corresponding author data must be written at the end of the abstract

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Impact of Immersive Product Display (AR) on Purchase Intention of Indian Consumers

Sweety Agarwal, Bhanu Pratap Maharatha

India saw a boom in e-commerce platforms during and after the Covid-19 pandemic, when numerous industries experienced losses and shutdowns during pandemic, e-commerce saw an opportunity and delivered necessary goods to the public while following health guidelines, earning public trust and confidence. Rapid and significant usage in mobile and internet accessibility along with more disposable income has led to increase in Indian e-commerce platforms valued at Rs. 10,82,875 crores (US\$125 billion) in FY24, is projected to grow to Rs. 29,88,735 crores (US\$345 billion) by FY30 (IBEF Report, 2024). The rapid growth of e-commerce platforms has led to numerous opportunities for retailers to enhance the user experience, brand loyalty, trust, and decision-making in a digital environment. One such opportunity is the use of “Augmented reality”, allowing users to experience the product sensorially and emotionally, helping reduce uncertainty and improve information about the product. AI plays a supportive role with the novel AI powered technologies (deep learning, and computer vision) which further enhances visual fidelity, personalized experience, accurate tracking, realism and further reducing cost and time for the platforms to build AR try on through these technologies. The Study focuses on the impact of AR on Indian consumers while the other mediators and variables are in interplay (mental imagery, perceived risk, perceived diagnostic, trust, perceived usefulness), which ultimately leads to the consumer making their decision (purchase intention) and adopt mixed research methodology, where starting with broader survey followed by a focus group experiment. The theoretical framework incorporates the Technology Acceptance Model (TAM), Stimulus– Organism–Response (SOR), and diagnostic models. Furthermore, how characteristics of AR (rich information, personalization, mobility, interactivity, connectivity) links to purchase intent especially in case of Indian consumers, where heterogeneous digital literacy, device capability, and intention to adopt novel technology differs significantly exists. Also analysing, how different presentation mode like video and static, comparing it with AR impact head on to understand which generate more purchase intent.

Keywords:

Augmented reality (AR), Interactive product display, Indian consumers, user experience, purchase intention, perceived risk

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AI-enabled Design Development - A Literature Review of the Technological Shift and Creative Documentation

Kakoli Talukdar

Amalgamation of AI in creative domains in recent times has given rise to unavoidable questions regarding originality, ownership and authorship across domains [1]. In art and architecture, as human participation is increasing day by day in usage of AI-driven generative tools during the process of design development or ideation, existing frameworks that govern creative ownership are failing to keep up with the new hierarchy of authorship [2]. This paper examines AI-enabled authorship as both a technological shift and a conceptual provocation, raising a debate upon the role and relationship of human input with the estimated output [3]. Thus, this literature review will synthesize recent research on design tools including generative design systems specifically AI generative tools and creative agencies that are used to visualise and create [4]. Also, how AI is reshaping authorship and the narration of creative documentation [3]. Studies from architectural practices across demonstrate that use of text-to-image and generative tools are increasingly embedded in the early-stages of ideation, in which the major role of the designer is to give prompts, which is creating a niche where prompting and getting an output from the generative models gives way to collaborative authorship [4]. Case studies highlight the fact that “distributed authorship” is a new phenomenon where authorship is shared by designers, coders, algorithms, and datasets who are involved in co-producing any such work which is an output of text-image process. Parallel work in law and policy reveals the inadequacy of the existing intellectual property frameworks—still premised on singular human authorship—is proving incompetent for such hybrid processes [5,6]. A comparative legal analyses and copyright office is needed to propose adaptive standards, collaborative measures and provenance-based documentation as pathways forward.

Keywords :

artificial intelligence, creative authorship, art and architecture

References:

- [1] Boden MA. Creativity and artificial intelligence. *Artif Intell.* 1998;103(1–2):347–56.
- [2] McCormack J, Gifford T, Brown A, et al. Ten questions concerning generative computer art. *Leonardo.* 2019;52(1):6–13.
- [3] Ratto M, Ree J. Distributed authorship and creative agency in AI art practices. *Design Studies.* 2023; 85:101146.
- [4] Alexander C, Davis M. Architectural design and machine learning: A review of emerging AI workflows. *Autom Constr.* 2022; 140:104379.
- [5] U.S. Copyright Office. *Copyright Registration Guidance: Works Containing AI-Generated Material.* Washington (DC): U.S. Copyright Office; 2023.
- [6] Samuelson P. AI authorship and copyright: Reconciling human creativity with machine outputs. *Harv J Law Technol.* 2024; 37(2):1–56.

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The Emotional and Behavioural Impact of Artificial Intelligence: A Research Proposal

A Bhattacharjee, SC Mittapally, S Kumar, L Singh, DL Xaxa

People feel, act, and relate socially. Recent global data show this tension clearly: 52% of respondents are excited about AI products, while a similar share report feeling nervous [1,2]. In India, 65% of respondents say they feel both excited and nervous simultaneously, a phenomenon Ipsos calls the “wonder and worry of AI” [2,3]. The primary objective of this study is to analyse how AI’s development impacts human emotions, especially the balance between feeling overwhelmed and feeling optimistic. Taking insights on Affective Computing Theory, AI is seen not just as a thinking tool but also as an emotional presence. It can evoke, enhance, or calm human feelings. The research also explores how AI-driven systems reshape everyday behaviours, decision-making, and social norms, particularly in communication and interpersonal interactions. We adopt a mixed-methods design using thematic analysis: large-scale surveys across varied demographics combined with in-depth interviews of regular AI users. Together they will yield quantitative and qualitative data on emotional responses, dependence on AI, changes in communication styles, and shifts in decision autonomy. Our findings will clarify the psychological and behavioural impact of AI, showing how it shapes learning, productivity, and social dynamics. These results can inform the design of AI systems, training for users, and policy frameworks. The goal is to support AI adoption that promotes positive emotional engagement while guarding against negative effects. In sum, this research aims to offer evidence-based guidance for integrating AI into education, work, and daily life with sensitivity to human experience.

Keywords:

Artificial Intelligence; Emotions; Decision-Making; Social Norms; Communication; Behavioural Impact

References:

- [1] Ipsos. Ipsos AI monitor 2025. Paris: Ipsos; 2025. p. 6. Available from: <https://www.ipsos.com/sites/default/files/ct/publication/documents/2025-06/Ipsos-AI-Monitor-2025.pdf>
- [2] Ipsos. Global AI survey across 31 countries. Paris: Ipsos; 2023. p. 4. Available from: <https://www.ipsos.com/sites/default/files/ct/news/documents/2023-07/Ipsos%20Global%20AI%202023%20Report%20-%20NZ%20Release%2019.07.2023.pdf>
- [3] Ipsos India. Indians both excited and nervous about AI in 2025: wonder and worry of AI. Indian Express [Internet]. 2025 Feb 25 [cited 2025 Sep 29]. Available from: <https://indianexpress.com/article/technology/tech-news-technology/indians-artificial-intelligence-google-ipsos-9159149/>
- [4] Wang X, Li H, Zhao Y and Chen J. How artificial intelligence affects the labour force. Front Public Health [Internet]. 2024 [cited 2025 Sep 29];12:10907740. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10907740/>
- [5] Babashahi L, Karami M, Alavi S and Nouri J. AI in the workplace: a systematic review of skill impacts. Sustainability [Internet]. 2024 [cited 2025 Sep 29];16(5):2119. Available from: <https://www.mdpi.com/>
- [6] Zhang Z, Liu Y and Huang W. The double-edged impact of generative artificial intelligence. J Mater Process Technol [Internet]. 2026 [cited 2025 Sep 29];312:117856. Available from: <https://www.sciencedirect.com/science/article/abs/pii/S1359644624003970>
- [7] Hagerty A and Rubinov I. Global AI ethics: a review of social impacts and ethical implications. arXiv [Preprint]. 2019 Jul [cited 2025 Sep 29]. Available from: <https://arxiv.org/abs/1907.07892>

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Inscribing Digital Futures: AI, AR/VR and the Re-imagination of Architectural Practice

Medha SS Sobti

The rapid adoption of artificial intelligence and immersive media is reshaping how architecture is produced, represented, and communicated. This paper reflects on Inscribe OPC, a practice-led initiative that brings together architectists, designers, and students on a digital platform designed to bridge the gap between education, professional practice, and public engagement. Through three case studies, the paper demonstrates how tools such as AI caption generators, automated portfolio builders, and AR/VR site simulations can extend architectural authorship beyond conventional modes of representation. Rather than replacing human imagination, these tools act as collaborators—translating design intent into narratives, immersive experiences, and cultural memory. For example, the deployment of AR/VR tours has enabled students to engage with construction sites remotely, while captioning and storytelling modules allow emerging practices to communicate their design ethos in accessible language to wider audiences. The research situates these experiments within ongoing debates on authorship, bias, and aesthetic agency in algorithmic design. It argues that the significance of such tools lies not in their novelty, but in their ability to democratize design knowledge, expand sensory experience, and make architectural culture more participatory. By documenting the successes and limitations of early deployments, this paper positions Inscribe as a living case study of how AI and immersive technologies can co-create aesthetic expression, while raising critical questions on ethics, pedagogy, and cultural specificity.

Keywords:

AI design, immersive media, authorship, democratization, architectural storytelling

References:

- [1] Carpo M. The second digital turn. Cambridge: MIT Press; 2017.
- [2] Oxman N. Material-based design computation. *Design Issues*. 2010;26(1):82–92.
- [3] Pallasmaa J. The eyes of the skin. London: Wiley; 2012.
- [4] Schnabel MA. Immersive digital environments in architectural education and practice. *Nexus Netw J*. 2011;13(1):43–58.

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Integrating AI into Architectural Practice: The Case of Prompt Engineering as a Tool

Nimisha Varghese, Ajai Chandran CK

The integration of artificial intelligence (AI) into architectural practice represents a paradigm shift in how design professionals approach creative and technical challenges. This paper examines the specific application of prompt engineering as a transformative tool within architectural workflows, analyzing its potential to enhance design efficiency, creativity, and collaboration. Through a comprehensive literature review and analysis of current AI implementation strategies, this study explores how prompt engineering techniques can be systematically integrated into various phases of architectural practice, from conceptual design to project delivery. The research identifies key opportunities and challenges associated with AI adoption in architecture, including the need for specialized training, ethical considerations, and the evolution of professional roles. Findings indicate that prompt engineering offers significant potential for improving design iteration speed, expanding creative possibilities, and facilitating better client communication through visual and textual AI outputs. However, successful integration requires careful consideration of professional standards, quality control measures, and the preservation of human creativity and judgment. The paper concludes with recommendations for architectural firms seeking to implement AI tools effectively, emphasizing the importance of strategic planning, staff development, and maintaining the balance between technological efficiency and design excellence. This research contributes to the growing body of knowledge on digital transformation in architecture and provides practical insights for practitioners navigating the evolving landscape of AI-enhanced design practice.

Keywords:

Artificial Intelligence, Generative AI, Prompt Engineering, Architectural Practice, Design Methodology, digital transformation.

References:

- [1] Tamke M, Nicholas P, Zwierzycki M. Machine learning for architectural design: Practices and infrastructure. *International Journal of Architectural Computing*. 2018 Jun;16(2):123–43.
- [2] Hurwitz J, Morris H, Sidner C, Kirsch D. *Augmented Intelligence*. CRC Press; 2019.
- [3] Soha Rawas. ChatGPT: Empowering lifelong learning in the digital age of higher education. *Education and Information Technologies*. 2023 Aug 9;29.
- [4] Ryan M, Stahl BC. Artificial intelligence ethics guidelines for developers and users: clarifying their content and normative implications. *Journal of Information, Communication and Ethics in Society*. 2020 Jun 10;19(1).

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Designing for Conversational Aesthetics: A Qualitative and Experimental Study of AI Bot Frameworks

Neelarnab Dutta

Conversational AI bots have emerged as a key interface in digital platforms, automating interactions to collect and disseminate information across websites and applications. Their development typically relies on natural language models trained on extensive datasets and libraries. While the technical pipeline for building such systems has become increasingly standardized, and a range of conversational user interface (CUI) design frameworks now support prototyping, a critical gap persists. Existing tools largely overlook the integration of natural human expression and conversational aesthetics—dimensions essential for designing interactions that feel intuitive, empathetic, and engaging [1,2]. This study adopts a three-phase methodology to address this gap. First, a systematic review of literature and existing systems was conducted to analyze the capabilities and limitations of current CUI language models and algorithms. Second, a focused group study with 18 English language experts was undertaken to identify design requirements for embedding human expression and conversational aesthetics into AI bots. Third, an experimental case [3] was developed using the widely adopted Rasa framework [4], incorporating the identified requirements, and subsequently evaluated through user testing. Findings from the evaluation reveal persistent challenges for CUI designers [5], particularly in achieving fluid, contextually sensitive, and aesthetically pleasing dialogue flows within current prototyping frameworks. The analysis highlights deficiencies in existing algorithms and toolkits when it comes to modeling naturalistic conversational dynamics. The study concludes by proposing directions for enhancing CUI development pipelines, with emphasis on algorithmic refinement and design integration that better capture the subtleties of human expression and conversational aesthetics. Such advancements are critical to advancing the next generation of conversational agents that move beyond functional automation toward more human-centered and expressive interaction design.

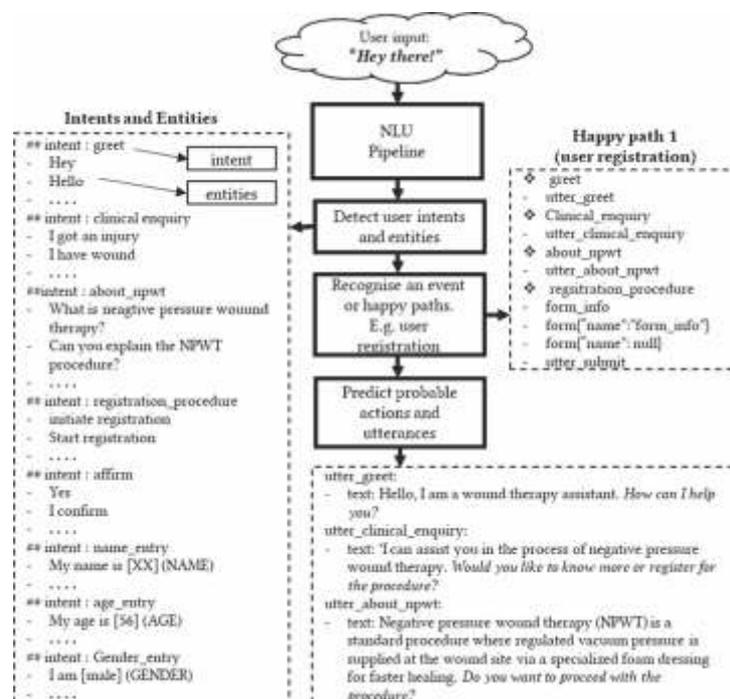


Figure 1: Conversational User Interface Design process

Keywords:

Conversational User Interface (CUI), Human-Centered AI, Conversational Aesthetics, Natural Language Processing (NLP), AI Bot Design Frameworks, Interaction Design.

References:

- [1] Wei C, Kim YH, Kuzminykh A. The Bot on Speaking Terms: The effects of conversation architecture on perceptions of conversational agents. In: Proceedings of the 5th ACM Conference on Conversational User Interfaces (CUI '23); 2023. p. 1–16.
- [2] Namvarpour M, Razi A. The Art of Talking Machines: A comprehensive literature review of conversational user interfaces. In: Proceedings of the 7th ACM Conference on Conversational User Interfaces (CUI '25); 2025. p. 45:1–45:18.
- [3] Haugeland IKF, Følstad A, Taylor C, Bjørkli CA. Understanding the user experience of customer service chatbots: An experimental study of chatbot interaction design. *International Journal of Human-Computer Studies*. 2022;161:102788.
- [4] Smutek T, Golec E, Rymarczyk P, Jarmuł M, Hernas A. Enhancing conversational AI with the Rasa framework: intent understanding and NLU pipeline optimization. *Journal of Modern Science*. 2024;57(Special Issue 3):531–548.
- [5] Kocaballi AB, Sezgin E, Clark L, Carroll JM, Huang Y, Huh-Yoo J, et al. Design and evaluation challenges of conversational agents in health care and well-being: selective review study. *Journal of Medical Internet Research*. 2022;24(11):e38525.

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When AI Designs: Implications for Industrial Design Practice, Pedagogy, and IP

Neelarnab Dutta

The growing integration of AI-driven generative design and rendering tools in CAD platforms is reshaping industrial design practice and education. Generative design algorithms now automate form exploration within defined constraints, while AI-based rendering systems can rapidly transform rough sketches into photorealistic 3D outputs without requiring advanced CAD expertise. These capabilities reduce the cognitive and technical load on designers, streamlining design analysis, creation, and visualization [1][2]. However, such automation also raises concerns: it may erode traditional ideation and problem-solving skills among novice designers, and challenge the significance of intellectual property protection in industrial design [3][4][5]. This qualitative study explores how industry and academia perceive and adapt to AI-based design tools. Thirty-three experts from both domains were interviewed to capture opportunities, risks, and adoption strategies. The transcripts were thematically analyzed, with validation from three independent qualitative design research specialists. The findings highlight a dual narrative: while AI enhances efficiency, inclusivity, and accessibility in design processes, it also creates challenges around originality, authorship, and the cultivation of core design thinking skills. Based on these insights, the study proposes a conceptual model outlining how AI adoption influences design pedagogy and its transition into professional practice. The model maps interconnections between technological capabilities, pedagogical strategies, and industrial requirements, while also addressing the emerging gaps in IP frameworks in the era of generative AI. By situating AI adoption within a broader socio-technical context, the study provides actionable directions for rethinking design education, balancing automation with human creativity, and safeguarding industrial design innovation in the future.

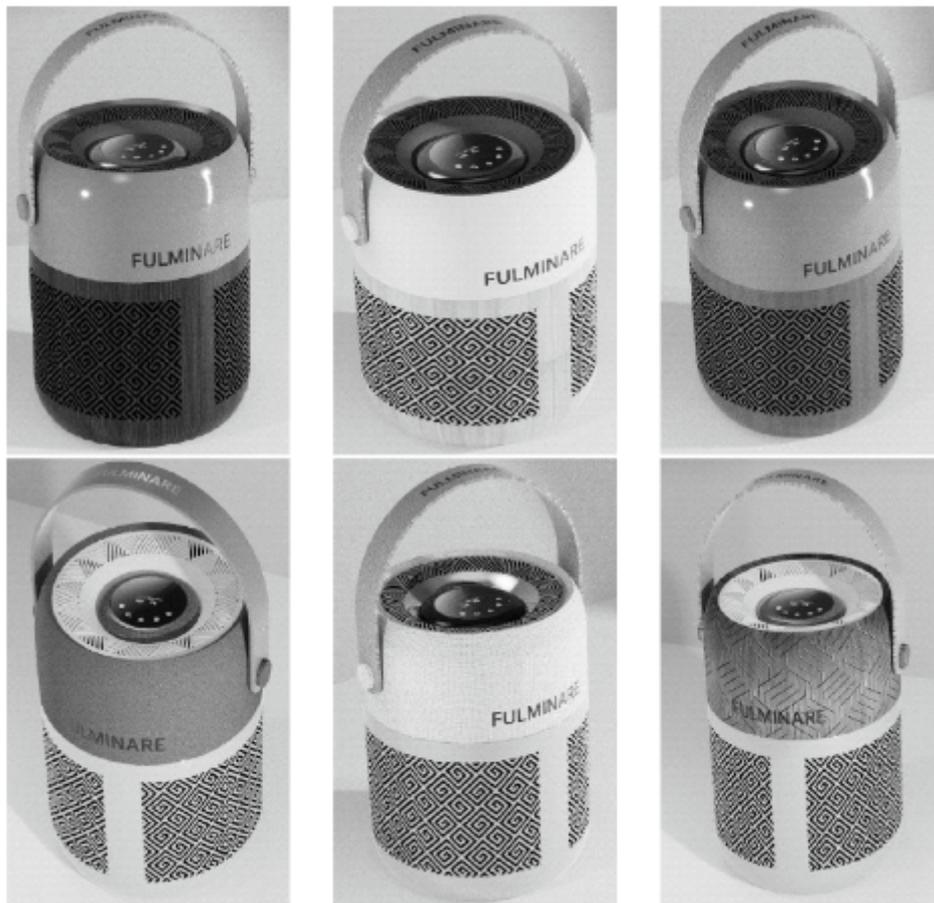


Figure 1: Example CMF Design carried out using Generative AI tool

Keywords:

Generative Artificial Intelligence, Industrial Design Pedagogy, Design Practice and Creativity, Design Thinking and Automation, Intellectual Property (IP) Frameworks, Qualitative Design Research.

References:

- [1] Choudhury MM, Eisenbart B, Kuys B. Artificial intelligence in the design process - a review and analysis on generative AI perspectives. *Proceedings of the Design Society: ICED 2025*. 2025;5:631–640
- [2] Peckham O, Raines J, Bultink E, Goudswaard M, Gopsill J, Barton D, et al. Artificial Intelligence in Generative Design: A Structured Review of Trends and Opportunities in Techniques and Applications. *Designs*. 2025;9(4):79.
- [3] Bartlett KA, Camba JD. Generative Artificial Intelligence in Product Design Education: Navigating Concerns of Originality and Ethics. *Int J Interact Multimed Artif Intell*. 2024;8(5):55–64
- [4] Rodriguez-Ferradas MI, Ballerini-Fernandes T, Morer-Camo P. Enhancing industrial design education: the impact of generative AI tools on mastering creativity techniques. *Proceedings of the International Conference on Engineering and Product Design Education (E&PDE 2025)*. 2025; p. 319–324
- [5] Al-Busaidi AS, Raman R, Hughes L, Albashrawi MA, Malik T, Dwivedi YK, et al. Redefining boundaries in innovation and knowledge domains: Investigating the impact of generative artificial intelligence on copyright and intellectual property rights. *J Innov Knowl*. 2024;9(4):100630

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Designing for Immersive Learning: An AR-based Experience on Human Anatomy for Learners and Educators

Monika, Ritika Raj

This project integrates Augmented Reality (AR) with an educational book on human anatomy to create a highly interactive and immersive learning experience. By combining the tangible experience of a physical book with the dynamic capabilities of AR, users can explore detailed 3D models of anatomical structures, such as skeletal, muscular, and other systems, while accessing in-depth information about each part. The AR experience allows users to rotate, zoom, and interact with models in real time, enhancing comprehension. To further engage learners, gamified elements like quizzes, challenges, and rewards are included, making the process both enjoyable and educational. The project focuses on specific body parts to maintain clarity and depth and is designed as a standalone AR-enabled book, transforming traditional methods into a visually rich and accessible learning tool for students and educators.

Keywords:

Augmented reality, education, 3D models, immersive learning.

References:

- [1] Azuma, R.T. (1997) 'A survey of augmented reality', *Presence: Teleoperators and Virtual Environments*, 6(4), pp. 355–385. Available at: <https://doi.org/10.1162/pres.1997.6.4.355>.
- [2] Chen, Y.C., Hsu, Y.L. and Lin, Y.H. (2020) 'The application of augmented reality in anatomy education: A review of empirical studies', *Medical Education*, 54(8), pp. 714–722. Available at: <https://doi.org/10.1111/medu.14185>.
- [3] Moro, C., Štromberga, Z., Raikos, A. and Stirling, A. (2017) 'The effectiveness of virtual and augmented reality in health sciences and medical anatomy', *Anatomical Sciences Education*, 10(6), pp. 549–559. Available at: <https://doi.org/10.1002/ase.1696>.
- [4] Kamphuis, C., Barsom, E.Z., Schijven, M.P. and Christoph, N. (2014) 'Augmented reality in medical education?', *Perspectives on Medical Education*, 3(4), pp. 300–311. Available at: <https://doi.org/10.1007/s40037-013-0107-7>.
- [5] Bacca, J., Baldiris, S., Fabregat, R., Graf, S. and Kinshuk (2014) 'Augmented reality trends in education: A systematic review of research and applications', *Educational Technology & Society*, 17(4), pp. 133–149. Available at: <http://www.jstor.org/stable/jeductechsoci.17.4.133>.
- [6] Yuen, S. C., Yaoyuneyong, G., & Johnson, E. (2011). Augmented Reality: An Overview and Five Directions for AR in Education. *Journal of Educational Technology Development and Exchange (JETDE)*, 4(1). <https://doi.org/10.18785/jetde.0401.10>

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MaRoop: A Participatory Augmented Reality Installation for Cultural Immersion and Community Engagement

Veda Arvind, Anoop Saxena

This study presents MaRoop, an interactive augmented reality (AR) installation designed to enhance community engagement and cultural participation during Navratri celebrations at Durga Puja pandals [4]. The project explores how immersive digital environments can reframe traditional rituals as participatory experiences, enabling visitors to embody cultural and spiritual icons through technology-mediated interaction [1]. By integrating real-time face-tracking AR with responsive soundscapes, the installation allows participants to visualize themselves adorned with Ma Durga's ornate mukut, while traditional instruments such as drums and conch shells respond dynamically to their presence. The research investigates the potential of digital design as a tool for sustaining and evolving cultural traditions through embodied participation [5]. Unlike earlier approaches that focus on static documentation or virtual reproductions, this work transforms heritage into a living, interactive experience where visitors become active co-creators. Through this participatory engagement, the installation bridges ritual, performance, and digital art, merging the sacred with the contemporary to create a multisensory space of devotion and play [2]. The prototype demonstrates how augmented reality can deepen cultural empathy, fostering both spiritual reflection and collective joy [3]. User observations revealed heightened engagement, emotional connection, and a sense of belonging among participants. The findings contribute new design knowledge on the use of interactive media for heritage interpretation, suggesting that immersive technologies can move beyond visualization toward co-creation and emotional resonance. For the design community, MaRoop exemplifies how digital innovation can enrich cultural sustainability by connecting people to their traditions through sensory, participatory, and inclusive design strategies. Future research will explore scalability across diverse festivals, adaptive soundscapes, and AI-based personalization to extend this framework toward globally shared yet locally rooted cultural experiences.



Figure 1: Outcome of MaRoop AR installation

Keywords:

Augmented Reality; Community Engagement; Cultural Heritage Design; Participatory Interaction; Immersive Experience; Multisensory Design; Digital Ritual.

References:

- [1] Nikolarakis A, Koutsabasis P. Mobile AR Interaction Design Patterns for Storytelling in Cultural Heritage: A Systematic Review. *Multimodal Technol Interact*. 2024;8(6):52.
- [2] Eagle R. Multisensory Ethnography Through Emplaced Augmented Reality. *Anthrovision*. 2020;8(2):1–18.
- [3] Wu Y, Li Y, Ch'ng E, Gao J, Hong T, et al. KaiBiLi: Gesture-based Immersive Virtual Reality Ceremony for Traditional Chinese Cultural Activities. *Visual Comput Ind Biomed Art*. 2025;8:24.
- [4] Wang Y, Lin Y-S. Public Participation in Urban Design with Augmented Reality Technology Based on Indicator Evaluation. *Front Virtual Real*. 2023;4:1071355.
- [5] Chatsiopoulou A, Michailidis P. Augmented Reality in Cultural Heritage: A Narrative Review of Design, Development and Evaluation Approaches. *Heritage*. 2023;8(10):421.

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AI and Design Education: A Critical Approach to Understand the Challenges Faced by Pedagogues

Neha Singh, Priyanka Gupta

In today's 21st-century era, where the younger generation is becoming more advanced, even children as young as 4–5 years old are technologically savvy and often understand digital modes better than conventional teaching methods and skill development practices. Teaching approaches have drastically shifted toward digital games and digital explanations of concepts, which add value and clarity to understanding but also stop young minds from using and challenging their brain cells. However, this shift is slowly becoming a source of concern and even a threat for educators. Kees Dorst, 2003, stated that Design is closely related to creativity because creativity involves generation and realization of new ideas and optimal problem-solving strategies. Design schools and colleges are not far removed from either the threats or the potential benefits of AI usage. Among budding designers, fear is rapidly growing about the role that creativity and the human mind will play in the design fields in the future. Moreover, the role of educators has increased drastically in handling these new learners. The design curriculum, which has always been based on critical thinking and practicality, is now being challenged by AI tools. On one hand, AI is used as a quick platform for completing tasks, but on the other hand, it is slowly hindering the human mind from putting thoughts together. Major challenges are arising in the evaluation of work, authenticity of outcomes, creative blockages, and more. Today, students often need help even to find keywords on AI or digital platforms before they can begin developing ideas or concepts. Design search engines have created such vast availability of pictures, products, and concepts that there is hardly any scope left to challenge the brain. This has led to a decline in self-awareness and sensitivity towards one's surroundings. As a result, observation skills have drastically reduced." In one of the research paper by Hye Kyung Lee, 2022 it is mentioned that artificial intelligence has begun to flourish and, with its applications in diverse fields, has been gradually replacing many creative and labor-intensive tasks Pitts, 2022 also stated that Creative and artistic services render products different meanings. Creative labor is often difficult to measure, which can lead to designers being undervalued. This research paper focuses on the challenges faced by pedagogues in design colleges in creating a balance between creativity and AI platforms. To identify these challenges, interviews, observations, and questionnaires will be used as analytical tools. To gain a better understanding, the research methods will be applied to both educators and students. The random sampling method will be used for data collection. The research will help identify the gaps in the current pedagogy and curriculum in relation to AI platforms and will also suggest possible solutions.

Keywords:

Artificial intelligence, Design Education, Design Curriculum, AI Platforms and Tools.

References:

- [1] Kees Dorst. 2003. Understanding design: 150 reflections on being a designer. Amsterdam: BIS Publishers.
- [2] Hye Kyung Lee. 2022. Rethinking creativity: creative industries, AI and everyday creativity. *Media Culture & Society* 44(3), 601-612, DOI: 10.1177/01634437221077009.
- [3] Frederick Harry Pitts. 2022. Measuring and managing creative labour: Value struggles and billable hours in the creative industries. *Organization* 29(6), 1081-1098, DOI: 10.1177/1350508420968187.

Note:

An AI-assisted tool was employed to review grammar and sentence structure. The substantive content and scholarly contributions are entirely the work of the author(s).

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The Mindful Matrix - Operationalizing Intentionality in Design Practice: A Practice-based Framework for Balancing Ethics, Strategy, and Environments

Khushi Purohit

Intentional, transparent, and balanced decisions across competing priorities. Developed through academic inquiry at the National Institute of Design (NID) and professional practice with Future Research Design Company (FRDC), the framework addresses persistent tensions between functionality, feasibility, sustainability, aesthetics, ethics, inclusivity, and strategic demands in design projects. The Mindful Matrix consists of ten dimensions—Context, Human-centredness, Functionality, Collaboration, Sustainability, Aesthetics, Feasibility, Ethics, System Awareness, and Inclusivity—arranged as a decagonal radar chart. Designers map projects on a 1–10 scale across each axis to visualize balance and identify underrepresented dimensions. The tool is non-prescriptive, functioning as a reflective instrument to surface trade-offs and make design choices deliberate and defensible. Methodologically, the research combines reflexive analysis, artifact tracing, and stakeholder dialogues. Academic and professional projects were analyzed to reveal how decisions privilege certain dimensions, while participatory discussions tested the Matrix’s communicative and evaluative value. Applied across three case contexts, a retail brand redesign, an urban pavilion, and a maritime museum concept the Matrix demonstrated its capacity to highlight imbalances (such as strong feasibility but weak inclusivity), guide reallocation of priorities, and improve stakeholder communication.

The framework contributes to design at three levels:

Practice: as a compact tool for reflective decision-making and client alignment.

Education: as a scaffold for critique and evaluation in design learning.

Strategy: as a means to integrate ethical, sustainable, and systemic priorities into business and design management.

By translating mindful design principles into a visual and repeatable method, the Mindful Matrix operationalizes intentionality, enabling designers to navigate complexity and pursue outcomes that are ethical, feasible, sustainable, and human-centred.

Keywords:

Mindful Design, Mindful Matrix, Design Principles, Design Practice, Holistic Design

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Bhotiya Folk Narratives and Tibetan Art: A Semiotic Framework for Understanding Cultural Appropriation

Nikita Nagar, Neha Singh

Textiles, beyond their materiality, operate as cultural texts that preserve collective memory, identity, and narratives. The Bhotiya tribe of Uttarakhand represents a community where weaving traditions are deeply embedded with symbolic meanings that risk being marginalized under pressures of modernization and globalization. This research addresses the problem of cultural erosion by examining how Bhotiya textiles function as semiotic systems and carriers of folk narratives, while also exploring their potential relevance in contemporary cultural and commercial contexts. The study aims to document and interpret Bhotiya weaving traditions through the lens of semiotics, with a focus on motifs, colours, and patterns as carriers of cultural meaning (1). Materials for the study include field documentation, visual analysis of textile samples, oral histories from Bhotiya weavers, and comparative references to Tibetan art influences (2). Methods combine qualitative ethnography, semiotic analysis, and cultural interpretation to decode symbolic narratives embedded in woven forms. Primary findings indicate that Himalayan textiles (Bhotiya and Kinnaura tribes) encode themes of spirituality, ecology, migration, and resilience, thereby acting as storytelling media that safeguard intangible heritage. The results also suggest that younger generations and global audiences resonate with these meaning-driven narratives, providing opportunities for positioning Bhotiya and Kinnaura textiles as cultural ambassadors rather than commodified artifacts. The discussion highlights how semiotic interpretation not only deepens academic understanding but also supports strategies for cultural preservation and market adaptation. In conclusion, Bhotiya weaving traditions exemplify how material culture can sustain living archives that bridge the past with the future, while offering pathways for economic viability through meaning-driven storytelling. Literature on textile semiotics, cultural sustainability, and heritage marketing frames this study within broader discourses of design, identity, and cultural continuity.

Keywords:

Bhotiya textiles, semiotics, cultural appropriation, storytelling, heritage preservation, Tibetan art

References:

- [1] Beer, Robert. *The Encyclopedia of Tibetan Symbols and Motifs*. 1st. Boston : Shambhala Publications, Inc. Horticultural hall, 300 Massachusetts Avenue Boston, 02115, 1999.
- [2] Understanding and Clarifying the term 'Bhutia'. Bhutia, Karma Samten. 10, Mangshila, North Sikkim : *International Journal of Humanities and Social Science Invention (IJHSSI)*, 2024, Vol. 13. 2319 – 7722.

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From Data to Culture: Embedding Cultural Frameworks in the Digital Documentation of Historic Post Offices in the UK

*Xiaolu Wang, Rowan Bailey, Nic Clear, Shaleen Sharma, Sanjay Gupta
Rajat Verma, Arzoo Kadian*

Digital documentation of historic buildings through 3D scanning and photogrammetry has been a mainstream practice for over three decades. The digitization of cultural heritage has progressively expanded beyond architectural documentation and conservation to include people-centred engagement and cultural interpretation [1] [2] [3]. While digital capture techniques such as 3D scanning and photogrammetry have become standard tools in heritage documentation, the question of how these technologies can transcend purely technical outputs and be meaningfully embedded within cultural frameworks remains in its early stages. There is a growing body of scholarship that addresses the integration of cultural context, local voices, community engagement, ethical critique, and the role of artificial intelligence in shaping digital models-such as 3D scans and photogrammetric outputs [4] [5] [6] [7] [8] [9]. Nevertheless, existing approaches, though evolving, are often fragmented, highly case-specific, and largely experimental. This paper therefore seeks to contribute to the practices by extending the discourse beyond technical outputs, foregrounding the cultural frameworks within which digital heritage work is situated. Focusing on selected historic Post Office buildings in the UK, the study investigates how digital tools, and their outputs can be effectively used to support local voices and community values embedded in Post Office culture heritage. This paper therefore argues that the focus of architectural data capture should be methodologically defined in advance of data collection, ensuring alignment with culturally informed frameworks. Furthermore, it contends that the resulting visual outputs-should be creatively and flexibly integrated with other cultural elements to support interpretation and engagement goals. By adopting this approach, the paper highlights the importance of predefining data capture strategies and embedding the resulting digital models within a more effective cultural heritage framework.

Acknowledgments;

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Keywords:

3D scanning, photogrammetry, architectural heritage, cultural framework, digital heritage.

References:

- [1] Remondino, Fabio 2011 J. Heritage Recording and 3D Modeling with Photogrammetry and 3D Scanning. *Remote Sensing* 3, no. 6, pp 1104-1138.
- [2] Hanke, K and Grussenmeyer, P 2002 J. Architectural photogrammetry: basic theory, procedures, tools. In *ISPRS Commission, Vol. 5*, pp 1-2. UK: Taylor & Francis Abington.
- [3] Xing, Y, Yang, S, Fahy, C, Harwood, T and Shell, J 2025 J. Capturing the Past, Shaping the Future: A Scoping Review of Photogrammetry in Cultural Building Heritage. *Electronics*, 14(18), p 3666.
- [4] Stylianidis, E 2025 J. Ethics and Responsibility. In *Exploring the Ethical Dimension in Recording and Documenting Cultural Heritage*, pp 89-104. Cham: Springer Nature Switzerland.
- [5] Yu, Y, Raed, A A, Peng, Y, Pottgiesser, U, Verbree, E and van Oosterom, P 2025 J. How digital technologies have been applied for architectural heritage risk management: a systemic literature review from 2014 to 2024. *Heritage Science*, 13(1), p 45.
- [6] Roggio, D S, Shokrollahi, S, Forte, A and Bitelli, G 2025 J. Exploring Historical Changes to Architectural Heritage Through Reality-Based 3D Modeling and Virtual Reality: A Case Study. *ISPRS International Journal of Geo-Information*, 14(9), p 353.
- [7] Saipi, S 2025 J. Digitizing the Past: The Role of Photogrammetry in Architectural Heritage Conservation. *Journal of Balkan Architecture (JBA)*, 1(2), pp 93-105.
- [8] Haddad, N A 2025 J. Insight on 3D virtual reconstruction of architectural and archaeological cultural

heritage: Critical assessment, comprehensive guidelines, and recommendations. *Studies in Conservation*, pp1-20.

- [9] Lucchi, E 2025 J. Digital twins, artificial intelligence and immersive technologies for heritage preservation and cultural tourism in smart cities. In *Digital Twin, Blockchain, and Sensor Networks in the Healthy and Mobile City* (pp 507-520). Elsevier.

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Reviving Urban Imageability: An Ethnographic Framework for Preserving Indian Cities' Unique Identities

Chandni Tandon, Charu Monga

Indian cities are well-known for their diversity, rich histories, and unique architectural styles. Each city has its own imageability, which is the ability to be remembered, recognized, and appreciated through its culture, architecture, and everyday practices. However, rapid urban growth and uniform development threaten this uniqueness, leading to a gradual loss of urban identity [1]. This research highlights the urgent need to protect and revive the imageability of Indian cities by treating it as an important heritage that needs careful preservation [2]. The study suggests the ethnographic methodology which allows for close engagement with the lived experiences of people, capturing the architecture styles, everyday practices, movements, and interactions that shape these spaces. By observing streets as dynamic social and cultural environments, the approach uncovers subtle cues often overlooked in purely spatial or statistical studies. This methodology therefore provides deeper insights into how architectural forms and street designs resonate with local identities and collective memory. The framework creates a shared vision that reflects local materials, vernacular practices, traditions, and cultural values. The research focuses on the importance of collective stories, visual elements, and architectural features in keeping the uniqueness of a place while also meeting modern needs [3]. The paper presents a conceptual framework that combines ethnographic methodology with heritage-sensitive urban contextual practices, offering strategies for designers and policymakers to preserve the visual and cultural identity of cities [4]. By examining case studies of diverse areas, streets, and cities, this study offers a comparative analysis grounded in ethnographic observation [5], [6], [7], demonstrating how each street articulates its own spatial language and how every city reflects a distinct architectural style that differentiates it from others. Ultimately, this work argues that maintaining the imageability of cities is crucial for sustaining India's diverse cultural identity. It suggests a scalable model for incorporating ethnographic practices into future urban projects.

Keywords:

Imageability, Ethnography, Urban Identity, Intangible Heritage, Indian Cities

References:

- [1] L. J. McCunn and R. Gifford, "Spatial navigation and place imageability in sense of place," *Cities*, vol. 74, pp. 208–218, Apr. 2018, doi: 10.1016/j.cities.2017.12.006.
- [2] S. Dellantonio, R. Job, and C. Mulatti, "Imageability: Now you see it again (albeit in a different form)," 2014, *Frontiers Media SA*. doi: 10.3389/fpsyg.2014.00279.
- [3] J. Ernawati, "Imageability of a Historic Street and Its Influence on People Preference," 2020.
- [4] B. Andrade, R. Morais, and E. S. de Lima, "The Personality of Visual Elements: A Framework for the Development of Visual Identity Based on Brand Personality Dimensions," *International Journal of Visual Design*, vol. 18, no. 1, pp. 67–98, 2024, doi: 10.18848/2325-1581/CGP/v18i01/67-98.
- [5] Yadav Vishek and Sengupta K., "Imageability Analysis of Contemporary Indian Cities Gurugram," *International Research Journal of Engineering and Technology (IRJET)*, vol. Vol 08, Issue: 10, no. Issue 10, pp. 1–8, Oct. 2021.
- [6] M. F. Jawaid, A. Kumar, M. F. Jawaid, and S. Pipralia, "Exploring the Imageability of Walled City Jaipur," *Article in Journal of Engineering Technology*, 2014, doi: 10.5176/2251-3701_4.1.171.
- [7] Dr. Swamy Chidambara and Dr. Shankar B., "Policy Measures for Improving the Imageability in the City of Mysore," *International Journal of Modern Engineering Research (IJMER)*, vol. Vol.2, Issue.2, no. Issue 2, Mar. 2012.

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Life-Centric Design: Towards An Ontological Redefinition through Evolutionary Ethics

Lalit Kumar Das

The central research problem this paper addresses is the lack of an ontological grounding of design that ensures its ethical orientation. While the trajectory of design thought has progressed from craft to industrial design, and from human-centered to sustainability-focused approaches, contemporary practice remains reactive and fragmented. The aim of this research is to propose a life-centric framework for design, grounded in the ethics observed in the evolution of life on Earth. The method adopted is a comparative discourse analysis: first, tracing the historical evolution of design paradigms, and second, juxtaposing these with the systemic principles evident in biological evolution. Evolutionary processes are examined as “materials of inquiry,” focusing on how nature deploys material, energy, information, space, and time (MEIST) with frugality, guided by the inherent propensities of natural laws—gravity, diffusion, pressure gradients, electromagnetism, and quantum effects. This methodological lens reveals evolution’s strategies of cyclicality, symbiosis, care for the vulnerable, and aesthetics through fractal geometries. The results of this inquiry suggest that evolution demonstrates prolific creativity without resource depletion or environmental toxicity. By contrast, human design in the Anthropocene has often been extractive, linear, and unsustainable. The discussion explores how adopting evolutionary ethics as a design template enables a redefinition of design: not as consumption-driven problem-solving, but as life-supporting creativity aligned with ambient conditions. The conclusion is that design, ontologically understood as life-centric, becomes inherently ethical, regenerative, and abundant—capable of guiding human futures, from circular economies on Earth to sustainable multi-planetary habitats. Indicative literature includes Lalit Das’s TED X talk ‘Values that shape Complex Systems, Victor Papanek’s Design for the Real World, Janine Benyus’ Biomimicry, and recent discourse on planetary design and regenerative futures.

Keywords:

Life-centric design, Evolutionary ethics, Ontology of design, Biomimicry and regeneration, Frugality of resources (MEST: matter, energy, space, time), Laws of nature in design

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Exploring the Program as a Catalyst for Heritage and Community Revitalization: A Pedagogical Inquiry in Spatial Design and Experiences

Sangramsinh Parmar

This inquiry emerged from the need to understand the design process adopted by students and faculty involved in the higher education domains of design of built environments – while looking at heritage sites. How we teach the re-design / retrofit of heritage structures in distinct communities plays a very important role in how our future architects and interior designers will approach such projects. The typical approach of looking at ‘adaptive re-use’ projects housed in ‘heritage’ buildings and sites has often resulted in inert, non-localized and inactive projects that do not do justice to the potential of the heritage site or the community within which it resides. Over the years, design education has also looked at ‘adaptive re-use’ through a very restrictive and narrow lens – often constrained by the strict regulations applicable to ‘graded’ buildings. However, with changing times and attitudes amongst local communities and this realization amongst design educators and learners, various design institutes across India are now re-looking at how communities and their heritage structures can be re-imagined for the contemporary times, not just as ‘spaces’ but also as ‘experiences’. The shift in focus from static architectural space to dynamic human experience is definitively articulated by Fred Scott, a key figure in interventional design theory - "*Change of use almost always requires spatial and physical changes. [...] most alteration occurs as a result of changes of use; this is the source of the new life of the building.*" [1] The intention to "re-vitalize such projects by the choice of activities" aligns with Scott's view that adaptive reuse should adopt a proactive stance toward the existing environment. Scott advocates for a transition away from what he terms the "*scarifying process of conservation*" toward a "*progressive, or even transgressive, attitude of adaptation*". [1] This study looks at design studio courses of semester 7 in an undergraduate program of Space Design to identify how students have been able to use community study and participation to generate interesting and relevant programmatic interventions in heritage sites. The intention of such a study is to highlight how a change in pedagogy can bring about a different approach of looking towards a heritage site and the community around it. Even without infringing upon the set rules and guidelines for heritage structures, one could re-vitalize such projects by the choice of activities that happen there. The program becomes a key catalyst in the regeneration of the project and the entire process is community-centric and heavily dependent on community participation. The study will use the documentation, inputs and deliverables from multiple studio exercises from Space Design Studios done in 2024 and 2025 at the Space Design program of School of Design, Anant National University.

Keywords:

Built heritage, intangible heritage, adaptive re-use, community, co-creation, participation, space design, architecture, re-vitalization, regeneration.

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References:

[1] Scott, F 2007 *On Altering Architecture* (Routledge ISBN 9780415317528) p 12, 15.

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The Ship of Theseus Paradox as a Creative and Proactive Approach to Sustainable Design Assisted by AI

Plavilayil John Varghese

The Ship of Theseus paradox, a longstanding philosophical riddle questioning whether an object that has all its components replaced remains fundamentally the same, provides a provocative lens for rethinking sustainable design practices. This paper explores how the paradox can serve as a creative and proactive approach to design process and pedagogy, particularly in the context of upcycling and iterative material transformation, when supported by artificial intelligence (AI). A micro-experiment was conducted with six students drawn from varied disciplinary backgrounds—four from business studies and two from user interface/user experience design—tasked with transforming discarded garments into new products. Over a six-day design sprint, participants were asked to select two or more out-of-use garments and, through an iterative process of replacing, removing, and incorporating parts, arrive at either a redesigned garment or a completely different product. AI played a dual role in the experiment: first, as a rapid knowledge enabler, bringing participants up to date on sustainability concepts and frameworks; second, as a creative partner, supporting ideation and brainstorming sessions. In addition, At the conclusion, each participant produced a finished product that differed substantially from the original garments. Reflections revealed diverse interpretations of continuity and transformation. Some considered their outcomes as extended iterations of the original garment, others described their work as hybrid chimeras blending multiple identities, while still others regarded the final artifact as an entirely new entity. This spectrum of perception underscores how paradoxical thinking can destabilize conventional boundaries of “reuse” and open broader avenues for creativity in sustainability practices. Beyond material outcomes, the project also facilitated cross-disciplinary learning, enabling business students to engage with materiality and design processes, while UI/UX participants explored philosophical and narrative aspects of identity embedded in objects. The experiment demonstrates that integrating the Ship of Theseus paradox into design education creates a unique space where philosophy, creativity, and sustainability intersect. AI, when used as both an accelerant for learning and a reflective design companion, enriched the process by ensuring that participants, despite their varied disciplinary backgrounds, could engage meaningfully within a short timeframe. This approach positions paradox not as an obstacle but as a productive framework to reimagine sustainable design, where questions of identity, authorship, and transformation converge with material practice. In conclusion, the study suggests that paradox-driven, AI-assisted design exercises can foster deeper critical engagement with sustainability beyond technical efficiency and explores open ended deign futures . Taking these forward . further explorations could extend the experiment to larger cohorts, longer project durations, and more sophisticated AI integration, offering new insights into how design education can meaningfully respond to the challenges of sustainability.

Keywords:

Pre-emptive Design, AI in Design, Sustainability, Continuity and change, multidisciplinary fashion and textile pedagogy.

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References:

- [1] Benade L, Jackson M 2020 Design, Education and Pedagogy. New York: (Routledge;Paperback).
- [2] Tovey M 2015 Design Pedagogy: Developments in Art and Design Education New York: (Routledge; Paperback)
- [3] Orr S, Shreeve A 2015 Art and Design Pedagogy in Higher Education: Knowledge, Values and Ambiguity in the Creative Curriculum. London, (Routledge)
- [4] Klein A 2018 Victor Papanek: The Politics of Design Weil am Rhein, Germany (Vitra Design Museum)
- [5] Margolin V. World History of Design: Prehistoric Times to World War I London, Bloomsbury Academic ISBN: 9781350012721
- [6] Penty J. Product Design and Sustainability: Strategies, Tools and Practice London Routledge 2020 ISBN 9781138301986

- [7] Katiyar VS, Mehta S. Design Education: Tradition and Modernity (Scholastic Papers from the International Conference, DETM 05) Ahmedabad, | Exotic India Art 2007 ISBN: 8186199578
- [8] Brown VA, Harris JA, Russell JY. Tackling Wicked Problems Through the Transdisciplinary Imagination. Washington, DC, USA Earthscan 2010 ISBN 9781844079247
- [9] Shreeve, A. Signature pedagogies in Design. In M. Tovey (Ed.), Design pedagogy: Developments in art and design. London, New York: (2015). Routledge.
- [10] Shulman, Pedagogies of uncertainty. Liberal Education, . (2005a). Spring, 18-25.
- [11] Kahneman D. Thinking, Fast and Slow. 1st ed. New York: Farrar, Straus and Giroux; 2011.
- [12] 2.Adobe. AI and Learning Design: Transforming Education [Internet]. 2024 Jun [cited 2024 Aug 16]. Available from: <https://elearning.adobe.com/2024/06/ai-and-learning-design-transforming-education/>

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Post Office Cultures: Using Place-based Creative Methods with Communities

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Rajat Verma, Arzoo Kadian*

The Post Office Cultures project, funded by the Arts and Humanities Research Council (AHRC), investigates the cultural heritage of post office buildings as sites of social memory, infrastructure, and belonging. Delivered in partnership with the University of Huddersfield, World University of Design, The Postal Museum, Kirklees Council, Radio Sangam, INTACH (India), and collaborating artists and students, the project employs place-based creative methods to explore how post office buildings function as anchors of local history, migration, and community attachment. In line with Cara Courage's (2021) work on placemaking, the project situates creative practice as a catalyst for reimagining infrastructures of everyday life as spaces of cultural belonging, particularly for communities whose stories of migration are bound up with these buildings [1]. We will present a selection of methods, designed to engage communities in telling stories about place. Approaches include postcard elicitation and letter writing, podcast and radio broadcasting, sonic postcards, oral history, citizen scanning, and community curation. Echoing Ward, Banks, Hart and Pahl's (2018) reflections on co-producing research with communities, these practices expand opportunities for people to reflect on personal and collective connections with post office buildings while co-producing narratives that situate them within broader histories of place and migration [2]. Drawing on current fieldwork in West Yorkshire, the paper highlights how creative methods mobilise memory, foster intergenerational dialogue, and support collaborative heritage-making. Building on recent AHRC work on co-creation in communities (Shaw, 2023), we argue that participatory, place-based approaches can democratise cultural heritage and transform functional infrastructures into living archives of shared experience [3].

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Keywords:

place-based making, co-creative research with communities, storytelling, cultural heritage.

References:

- [1] Courage, C. (2021) *The Creative Practitioner's Handbook: Placemaking as Practice*. London: Routledge.
- [2] Shaw, K. (2023) *AHRC Creative Communities: Co-Creating Research and Policy*. Arts and Humanities Research Council.
- [3] Ward, P., Banks, S., Hart, A. and Pahl, K. (2018) *Co-Producing Research: A Community Development Approach*. Bristol: Policy Press.

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Shapes, Spaces and Community – Durga Pujo : Transformation of a City @ Kolkata

Jayati Mukherjee

The City of Joy, Kolkata aka Calcutta, erstwhile home to the Indian elites, who contributed to the grandeur of the city that evolved into the capital of the British India. Durga Pujo, was the expression of exhibiting the wealth of these Merchants, Bankers, Philanthropists and Intellectuals, laying foundation for a unique socio-cultural aesthetics, setting traditions which remain in practice even today. To break the control of the rich and to gain inclusivity for the community, 12 friends initiated a fund raiser Pujo, hence earning the name Barowari (from 'Baro'+ 'Yaar' i), and the Durga Pujo evolved as 'Sarbojanin' (for everyone). Thus, from the houses of the Aristocrats, it transcended into urban public spaces, evolving into a revered annual activity for community involvement over 5 days of rituals, creation, celebration, participation and sharing in festivities. Since 1960s, these created 'Pandals' or the temporary abode of the Goddess, saw a significant departure from the traditional cloth and bamboo structures, introducing the concept of 'Theme' based aesthetics. Public spaces transformed into artworks and vibrant imaginary worlds brought alive through traditional crafts, materials and creative journeys. The innovation and excellence has emerged into a competitive spirit of the highest order with introduction of Themes of the Times, exploring materials and design diversification of the crafts used. And the themes diversified year after year, to transform the same space in multiple ways, generating unique visual experiences, through Shapes as primary element of Design. This vibrant creative participation of the Community inscribed the Festival, particularly in Kolkata, into the UNESCO Representative List of the Intangible Cultural Heritage of Humanity in 2021. This paper would be an illustrative narrative on how geometric shapes, with materials, trace the transformation of a mundane neighbourhood Space, based on creative thinking, innovation and realization in physical prototypes- towards ultimate visual and aesthetic experience.

Keywords:

Theme, Urban Space, Shapes, Materials, Exploration

References:

- [1] Mukherjee J and Ghosh M 2020 Traditional crafts as materials in placemaking: Application and sustainability in aesthetic transformation of geometry of urban public spaces (Encyclopedia of Renewable and Sustainable Materials, Oxford: Elsevier) Vol. 4, pp. 259–291.
- [2] Vatsyayan K 1997 The square and the circle of the Indian arts (Abhinav Publications)
- [3] Gupta A and Gupta A 2017 Celebrating Public Spaces of India (Mapin Publishing)
- [4] Chakrabarty D 2024 Heritage, Crafting Communities and Urban Transformation: Durga Puja Festival, Kolkata (Routledge).

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Sacred Geometry and Living Heritage: Mapping Cultural Circuits of Continuity from Urban Precincts to Regional Contexts in Thanjavur and Beyond

L Malarkodi, AK Kasthurba

This research investigates the intersections of sacred geometry, living heritage, and cultural circuits in shaping the spatial, social, and economic continuities of Thanjavur and its wider regional context. Adopting a multi-scalar urban design approach, the study examines the city at the micro scale of temple precincts, the meso scale of the historic city, and the macro scale of the surrounding regional landscape. It highlights how cosmology, embedded in temple layouts, street orientations, and precinct hierarchies, informs both spatial organization and ritual practices, sustaining continuity in tangible and intangible heritage (Michell, 1995; Hardy, 2007). Through systematic mapping of memory, movement, and meaning, the study identifies the formation of cultural clusters around temples and heritage precincts, alongside economic clusters linked to markets, craft production, and trade activities. The introduction of multi-scalar cultural circuits—from precinct-level processional routes, to city-wide festivals, to regional pilgrimage and trade networks—demonstrates how these interconnected flows reinforce social cohesion, economic vitality, and heritage continuity (Ramaswamy, 2007). Integrating the UNESCO Historic Urban Landscape (HUL) approach (UNESCO, 2011; Bandarin & van Oers, 2012), the research frames heritage as a living, adaptive system, emphasizing the need for urban design strategies that balance conservation with contemporary urban growth. The study proposes a framework for reimagining Thanjavur as a dynamic cultural landscape, where sacred geometry, clustered cultural and economic activity, and multi-scalar circuits collectively guide sustainable development. This approach not only preserves historical identity but also enhances the functional, social, and economic resilience of the city, providing insights for heritage towns seeking to integrate tradition with modern urban needs.

Keywords:

Living Heritage, Sacred Geometry, Cultural Circuit, Urban Heritage and Historic Urban Landscape, Economic & Cultural Clusters.

References:

- [1] Michell G. 1995. Architecture and art of southern India: Vijayanagara and the successor states. Cambridge: Cambridge University Press.
- [2] Hardy A. 2007. The temple architecture of India. Chichester: Wiley.
- [3] Ramaswamy V. 2007. Walking naked: women, society, spirituality in South India. Shimla: Indian Institute of Advanced Study.
- [4] Bandarin F and van Oers R. 2012. The historic urban landscape: managing heritage in an urban century. Chichester: Wiley-Blackwell.
- [5] UNESCO. 2011. Recommendation on the historic urban landscape. Paris: UNESCO.

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Decoding the Blueprint of Future Societies

S Chaudhuri, A Bhatt, DL Xaxa, L Singh, M Pawar, R Bhardwaj, S Saha Subhav, S Khutale

This research investigates the evolution of the "Smart City" paradigm at the intersection of technological advancement, shifting social behaviors, and environmental imperatives. The primary aim is to analyze the core tensions and competing models shaping future urban societies. The methodology involves a qualitative, multi-scalar analysis of contemporary trends across technological, social, and political domains, decoding present-day cues to map future societal blueprints. Results indicate a fundamental conflict between two divergent urban futures. The first is a top-down, data-informed model where AI and IoT optimize city functions but risk creating a "Surveillance Driven" environment [1]. The second is a bottom-up, "Community-driven" model, exemplified by creative co-ops and circular living, which prioritizes social equity and resident autonomy [3]. The analysis further identifies the demographic shift towards "Super-aged Cities" and the critical need for "Climate-resilient Cities" with "Future-proof Infrastructure" as key forces reshaping urban development [2]. The discussion concludes that the future of the smart city is not a technologically determined inevitability but a contested social and political space. Urban resilience must be redefined to integrate infrastructural fortification with robust social systems, balancing efficiency with democratic control. Indicative literature includes global climate agreements and socio-political movements that frame this new urban contract.

Keywords:

Future Societies, Smart Cities, Social Behavior, Technology Gatekeeping, Participatory Governance, Structural Shift

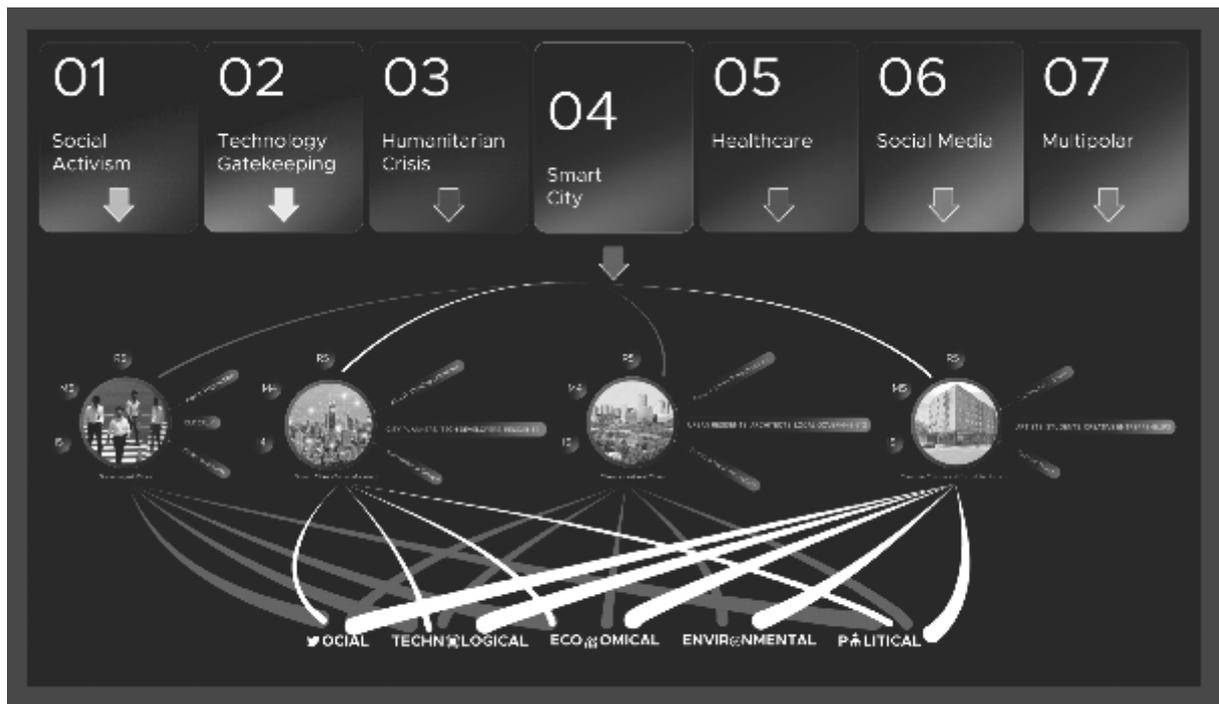


Figure 1. Nystorm Framework and STEEP Analysis

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References:

- [1] National League of Cities (2017). Trends in Smart City Development. Washington D.C.: NLC.

- [2] United Nations (2015). Paris Climate Agreement. New York: United Nations Framework Convention on Climate Change.
- [3] WGSN Insider (2022). WGSN's top picks of sustainable cities across the world. WGSN.

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Adaptive Reuse as a Tool for Sustainable Heritage and Urban Renewal in Nashik

Pallavi Pathak

Heritage forms the foundation of cultural identity, making its protection an issue of both emotional and pragmatic importance. While conservation has long been emphasized by scholars and practitioners across the globe, the practice of adaptive reuse extends its relevance further by linking heritage with contemporary needs. This paper examines the potential of adaptive reuse as a tool for cultural continuity, sustainability, and socio-economic upliftment, with a specific focus on Nashik—a historic city known for its ancient temples, wadas, and the globally renowned Kumbh Mela. The study investigates the opportunities and constraints involved in reviving a selected wada and its surrounding precinct. It highlights how adaptive reuse can foster sustainable practices, connect with ongoing policy frameworks, and cater to diverse urban communities. The research emphasizes the layered benefits of such an approach: revitalizing neglected spaces, enhancing the livelihoods of primary vendors, and indirectly strengthening smaller dependent businesses. In this way, adaptive reuse serves not only as a cultural responsibility but also as an engine for urban regeneration. Two key models of reuse are explored. The first prioritizes community empowerment, giving voice and agency to local groups in shaping their heritage. The second takes a profit-driven approach, emphasizing economic viability and investment potential. The paper argues that a balanced application of these models can create a resilient framework for conservation, ensuring that heritage assets remain socially relevant while also being economically sustainable. By using Nashik's wadas as a case in point, this research demonstrates how critical conservation and adaptive reuse can merge cultural preservation with urban renewal, offering pathways for more inclusive and sustainable city development.

Keywords:

Adaptive reuse, Heritage revival, Nashik Wadas, Sustainable urban development, Community empowerment

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Conceptualising Temporalities: A Philosophical Investigation of Plurality in Time and Space

Parul Kiri Roy

This research investigates the idea of the ‘spirit of our times’ (zeitgeist) in context of India. Scholarly work on the multiplicity of times coexisting highlights how diverse temporalities shape cultural, social and historical life across the subcontinent. The discourse here intends to address both the coexistence and contestation of different notions and experiences of time. Scholars argue that India has long accommodated a range of temporal frameworks- linear historical time, cyclical time (as in many religious traditions), modern capitalist time and local timescapes that organise agricultural, ritual, and everyday life. This coexistence is not merely philosophical, but is lived out in social practices, policy, identity and even economic life. Architecture, or rather the built environment is the most obvious physical entity that carries the imprint of time. This is not only due to weathering but rather because it is lived in, layering the passing of time in its materiality and in its space. Does multiplicity of times create multiplicity in spaces? What is the nature of this relationship between time and space in the Indian context? It manifests in the material or/ and in the processes of inhabitation or/ and in the structure of the settlement? What is the role of memory in holding onto the lived experience of a place? Recognising this, this paper intends to underscore concepts of time that are embedded in sacred cities and their built form, in order to broaden our understanding of the meaning of human settlements. Every philosophical investigation requires a ground for application of the theory. The discussion presented here foregrounds the extent to which current epoch externalises and reifies contemporary notions of time as can be analysed in the redevelopment of temple corridors in sacred cities such as Varanasi and Puri. Connecting this to the concept of multiplicity of times and related pluralism in architectural manifestation, I propose alternate visions of development that are place specific and place sensitive.

Keywords:

Multiplicity of times, materiality, memory, sacred cities, development models

References:

- [1] Chakrabarty, Dipesh (1992). Postcoloniality and the Artifice of History: Who Speaks for "Indian" Pasts? Representations, No. 37, Special Issue: Imperial Fantasies and Postcolonial Histories), pp. 1-26.
- [2] Chatterjee, Partha (2005). The nation in heterogeneous time. Futures, Volume 37, Issue 9, pp. 925-942.
- [3] Jordheim, Helge (2012). Against periodization: Koselleck's theory of multiple temporalities. History and Theory Vol. 51 (2), pp. 151-171.
- [4] Kaul, Shonaleeka (2022). “Temporality and its discontents or why time needs to be retold”. In Retelling Time: Alternative Temporalities from Premodern South Asia, 1–10, edited by Shonaleeka Kaul, New York: Routledge.
- [5] Paramita, Kristanti Dewi (2022). Architecture as a Projection of Multiplicities. ARSNET, Vol. 2, No. 2, pp.82–87.
- [6] Thapar, Romila (2005). Cyclical and Linear Time in India. Museum International 227 Vol LVII, n°3, Cultural Diversity and Heritage, pp. 17-30.
- [7] Zammito, John (2004). Koselleck's Philosophy of Historical Time(s) and the Practice of History. History and Theory, Vol.43 (1), pp. 124-135.

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Recording Memory of Built Form through Integrated Digital Survey: A Key Study of Lincoln Cathedral

Belula Tecele-Misghina, Xiaolu Wang

Architecture serves as a tangible reflection of culture and life, with historic buildings serving as repositories of technological evolution and social narratives. Heritage buildings face constant threats from climate [1], human activities, and natural disasters, leading to the loss of many such structures, leaving only photographs and 2D drawings as data record [2]. This paper explores the potential of survey methodology that integrate 3D digital technologies, drone photogrammetry and laser scanning, as reliable methods for data recording. This methodology can provide valuable support for restoration and the reconstruction of a building's character and spatial quality. The study focuses on identifying and defining an appropriate methodology of an integrated 3D digital survey, using Lincoln Cathedral in England, a Gothic masterpiece, as case study. Originally built around 1070, Lincoln Cathedral's architecture has been shaped over centuries through extensions, alterations, decay, and both natural and human-induced damage. Currently it stands as a large-scale and intricate historical building, making it an ideal for surveying challenges. Identifying an appropriate methodology for the cathedral's integrated digital survey will be invaluable not only for data recording and memory reconstruction, but also for providing vital information for adaptive reuse, restoration, and reconstruction of damaged components. The paper will present survey test data and a reliable methodology for documenting large-scale historic buildings. It will critically evaluate the strengths and limitations of integrated digital survey methodology and suggest some recommendations to enhance its effectiveness in capturing complex architectural heritage.

Keywords:

Architectural Heritage, Drone (UAV), Integrated digital survey, Laser Scanner, Lincoln Cathedral, Photogrammetric Survey.

References:

- [1] Dimabayao J J et al. 2025 Integrating climate risk in cultural heritage: a critical review of assessment frameworks. *Heritage* 8.8 p 312.
- [2] Quntar S A et al. 2015 Responding to a cultural heritage crisis: the example of the Safeguarding the Heritage of Syria and Iraq Project. *Near Eastern Archaeology*, 78(3), pp154-160.

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Heritage and Co-creation with Community – Creative and Sustainable Revitalization of Villages in Yunnan, Southwest China

Yun Gao, Ling Zhou, Adrian Pitts

Understanding of place and use of spaces. This study explores a case study of the transformation of a rural village in SW China. SW China is well-known for its diverse geography and diverse cultures of ethnic groups. The case study used as an exemplar here is Damoyu, a village historically belongs to the Yi ethnic group and villagers were mainly general farmers. Three aspects of transformation occurred over recent decades years that have affected the place. Firstly, due to the fast urbanization process, villagers no longer rely on larger scale agriculture to make a living but have shifted to other employment or to grow more profitable specific vegetables and fruits within the village settlement. Secondly, the traditional village settlement of the Yi group and the pleasant natural environment with an adjacent protected reservoir and forest have attracted incomers from the urban population. The ‘new’ and ‘existing’ villagers’ territories are physically mixed but their daily lives represent different notions of places. Many new-build or converted village houses were constructed making use of new construction materials and products. However, many such houses copied the styles from cities with little consideration of the local climate and cultural context. Consequently, changes are required in design, and the integration of new technologies and techniques must be understood in the context of preservation. The project uses mixed methods approach including surveys and interviews. It identifies conflicts between the wish to preserve and the need to adapt; and considers how climate sensitive design might be used to preserve traditions and also inform future possibilities. The outcome of the project demonstrates that a case study of Damoyu concerning use, movement and participation, provides new understanding of the principles that lead to the creation of places.



Figure 1. Damoyu Village in 2023 (photo by author)

Keywords:

Heritage, Building, Sustainable Design, Co-creation with community, Rural China

References

- [1] Carr, S., Francis, M., Rivlin, L., & Stone, A. 2023 Public Space (Cambridge: Cambridge University Press).
- [2] Gehl, J., & Svarre, B. 2016 Research methods of public life (Beijing: China Building Industry Press).
- [3] Hillier, B., & Hanson, J. 1984 The Social Logic of Space (Cambridge: Cambridge University Press).

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Heritage, Co-Creation and Community Participation in Art, Design and Architecture

Renu Khanna, AK Kasthurba, Prasad Krishna

The Saraswati–Sindhu Civilization (c. 3300–1300 BCE), one of the earliest urban cultures, embodies a sophisticated understanding of sustainable planning, water management, art, design, architecture and socio-cultural organization. Despite its global significance, it remains marginal in contemporary heritage discourse and underutilized in India’s cultural economy. The research problem lies in the inadequate integration of this proto-urban heritage into modern frameworks of sustainable development, art forms, design education, and heritage tourism. The aim of this study is to reinterpret the spatial, environmental, and cultural systems of the Saraswati–Sindhu Civilization (SSC) to formulate a replicable model for sustainable urbanism and heritage revitalization in the twenty-first century. A multi-method approach was adopted, combining archaeological literature review, spatial mapping using GIS tools, and comparative analysis of heritage-driven tourism models (Egypt, Greece, Peru). Ethnographic fieldwork and stakeholder interviews in Haryana and Gujarat provided qualitative data on community perceptions and participation with archaeological heritage. Quantitative layers—drainage density, accessibility, and land-use—were processed through a weighted overlay analysis to develop a Tourism Suitability Index (TSI).



Figure:1 Comparative Analysis of Heritage-Driven Models
Egypt · Greece · Peru)



Figure:2 Mohenjo-daro
(Harappa.com)

The results reveal strong continuities between SSC’s planning principles and Vastu-based sustainable practices, highlighting water harvesting, sanitation, and equitable access as core to resilience. Discussion indicates that aligning SSC’s legacy with contemporary Sustainable Development Goals (SDGs 11 and 8) could catalyze community-based economic upliftment through heritage tourism. The conclusion asserts that rediscovering SSC’s design ethos offers vital lessons for climate-adaptive planning and participatory conservation today.

Indicative Literature:

Kenoyer (1998); Possehl (2002); Wright (2010); Bisht (2015); Sen (1999); Nussbaum (2011).

Keywords:

Saraswati–Sindhu Civilization, Sustainable Heritage, Urban Planning, Vastu Vidya, Community Tourism, Cultural Revitalization

References:

[1] Kenoyer JM. Ancient cities of the Indus Valley civilization. Oxford: Oxford University Press; 1998.

- [2] Possehl GL. The Indus civilization: a contemporary perspective. Walnut Creek (CA): AltaMira Press; 2002.
- [3] Wright RP. The ancient Indus: urbanism, economy and society. Cambridge: Cambridge University Press; 2010.
- [4] Bisht RS. Excavations at Dholavira. Puratattva. 1996–2012;26–32. (Additional excavation seasons compiled in volumes 26–32)
- [5] Bala M. Hydraulic engineering in Harappan civilization. Indian J Hist Sci. 2017;52(3):301–315.
- [6] Jansen M. Water supply and sewage disposal at Mohenjo-daro. World Archaeol. 1980;12(3):306–321.
- [7] Valdiya KS. Saraswati: the river that disappeared. Hyderabad: Universities Press; 2010.
- [8] Clift PD, Giosan L. Holocene evolution of the Indus River. Nat Geosci. 2012;5(8):637–640.
- [9] Saaty TL. The analytic hierarchy process. New York: McGraw-Hill; 1980.
- [10] Crouch D, editor. Tourism, power and space. London: Routledge; 2014.
- [11] Chhabra D. Heritage tourism and community empowerment in India. Tour Manag. 2010;31(4): 513–520.
- [12] Singh S. Cultural tourism in India. Ann Tour Res. 2015;52:129–142.
- [13] Smith L. Uses of heritage. London: Routledge; 2006.
- [14] UNESCO. Cultural routes and sustainable tourism guidelines. Paris: UNESCO World Heritage Centre; 2019.
- [15] United Nations. Sustainable development goals report. New York: United Nations Publications; 2022.

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Co-creation and Community Participation in Indian Vernacular Architecture: A Heritage-Based Approach to Contemporary Practice

Arzoo Kadian, Rajat Verma

This paper examines the mechanisms of co-creation and community participation inherent in Indian vernacular architecture, analyzing how traditional collaborative design processes can inform contemporary architectural practice. Through qualitative analysis of exemplary case studies from diverse climatic and cultural regions of India, this research demonstrates that vernacular architecture embodies sophisticated systems of collective knowledge production, social negotiation, and adaptive design strategies [1-3]. The study reveals that co-creation in vernacular contexts operates through multi-layered participation involving craftspeople, users, and community stakeholders, resulting in architectures that are climatically responsive, culturally embedded, and socially sustainable [4-6]. In particular, the paper highlights how indigenous building traditions are not merely technical solutions but cultural enterprises where design, construction, and use evolve in tandem. Vernacular practices integrate ecological wisdom, material adaptability, and social rituals, thereby ensuring continuity between human habitation, community identity, and natural environments. These processes reveal design as an ongoing negotiation, where local knowledge, experiential expertise, and shared cultural values converge to produce resilient and context-sensitive built forms. Such insights challenge contemporary notions of authorship in architecture, underscoring instead a distributed form of creativity where knowledge is collectively created, transmitted, and transformed across generations. By foregrounding the pedagogical and methodological value of vernacular co-creation, this study argues for the need to rethink conventional architectural pedagogy and professional frameworks. Heritage-based approaches rooted in shared agency and community participation hold the potential to revitalize participatory design practices in the face of global urbanization, climate change, and social inequities. The research thus contributes to the discourse on participatory design by documenting indigenous frameworks of architectural co-creation that not only predate but also critically inform modern collaborative design theories. It suggests that the vernacular, far from being static tradition, represents a dynamic and living laboratory of sustainable and inclusive design practices for contemporary relevance.

Keywords:

Vernacular Architecture, Community Participation, Co-creation, Indigenous Knowledge, Sustainable Design, Architectural Pedagogy

References:

- [1] Jagatramka R, et al. Sustainability indicators for vernacular architecture in India. ISVS e-journal. 2020;7(4).
- [2] Doshi T. Decay of vernacular architecture in rural India. Lingayas Vidyapeeth. 2025.
- [3] Kazimee BA. Representation of vernacular architecture and lessons for sustainable and culturally responsive environment. WIT Press. 2009;4(4):337–50.
- [4] Tiwari S. Adaption of Neo-Vernacular Architecture in India. ISVS e-journal. 2024;11(8).
- [5] Grcheva O. Co-creation model in cultural heritage management and participatory design. Eastern Mediterranean University; 2023.

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Collective Wellbeing and Community Resilience: Toward A Social Design Approach*

Ilaria Rapaccini Bellini, Marco Bevolo, Elena Fabris, Mattia Monacelli

Purpose: This paper posits and articulates Social Design as a conceptual framework for the purpose of addressing limitations of technocentric urban models, namely the erosion of social cohesion within dwellings and settlements. For this purpose, it aims to select, articulate, and integrate theories of wellbeing, resilience, commons, participation, relational space, reputation, and social capital into a systemic Social Design approach that might enable collective wellbeing and community resilience. **Design/methodology/approach:** This paper builds on practice, towards theoretical contributions from social sciences, design studies, and urban theory. It adopts a conceptual and discursive approach, based on reflexive input accumulated within applied research in a Prop-Tech real estate business context, herewith not directly presented or referenced. To this end, the paper proposes two interrelated methodological frameworks. The first, Social Design for Value and Reputation, explains how participatory engagement and shared values generate symbolic capital and socio-cultural legitimacy. The second, Digital and Service Acceleration, highlights how services and digital infrastructures might act as accelerators of positive dynamics, e.g. well-being, neighbourliness, and local economic vitality. **Findings:** The paper presents educated theoretical reflections and a preliminary methodological articulation, demonstrating how Social Design might provide a repeatable and participatory grammar for systemic value creation through communities. It positions relational, behavioural, and social dynamics as the central materials of a design approach, thereby proposing a potential link between collective wellbeing with resilience and reputation. **Research limitations/implications:** As a conceptual paper based on reflexive input, the contribution of this paper to the scientific discourse about Social Design is limited to theoretical elaboration and methodological propositions. Future research and further reflection should therefore empirically operationalise and test the proposed frameworks across different urban and cultural contexts, to optimise and specify the models and develop appropriate methods to measure relational impacts for due validation. **Practical implications:** Although not presenting any empirical data or findings, the paper is the reflexive outcome of applied research within a given Prop-Tech real estate business. It therefore might inspire policymakers, urban designers, and community practitioners to benefit from adopting Social Design as a strategic lens for planning and governance, especially where well-being, reputation, social cohesion and legitimacy are at risk. **Originality/value:** The paper advances Social Design as a multidisciplinary framework where design studies, social theory, and urban governance converge. By synthesising diverse theoretical strands, it contributes an integrative perspective to current debates on urban wellbeing, resilience, and reputation.

Keywords:

Design Studies, Social Design; Wellbeing; Community Resilience; Social Capital.

Article type: Conceptual paper

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References:

- [1] Aldrich, D. P. (2012). Building resilience: Social capital in post-disaster recovery. Chicago: University of Chicago Press.
- [2] Anholt, S. (2010). Places: Identity, image, and reputation. London: Palgrave Macmillan.
- [3] Berger, P. L., & Luckmann, T. (1966). The social construction of reality: A treatise in the sociology of knowledge. New York: Anchor Books.
- [4] Bonomi, A., & De Rita, G. (1998). Manifesto per lo sviluppo locale. Bologna: Il Mulino.
- [5] Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.), Handbook of theory and research for the sociology of education (pp. 241–258). New York: Greenwood Press.
- [6] Bregman, R. (2017). Utopia for realists: How we can build the ideal world. London: Bloomsbury.
- [7] Bruni, L., & Porta, P. L. (2005). Economics and happiness: Framing the analysis. Oxford: Oxford University Press.
- [8] Buchanan, R. (1992). Wicked problems in design thinking. Design Issues, 8(2), 5–21.
- [9] Castells, M. (2012). Networks of outrage and hope: Social movements in the internet age. Cambridge: Polity Press.

- [10] Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95–S120.
- [11] Cottam, H. (2018). *Radical help: How we can remake the relationships between us and revolutionise the welfare state*. London: Virago.
- [12] Dewey, J. (1934). *Art as experience*. New York: Minton, Balch & Company.
- [13] Ehn, P., & Topgaard, R. (Eds.). (2014). *Making futures: Marginal notes on innovation, design, and democracy*. Cambridge, MA: MIT Press.
- [14] Escobar, A. (2018). *Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds*. Durham, NC: Duke University Press.
- [15] Friedman, K. (2019). *Systemic design theory: Integrating systems thinking and design*. London: Routledge.
- [16] Govers, R. (2018). *Imaginative communities: Admired cities, regions and countries*. Antwerp: Reputo Press.
- [17] Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360–1380.
- [18] Inghilleri, P. (2021). *I luoghi che curano*. Milan: Raffaello Cortina.
- [19] Jacobs, J. (1961). *The death and life of great American cities*. New York: Random House.
- [20] Krippendorff, K. (2006). *The semantic turn: A new foundation for design*. Boca Raton: CRC Press.
- [21] Latour, B. (2005). *Reassembling the social: An introduction to actor-network theory*. Oxford: Oxford University Press.
- [22] Lefebvre, H. (1974). *The production of space*. Oxford: Blackwell.
- [23] Manzini, E. (2015). *Design, when everybody designs: An introduction to design for social innovation*. Cambridge, MA: MIT Press.
- [24] Manzini, E. (2021). *Livable proximities: Ideas for the city that cares*. Milan: EGEA.
- [25] Manzini, E., & Jegou, F. (2003). *Sustainable everyday: Scenarios of urban life*. Milan: Edizioni Ambiente.
- [26] Mattei, U. (2011). *Beni comuni: Un manifesto*. Bari: Laterza.
- [27] Meadows, D. H. (2008). *Thinking in systems: A primer*. White River Junction, VT: Chelsea Green Publishing.
- [28] Mulgan, G., Tucker, S., Ali, R., & Sanders, B. (2007). *Social innovation: What it is, why it matters and how it can be accelerated*. Oxford: Skoll Centre for Social Entrepreneurship, Said Business School, University of Oxford.
- [29] Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge: Cambridge University Press.
- [30] Papanek, V. (1984). *Design for the real world: Human ecology and social change*. Chicago: Academy Chicago Publishers.
- [31] Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.
- [32] Ramos, J. M. (Ed.). (2016). *The city as commons*. Melbourne: Commons Transition Coalition.
- [32] Reason, P., & Bradbury, H. (Eds.). (2001). *Handbook of action research: Participative inquiry and practice*. London: SAGE.
- [33] Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, 4(2), 155–169.
- [34] Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.
- [35] Sennett, R. (2012). *Together: The rituals, pleasures and politics of cooperation*. New Haven: Yale University Press.
- [36] Simon, H. A. (1969). *The sciences of the artificial*. Cambridge, MA: MIT Press.
- [37] Venturi, P., & Zandonai, F. (2019). *Dove. La dimensione di luogo che ricomponde impresa e società*. Milan: EGEA.
- [38] Wilkinson, R., & Pickett, K. (2009). *The spirit level: Why equality is better for everyone*. London: Penguin.
- [39] World Economic Forum. (2023). *Global Risks Report 2023*. Geneva: World Economic Forum.
- [40] Wright, K. (2022). *Community resilience: A critical approach*. New York: Routledge.

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From Waste to Worth: A Design-Led Approach to the Reuse of Dog Hair Waste in India's Pet Care Industry

Vaishnavi Shantikari, Neelarnab Dutta, Dandeswar Bisoyi

The expansion of India's pet care industry has resulted in a parallel increase in dog grooming activities and substantial hair waste generation[1,2]. Common disposal methods—open dumping and burning—pose environmental concerns, contributing to methane emissions, waterway blockages, and unsanitary conditions[3,4]. Yet, dog hair, as a natural animal fibre with evidence of ancient use, remains an underutilized and undervalued resource within India's sustainability and material reuse discourse[5]. This study examines current practices, quantities, and awareness levels surrounding dog hair waste management in grooming salons, with the goal of identifying pathways for sustainable reuse. A qualitative research approach was employed through semi-structured interviews with twenty-three grooming salons across the country. Findings reveal that each salon produces approximately 3–4 standard 30L bags of hair weekly, primarily from long-coated breeds such as Shih Tzu and Lhasa Apso[6]. The collected hair, ranging between 1.5–3 inches in length, was found to possess the softness and tensile properties suitable for fibre reuse, though handling and sanitation practices varied[7]. In response, a design intervention was developed to enable systematic segregation and storage. Prototyped collection bins were designed to sort hair by breed and color, improving its suitability for recycling and textile transformation. User feedback informed iterative refinements enhancing ergonomics, functionality, and usability. The findings reveal limited awareness but strong willingness among grooming professionals to participate in structured reuse initiatives. The study highlights how design can facilitate sustainable material cycles—transforming a neglected waste stream into a renewable fibre resource. By coupling waste management with design innovation, it proposes a replicable framework for circular practice that redefines value, fosters environmental responsibility, and advances material conservation within India's growing pet care and textile ecosystems.

Keywords:

Dog Hair Waste; Pet Grooming Industry; Circular Economy; Sustainable Material Innovation; Waste Collection Design; Textile Fibre Reuse; India

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Reimagining Heritage Walks: Crafting Shared Cultural Futures through Immersive, Participatory Experiences

Dhwani Gala, Kanak Patil, Aditi Karthikeyan, Rishikesh Vedpathak, Moli Gupta

Rapid urbanization and cultural convergence in modern India have created a coexistence paradox. While cities evolve into cultural mosaics, citizens grow increasingly disconnected from their local heritage. Conventional heritage walks, once envisioned as educational journeys through historic landmarks, are now perceived as static, outdated, and disengaging, particularly among younger generations, NRIs, and international visitors. This research reimagines heritage walks beyond the act of walking, positioning them as immersive learning environments that foster empathy, cultural belonging, and cross-community engagement. By integrating storytelling, sensory immersion, and participatory design methods, the study explores how heritage experiences can evolve into platforms for cross generational learning and shared cultural futures. Workshops with locals, NRIs, and global travelers, the research identifies three key challenges: limited personalization, low engagement, and minimal community collaboration. The study proposes a framework where heritage is not merely observed but co-created, enabling users to contribute stories, perspectives, and digital artefacts that reflect collective memory and identity. Through the lens of experience design and cultural empathy, the project demonstrates how Gen Z appropriate interventions such as interactive narratives, localized audio storytelling, and gamified cultural exchanges can transform heritage walks into living, evolving ecosystems of learning and belonging. By bridging tradition and technology, the research positions design as a catalyst for cultural continuity, enabling citizens to not only look at the past but to walk forward with it together.

Keywords:

Cultural Preservation, Experience Design, Participatory Design, Cross-Community Engagement, Shared Cultural Futures

References:

- [1] Indian cities. *Journal of Cultural Heritage Management and Sustainable Development*, 8(3), 264-277.
- [2] National Institute of Urban Affairs (NIUA). (2015). *Urban heritage in Indian cities: Compendium of good practices*. Cities Alliance.
- [3] Raman, R., & Subbiah, K. (2018). Effects of urbanization on historical heritage buildings in Kumbakonam, Tamilnadu, India. *Frontiers of Architectural Research*, 8(1), 94-105. <https://doi.org/10.1016/j.foar.2018.11.001>
- [4] Coexist with Peace. (2024). The power of storytelling to build bridges between cultures. Retrieved from <https://www.coexistwithpeace.com/the-power-of-storytelling-to-build-bridges-between-cultures/>
- [5] Salvesen, L. B., & Keitsch, M. (2020). Preservation and promotion of intangible cultural heritage: A participatory design approach. In *Proceedings of the 22nd International Conference on Engineering and Product Design Education*. The Design Society. <https://doi.org/10.35199/EPDE.2020.82>
- [6] Zhang, L., & Wang, H. (2024). Gamified experience design: A case study on China's immersive tourist blocks in historic cities. *Frontiers in Sustainable Tourism*, 3, 1482203. <https://doi.org/10.3389/frsut.2024.1482203>
- [7] Bandarin, F., & Pereira Roders, A. (2020). Urban heritage conservation and rapid urbanization: Insights from Surat, India. *Sustainability*, 12(6), 2172. <https://doi.org/10.3390/su12062172>
- [8] Chen, W., & Yang, L. (2025). The 'making' of participatory and co-design for digital experiences in cultural heritage: A review. *CoDesign*, 21(2), 145-168. <https://doi.org/10.1080/15710882.2025.2511791>
- [9] UNESCO. (2017). Historic city of Ahmadabad [Inscription on World Heritage List]. Retrieved from <https://whc.unesco.org/en/list/1555>
- [10] Pine, B. J., & Gilmore, J. H. (1998). Welcome to the experience economy. *Harvard Business Review*, 76(4), 97-105.
- [11] Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, 18(3), 5-14.

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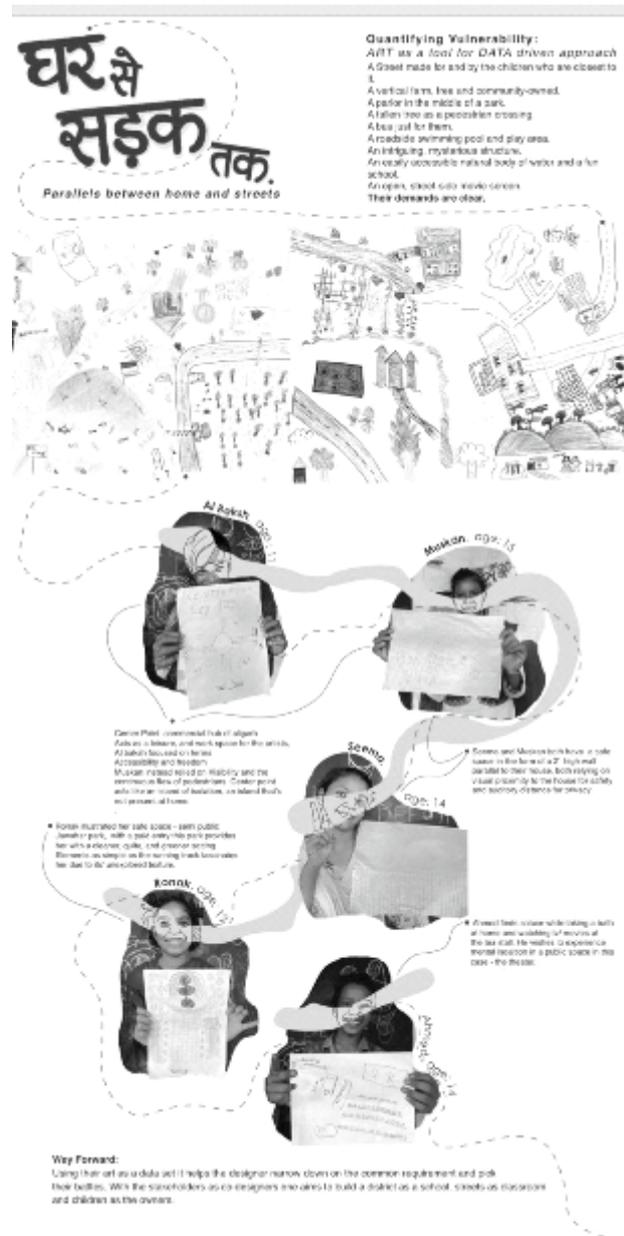
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Ghar Se Sadak Tak : Parallels Between Home and Street

Anindya Raina, Sagar Sisodia

"Quantifying Vulnerability: Data-Driven Approaches to Supporting Children in Street Situations"

Children in street situations represent one of the most vulnerable yet overlooked groups in India's urban landscape. Despite their prominent visibility in public spaces such as traffic junctions, railway platforms, markets, and pavements, they remain largely invisible in official data and policy frameworks. The aim of this research is to understand the relationship between street-connected children and urban public spaces, and to use participatory design interventions to enhance their access to rights, and societal inclusion. The research adopts a child-rights-based approach, as outlined in UN General Comment No. 21[1], viewing children not as passive recipients of aid but as active stakeholders in shaping their environments. Through a mixed-methods framework involving both qualitative and quantitative data collection, the study engages children directly to identify needs, analyse contexts, and co-develop interventions. A key observation is that public spaces often serve as surrogate spaces that are missing at home for the children. However, lacking ownership and safety, these environments frequently contribute to substance abuse, isolation, and exploitation. Reimagining such spaces through collaborative and inclusive design empowers children and restores their agency, thereby fostering safer, equitable, and child-friendly urban areas. These processes include participatory urban and house mapping, interactive workshops, multi-dimensional data for decision-making which is done using art as a participatory method to communicate and understand the problem areas directly from the stakeholder, forming a cycle of Data Collection – Facilitation – Data Analysis which leads to built interventions. Data collected over three years forms the foundation for design interventions, as well as contributing to urban development discourse by proposing a scalable, rights-based methodology for integrating marginalized children into urban planning processes. Participatory design can catalyze systemic change when children are treated as equal partners in city-making. Future work will involve policy-level integration of data and design outcomes.



Keywords:

Participatory Design, Child's Rights, Children in Street Situations, Urban Vulnerability

Figure: 1 Poster as a description for the proposal credits: Anindya Raina

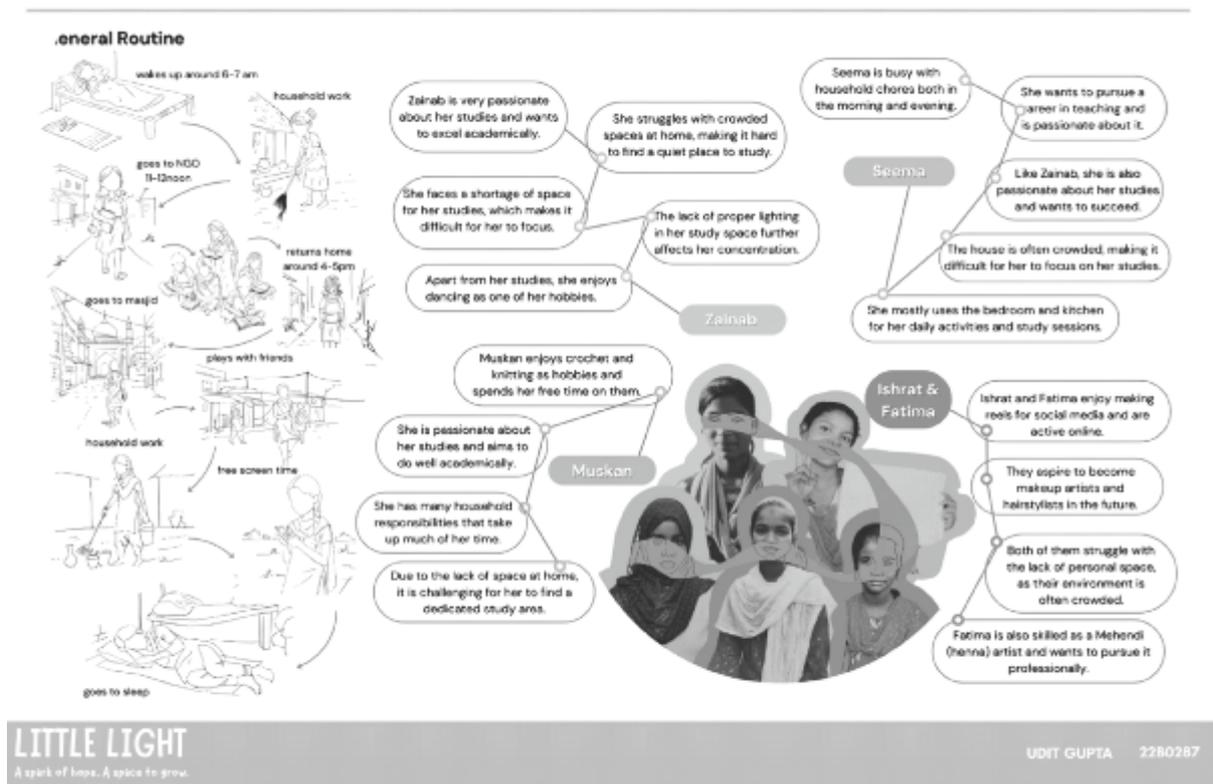


Figure: 1. Recorded observations and mapping of the identified stakeholders
 credits: Udit Gupta, World School of Planning & Architecture, World University of Design, Sonipat

03 VISION AND NARRATIVE

“Understanding the What, why and how”

MAATIKATHA
 Narratives of Earth and Play

What is Maati Katha?
 Maati Katha is an architectural response to the need for sensory and safe learning environments for street-connected children in Aligarh. It is designed as a child-centric intervention that reclaim underutilized urban voids and activates them through sensory and tactile elements, while fostering a deep connection with the materials of maati (earth). This project recognizes that these children—often overlooked in mainstream urban planning—secure and engaging spaces that encourage interaction, learning, and emotional well-being.

Why was this project conceived?
 This project arises from the need to respond to these conditions through a child-sensitive design that not only shelters but empowers the children.

Project Brief and Intent

Client: Designed in collaboration with an NGO working with street connected children.

Users: Street-connected children (ages 5-12) and their caregivers.

Site: Railway owned edge with active public movement and no scope for permanent construction.

“Let the soil speak, let the senses breathe — Maati Katha begins here.”

Designing the Interventions
 Conceptual Approach

Soil as a sensory medium: Engages touch, smell, and movement - designed to soothe and regulate.

Permaculture in Planning: Spaces are planned around washing trees. -Locally Sourced and low Impact Materials

Sensory zoning: Spaces are designed based on unappreciated activity levels and comfort thresholds.

Storytelling spaces: Use of mud, light, and texture to create pause where stories can be heard, told.

Material Palette and Sensory Qualities

| | | | |
|--------------|---------------------------|--------------------------|------------------------------|
| Photograph | | | |
| Material | Mud | Stone | USB |
| Sensory Role | Grounding | Cooling/Tactile Contrast | Grounding + Shelter |
| Qualities | Texture, Scent Connection | Hard/Soft Transition | Thermal Mass, Scent, Tactile |

ANSHIKA KHURANA, SEM VI

Figure: 2. Recorded observations for problem areas identified
 Credits: Anshika Khurana, World School of Planning & Architecture, World University of Design, Sonipat

PathFinders

-Vrinda Mata (22B0292)
Sem VI

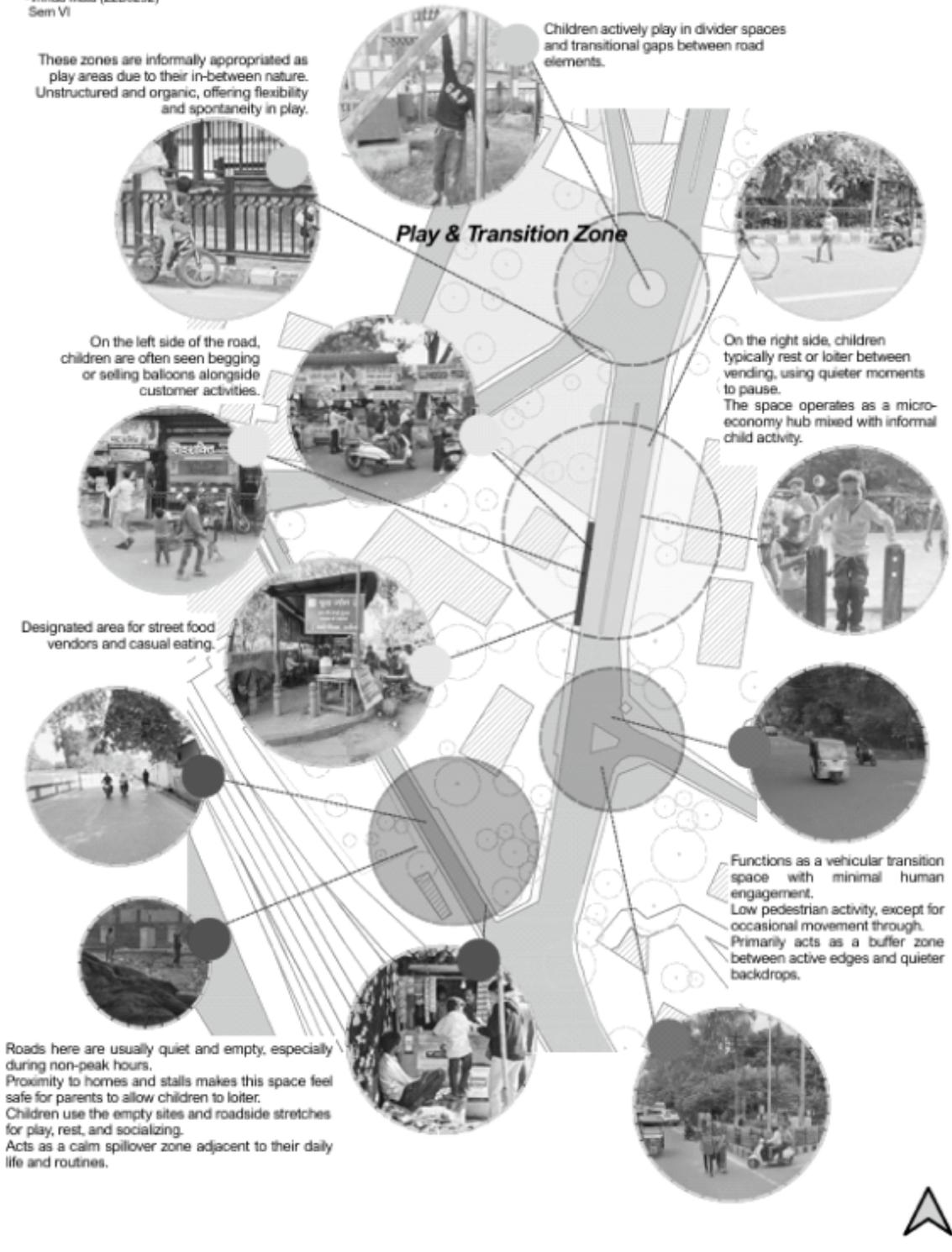


Figure: 3. Identification and documentation of urban spaces and zones used by the stakeholders
Credits: Vrinda Mata, World School of Planning & Architecture , World University of Design, Sonipat

PathFinders

-Vrinda Mata (22B0292)
Sem VI

Contextual Integration:

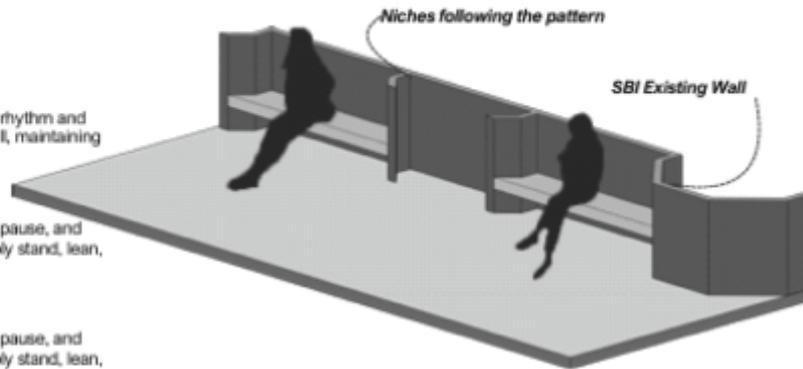
Seating niches designed to match the rhythm and materiality of the existing boundary wall, maintaining architectural harmony.

Multiple Use Modes:

Dedicated seating spaces for rest and pause, and vertical niches for people to comfortably stand, lean, or wait.

Multiple Use Modes:

Dedicated seating spaces for rest and pause, and vertical niches for people to comfortably stand, lean, or wait.



Nature Sound Spiral

Spiral Intervention:

A spiraling structure adjacent to the light pole leads toward a tree, inviting movement and curiosity.

Listening Pipe at Base Level:

A sound pipe installed at child height allows children to hear natural sounds from the tree canopy.

Sensory Play Element:

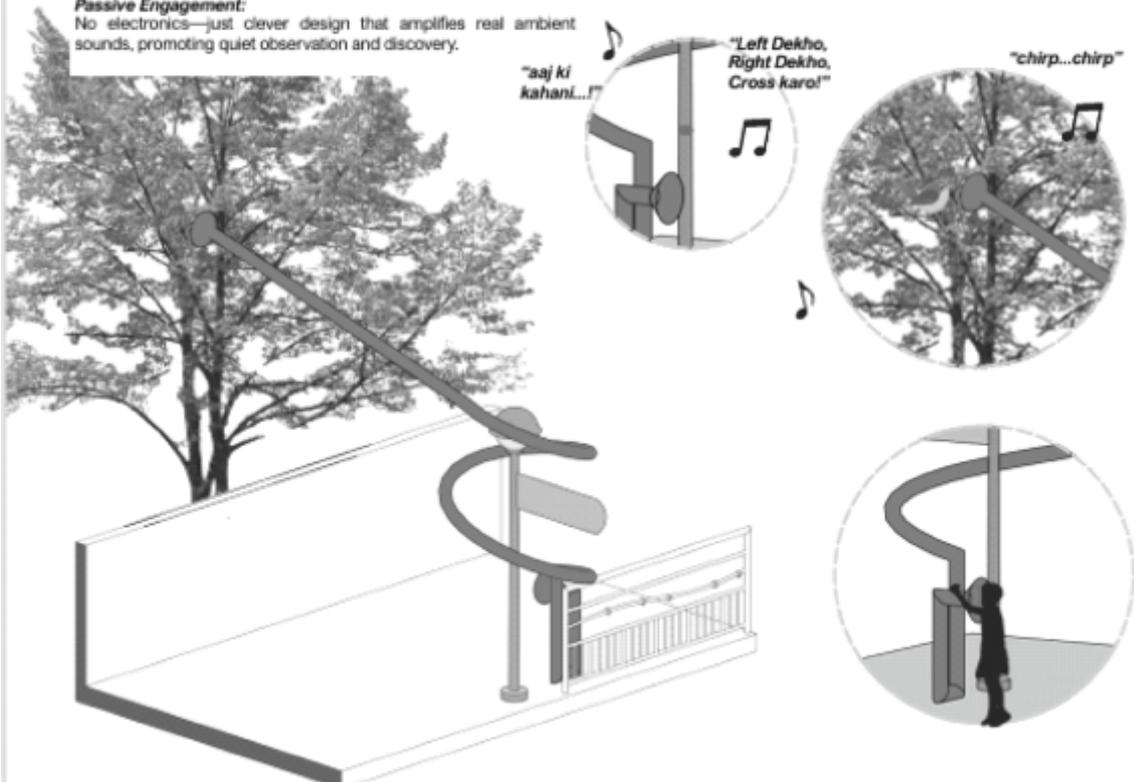
Encourages listening to birds, rustling leaves, and engaging with nature through acoustic interaction.

Educational & Fun:

Introduces children to the soundscape of nature, fostering awareness, mindfulness, and connection to the environment.

Passive Engagement:

No electronics—just clever design that amplifies real ambient sounds, promoting quiet observation and discovery.



Multi-functional Light Pole

Angled Light Emission:

Light is directed downward at an angle to reduce glare and minimize light pollution.

Built-in Speaker:

Integrated speaker system for announcements, ambient music, or storytelling in public areas.

Signage Integration:

A mounted board provides space for directional signs, educational messages, or public information.

Contextual Aesthetic:

Designed to be functional yet visually subtle, contributing to the character of the space without overpowering it.

Figure: 4. Design intervention post identification of problem area
credits: Vrinda Mata, World School of Planning & Architecture, World University of Design, Sonipat

Keywords:

Include 4–6 keywords highlighting the focus areas of your study.

Acknowledgments:

A heartfelt thanks to my students of design studio Semester 6, 2025, Anshika Khurana, Abhishek Saxena, Neha Kushwaha, Manvi Singh, Udit Gupta, Vrinda Mata, World School of Planning & Architecture, World University of Design, Sonipat, who helped me implement the collected data and methodology on ground and Rag Dream Weavers Association Aligarh, who helped me build it from ground up and gave us their turf and ground experience.

References:

- [1] United Nations Committee on Economic, Social and Cultural Rights (CESCR). General Comment No. 21: Right of Everyone to Take Part in Cultural Life (Art. 15, para. 1(a), of the International Covenant on Economic, Social and Cultural Rights). UN Doc. E/C.12/GC/21. Geneva: United Nations; 2009. Available from: <https://digitallibrary.un.org/record/673444>

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An Exploratory Study of Perceptions and Evoked Emotion by Design Features of Public Spaces

Vikash Kumar, Satish Shivarudraiah

Public Spaces form an essential aspect of Urban Design encountered in the daily routine activities of its citizens. It provides an opportunity for people to interact with both strangers and acquaintances. Sometimes, it acts as a spaces for individuals to express themselves irrespective of the age group and its surroundings. Although people use public spaces all the time without thinking much about it, they are pretty complex. Many reasons are attributed to this complexity, including changes in people's lifestyles, rapid urbanisation, and evolving multi-functional needs. These changes are likely to affect people's perception of public spaces and the feeling invoked. Understanding such perceptions will likely help Public Spaces designers design more usable spaces. In this paper, the perception of built public spaces is being explored for its capability to induce a set of emotions. The paper reports on a study conducted on 30 young, technically qualified respondents who were asked to compile photographs sourced from the internet Public Spaces that evoke in them the following set of emotions: Apprehension, Fear/Phobia, un-comfortability/Hostile, Invasion of Privacy, Relaxation, Excitement, Being Safe/Secure, Indulge in Activity of choice and any other characteristic that space may evoke. These photographs were then analysed from a spatial isovist, usability point of view to extract physical features or characteristics and conditions from within the space, which most probably contribute to evoking the feelings. The study indicates that line of sight, lighting condition, presence of other humans as well as 'live' objects that give safety assurance - play a significant role in raising or decreasing anxiety levels within the space. Inference from this study is expected to help develop a heuristic designing framework that includes the public spaces 'usability factors' along with functionality factors.

Keywords:

Urban Planning, Public Spaces, Design for Emotion, Usability, Spatial Isovist.

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Luit Dhara: Documentation of Community-led Resilience Narratives of Majuli through Digital Media

Anusha Malusare, SK Nawaz Ali

Majuli, in Assam, is one of the world's largest inhabited river islands. Before 1950, it covered approximately 1,250 sq. km but today, it spans approximately 480-520 sq. km reflecting a reduction of land mass of about 50-60% from its historic size due to erosion caused by perennial floods. Despite facing recurring floods and displacement, the people of Majuli have cultivated deep ecological intelligence and resilience. Here, floods are not seen solely as disasters but as cyclical events that shape community rhythms, agricultural patterns, and spiritual life. On the contrary, the disaster narrative remains fragmented and overshadowed by tourism narratives that restricts Majuli's identity to a picturesque landscape overlooking its ongoing struggles and resilience. This study documented how these communities sustain their lives, knowledge systems, and crafts through indigenous adaptive strategies. The research employed ethnographic methods, including field observations, interviews with local residents, artisans, and institutional actors, along with analysis of environmental and policy documents. The project highlights the role of design research as a bridge between local wisdom and institutional frameworks, reframing floods not as isolated tragedies but as experiences interwoven with culture, memory, and adaptation. It further demonstrates how participatory documentation and digital storytelling can contribute to a more grounded and empathetic model showcasing how community adapted to climate change. To bring these insights together, a digital research output titled Luit Dhara was developed—an interactive platform that visualizes data, narratives, and community-driven solutions to foster a change in attitude to view floods not just as a disaster but as a catalyst for resilience, adaptation, and continuity. The platform functions both as a living repository and as a collaborative interface for researchers, policymakers, and designers to engage with Majuli's evolving and dynamic landscape.

Keywords:

Community Resilience, Design Research, Digital Storytelling, Flood Adaptation, Majuli, Cultural, Heritage

Acknowledgments:

The author wishes to acknowledge the guidance of Ar. Sk Nawaz Ali and the invaluable insights shared by the residents of Majuli, the teams at Amar Majuli, Ayang Trust, and Rengam, as well as the researchers from the Geological Survey of India, Majuli, whose contributions enriched the research.

References:

- [1] Roy N, Pandey BW and Rani U 2020 Protecting the vanishing geo-cultural heritage of India: Case study of Majuli Island in Assam Environmental Challenges 1 100013
- [2] Ankur, Singh NR and Kumar V 2018 Disaster resilient design strategies through vernacular practices: Case study of Majuli Island and Bakkhali, India Proc. 6th Annual International Conference on Architecture and Civil Engineering (ACE 2018) (GSTF) pp 538–545 doi:10.5176/2301-394X_ACE18.102
- [3] Chetry B 2020 Climate change, erosion and river-bank displacement in Majuli: A study of challenges and responses Journal of North East India Studies 10(2) 1–27
- [4] Mago P, Sundaram S, Singh AK, Gosain N, Sarin L, Mishra S, et al. 2022 Sustainable environmental and cultural practices of Majuli, India: A case study SSRN Electronic Journal Available from: <https://ssrn.com/abstract=4148279>
- [5] Jauhari D 2015 Rescuing the flood-ravaged river island of Majuli, Assam Journal of Landscape Architecture 10(1) 36–47

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Sacred Motifs as Intangible Heritage: A Study of Konark Temple and Odisha Ikats

Ashima Gupta, Dimple Bahl, Vandana Bhandari

Motifs carry meanings that extend far beyond sensory beauty, embodying layers of faith, philosophy, and cultural memory [1]. This study investigates the relationship between the motifs of temple architecture and the celebrated ikat textiles of Odisha, revealing how both emerge from a shared cultural and philosophical framework. The 13th-century Sun Temple at Konark was selected as the central case study for its status as the pinnacle of Odisha's temple architecture [2]. A qualitative interpretive-historical approach was adopted, combining site visits, field observations, and visual analysis of temple iconography and ikat textiles. Through figurative analysis and contextual narration, the study uncovers underlying themes, patterns, meanings, and cultural or social discourses embedded within both forms. Primary field observations are supported by secondary sources, historical documentation, comparative imagery, and existing textile studies to establish correlations between architectural and woven motifs, bridging built and material culture. The findings reveal strong parallels in geometric, floral, figurative, and symbolic motifs, as well as in their compositional placement. Both Odisha architecture and textiles demonstrate a shared design grammar rooted in rhythm, repetition, proportion, and symmetry, principles central to Indian aesthetics [3]. They further highlight Odisha's long-standing role as a vibrant center of art, culture, and maritime trade, whose connections across Southeast Asia enabled both the dissemination and transformation of its visual language [4]. This research shows that Odisha's temple architecture and ikat weaving are interconnected living traditions. Their shared visual language reveals how communities transformed sacred architectural motifs into woven art, preserving cultural memory across time. The study deepens our understanding of Indian textiles as living traditions, where the monumental and the wearable together narrate a shared cultural story. This convergence of stone and cloth offers insights into India's intangible heritage, where mythology, architecture, and craft continue to inform one another.

Keywords:

Odisha Ikat, Konark Temple, Motifs, Material Culture, Intangible Heritage, Living traditions

References:

- [1] Bhatnagar P. Decorative design history in Indian textiles and costumes. New Delhi, India: Abhishek Publications; 2005.
- [2] Oki M, Bäumer B, Konishi M. Konārka: Chariot of the Sun-God. New Delhi, India: D.K. Printworld; 2007
- [3] Vatsyayan K. Inter-relationship of the Arts | IGNCA [Internet]. [cited 2025 Sep 15]. Available from: <https://ignca.gov.in/inter-relationship-of-the-arts-kapila-vatsyayan>
- [4] Patra B. Maritime trade and overseas activities of early India: Odishan Perspective. New Delhi, India: Aryan Books International; 2013.

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Drawing through Collaboration, Co-Creation and Participation - Engaging Communities of Identity, Interest and Experience Through the Lure of a Textile Pattern Archive

Matthew AE Taylor

Pattern design archives are a valuable resource for Fashion and Textile businesses and Art and Design educational institutions worldwide [1]. As records of completed commissions they preserve the legacy of an ever-changing designed world by conserving images and instruction that guided a manufacturing process. Through careful curation their heritage value can be extended to provide inspiration for designers seeking to converse with patterns from the past, whilst it is through creative play that the same patterns can ignite conversation and participation with a contemporary and diverse audience. The Gleneden Post-War Design Archive is a collection of approximately 1000 historic design sheets, hand drawn in pencil and coloured with gouache paint, conceived to aid commercial production of jacquard woven cloth in a factory Carlisle, England, called Gleneden between 1955 and 1990 [2]. The archive was last commercially owned by Collins and Aikman and was donated to the University of Huddersfield in 2005 as a resource for teaching and is now homed in their Heritage Quay Archive, which has stabilised its condition but limited access to it. This paper reports on projects designed and instigated by the author whose work in academia intersects the roles of artist, researcher, and teacher [3]. It documents a methodology of practice that began by capturing 100 design sheets photographically providing access to a portable resource from which personal practice can develop. New work emerges from workshops where co-creative activity and the participation of various communities of identity, interest and experience are essential in the creation of the designed outcomes. Visual recordings of both the Gleneden archive and the new art and design work are stored digitally online so they can be utilised as materials for pedagogic enquiries and as part of a functional interactive archival resource.

Keywords:

Pattern, Archive, Co-Creation, Collaboration, Participation, Post-War Design

References:

- [1] Schoeser M and Boydell C 2002 *Disentangling Textiles. Techniques for the study of designed objects*, ed M Schoeser and C Boydell (Middlesex University Press) pp 1-3.
- [2] National Records of Scotland 2020 GD326/285 Minutes of meetings of the board of directors of Gleneden Textiles Ltd. 1955-59 (www.nrscotland.gov.uk).
- [3] Springgay S, Irwin R L, and Wilson Kind S 2005 *A/r/tography as Living Inquiry Through Art and Text. Qualitative Inquiry*, 11(6) p 900.

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Effectiveness of the Storytelling Ability of Various Graphic Forms - Influence of Media, Context, and Purpose

Priyaranjaan Behera

It has long been acknowledged that storytelling is a basic component of human communication, and in today's visual environment, graphic forms have become effective means of creating, forming, and sharing stories. This study explores the efficacy of storytelling using a variety of visual formats, looking at how media selection, context, and the intended communication goal all work together to shape narrative impact. Graphic storytelling uses the affordances of imagery, symbols, typography, spatial arrangements, and digital interactivity to create meaning that frequently cuts over linguistic and cultural boundaries, whereas traditional text-centred narratives mostly rely on linguistic patterns. Using a comparative and multidisciplinary methodology, the study incorporates ideas from media studies, semiotics, cognitive psychology, and visual communication theory. It evaluates the storytelling potential of many formats, including static images, posters, comics, data visualizations, infographics, motion graphics, and interactive digital platforms, in a variety of contexts. Particular focus is placed on how context—cultural background, audience literacy, technology environment, and social setting—influences interpretation and how purpose—whether persuasive, entertaining, informative, or artistic—determines narrative design tactics. The effectiveness of graphic storytelling, according to the findings, is never inherent in the medium but rather results from the dynamic alignment of medium, context, and goal. For example, infographics perform well in situations requiring the efficient and clear flow of information, whereas comics and sequential art encourage relatability and emotional engagement. Similar to this, interactive and multimedia platforms improve engagement, but in order to fully realize their potential, they need contextual receptivity and technological literacy. The study also identifies persistent issues that, if left unchecked, might reduce the effectiveness of narrative, including media saturation, cultural misunderstanding, and oversimplification. In the end, this study emphasizes that selecting a superior medium is not the key to good graphic storytelling; rather, it is about skilfully navigating the interplay between media form, contextual circumstances, and narrative goal. With a framework to maximize storytelling techniques in visual communication across academic, professional, and artistic sectors, the findings have important ramifications for designers, educators, media practitioners, and cultural institutions. By providing insights into the ways that ancient imagery still influences human perception and emotion, this research advances our understanding of visual cognition, cultural memory, and symbolic communication. The study reinforces the importance of visual storytelling in both ancient and modern situations by highlighting the ageless and universal character of symbolic language.

Keywords:

Graphic storytelling, visual communication, media influence, narrative design, context and purpose

References:

- [1] Meggs PB (1998) A History of Graphic Design (3rd ed.) John Wiley & Sons.
- [2] Barthes, R. (1967). Image-Music-Text. Fontana Press.
- [3] Mitchell, W. J. T. (1994). Picture Theory: Essays on Verbal and Visual Representation. University of Chicago Press.

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Hybrid Surveying for Indian Architecture and Environmental Analysis: Bridging the Workflow Gap

P Patel, B Mudi

The study addresses a key gap in Indian architectural and environmental practice: the lack of a standardized workflow for integrating traditional ground surveying with drone based photogrammetry. Lack of such integration in a workflow limits the efficiency and quality of site's data collection, environmental analysis and design coordination. The research is intended to develop and assess a practical hybrid surveying process and a workflow tailored for India's technical, regulatory and operational environment. The workflow merges ground surveys and UAV (Unmanned Aerial Vehicle) photogrammetry to generate accurate, timely and environmentally responsive datasets for mid-scale and large-scale projects. The method involves selecting for pilot sites – such as institutional campuses for mid-scale and urban development/redevelopment sites for large-scale projects and executing both traditional ground control survey and drone flights. The resultant datasets are unified according to common workflow framework. The research assesses key parameters like survey time, data processing, accuracy, software compatibility, cost, area coverage and environmental mapping precision to assess usability and design impact. Findings confirm that the hybrid surveying method is highly effective and can reduce total time on site surveying substantially. Also yielding enhanced spatial and environmental information making workflow streamlined for the integration of datasets into digital architectural tools. Additionally, end-user's feedback reported an elevation in understanding of the site interpretation and passive design decisions. Challenges include regulatory compliance and complex data handling. The research demonstrates that standardizing hybrid survey workflows can address current technical and methodological gaps, leading to more efficient and sustainable architectural practices in India. This research lays the groundwork for a replicable workflow model that can transform surveying practice in India towards more sustainable, efficient, and digitally integrated futures.

Keywords:

Hybrid Surveying, Environmental Analysis, Standardized Workflow, Drone Photogrammetry, Traditional ground surveying, UAV

References:

- [1] McNeil, Bill, and Colin Snow. "The Truth About Drones in Mapping and Surveying." Drone Analyst / Skylogic Research, Dec. 2016. Available at: Drone Analyst
- [2] Ok, Emmanuel. "Traditional Surveying vs. UAV Drone-Based Structure-from-Motion: Advancements in Topographical Mapping Accuracy and Efficiency." ResearchGate, Jan. 2025. Available at: ResearchGate
- [3] Vanathi, V., and Radhika, V. "Rise of Drones in Indian Construction Industry." International Research Journal of Engineering and Technology (IRJET), vol. 9, no. 7, July 2022, pp. 1206.

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Universal Design Strategies for Home-Based Medical Care: Towards Inclusive and Sustainable Care Environments

Shalini Raman Vig

With the global rise of aging populations, increasing incidence of chronic illness, and preference for in-place recovery, home-based medical care (HBMC) is an evolving model of healthcare delivery. Traditional healthcare settings are designed with specialized infrastructure, but home environment—as site of care—presents unique challenges [1]. Universal Design (UD), with its emphasis on inclusivity and usability for people of all abilities, offers a promising lens for rethinking residential spaces as supportive care environments [2]. This review synthesizes research across architecture, healthcare, and assistive technology domains to evaluate how UD principles can inform optimal home environments for medical care [3]. Key design factors analyzed include spatial planning for accessibility, integration of medical equipment, indoor environmental quality, digital health interfaces, and adaptability for caregivers and patients [4]. Sources include peer-reviewed journals, case studies, design guidelines, and international standards. The findings advocate for a holistic framework that integrates universal design with evidence-based healthcare planning, positioning HBMC as a pathway to inclusive, resilient, and future-ready living environments. Universally designed homes can enhance autonomy, reduce caregiver burden, and improve quality of life for diverse populations. While the potential of UD in HBMC is evident, challenges remain in affordability, complexity in retrofitting existing homes, addressing cultural variations in caregiving, user awareness, and regulatory gaps [5]. Future research directions include empirical evaluation of health outcomes, interdisciplinary collaboration, adaptive design systems and policy-level integration of UD into healthcare infrastructure planning [6]. The review concludes by proposing a framework for integrating telemedicine-ready features with universal design principles in residential architecture. It emphasizes the potential of this approach to revolutionize home healthcare delivery, promote independence for older adults and individuals with disabilities, and create more resilient and adaptable living spaces [7].

Keywords:

Home-Based Medical Care, Universal Design, Inclusive Architecture, Assistive Technologies, Health and Built Environment

References:

- [1] Beer JM, McBride SE, Mitzner TL and Rogers WA 2014 Understanding challenges in the front lines of home health care: a human-systems approach. *Appl Ergon.* 45(6):1687–1699
- [2] Carr K, Weir PL, Azar D and Azar NR 2013 Universal design: a step toward successful aging. (*J Aging Res.*) 1–8
- [3] National Research Council (US) Committee on the Role of Human Factors in Home Health Care 2010 *The Role of Human Factors in Home Health Care: Workshop Summary* (Washington (DC): National Academies Press US)
- [4] Bitterman N 2011 Design of medical devices--a home perspective (*Eur J Intern Med*) 22(1) 39–42
- [5] Universal design approach to analysis of physical environment for users with multiple sclerosis *J ACCES* 2022 12(2):284-319
- [6] Mustaqim M 2015 A study of universal design in everyday life of elderly adults. *Procedia Com Sci.* 67:57–66.
- [7] Goddard KS, Hall JP, Greiman L, Koon LM and Gray RC 2025 Examining the effects of home modifications on perceptions of exertion and safety among people with mobility disabilities *Dis Health J*;18(3):101590
- [8] Young D, Wagenfeld A, Rucker H 2019 Universal design and the built environment: occupational therapy and interprofessional design teams—a scoping review. *Ann Int Occ Ther.*;2(4):217–226.
- [9] Steinfeld E, Maisel J. 2012 *Universal Design: Creating Inclusive Environments* (Hoboken: Wiley)
- [10] Peace S, Wahl HW, Mollenkopf H and Oswald F 2009 *Environment and ageing International Handbook of Population Aging* Dordrecht: Springer; 2009. p. 485-512
- [11] Saha, Parichiti & Biswas, Biplab & Chauhan, Milan 2025 *Universal Design Principles in Healthcare Environments* (*J Prog Civ Eng*);7(5):1-8

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Descendants of Dada: Commodification and Conceptual Art at the India Art Fair

Smita Som

Objective:

Observation and analysis of Conceptual Art at India Art Fair, using historical understanding and international context. The study focuses on the conflict between conceptual meaning and commodity status of the Art Object.

Methodology:

Observational studies and Netnography (study of online milieu) were used to gauge the environment of the Art Fair. Work of relevant art practitioners was then identified (purposive sampling), documented and analysed along several parameters, using the artist's practice as a reference point. Synthesis and discussion were constructed with the use of Reflexive Thematic Analysis. Tracing the timeline from historical conceptual art to contemporary practices, this paper starts with the understanding that a philosophy of "idea-first" artistic practice appears to resist commodification. When the concept is a priority and the material form is its transient vessel, the resulting work is challenging to categorise, collect, and price according to traditional market metrics. In a growing art market such as India, novelty and spectacle emerge as new marketable commodities, made possible using widely accessible new technology. The researcher identifies relevant work showcased at the India Art Fair (2025), a major annual event for the Indian Art Ecosystem. Using an unconventional mixed-method approach, the artworks are studied as cultural texts, as physical objects (form and material), and as concepts. The current study focuses on conceptual, multi-disciplinary work by mid-career artists and analyses their materiality, themes and market approach. Due importance is given to gallery and fair representation, as well as public engagement. The paper examines and discusses the conceptual dimension of selected artworks from IAF 2025. The findings provide an insight into the tension between artistic authenticity and market engagement in the Indian context.

Keywords:

Conceptual Art, Materiality, Commodification, Art Object

References:

- [1] Berger J 1972 *Ways of Seeing* (London: Penguin)
- [2] Lippard L R 1997 *Six Years: The Dematerialization of the Art Object from 1966 to 1972* (Berkeley and Los Angeles: University of California Press)
- [3] Tzara T 1918 *Dada Manifesto* (Paris: Tzara)
- [4] Kapur G 2000 *When was Modernism in India? In: When was Modernism?* (Delhi: Tulika Books)

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Designing Smart and Inclusive Support Systems for Maternal Mobility: A Human-Centered Approach to Symphysis Pubis Dysfunction

Aditi Shekhar Tendolkar, Poorvi Singh, Neelarnab Dutta

This study investigates how design-led technological interventions can enhance maternal well-being by addressing Symphysis Pubis Dysfunction (SPD) [1], a frequently overlooked pelvic condition affecting pregnant women. By integrating digital fabrication, smart materials, and ergonomic validation, the research aims to reimagine maternal mobility aids that are both clinically effective and culturally inclusive. Moving beyond conventional biomedical perspectives, the study introduces a human-centered design framework that connects healthcare usability with adaptive technology [2]. It explores the role of sensor-based feedback, smart textiles, and personalized digital interfaces in developing multisensory support systems that cater to physiological comfort, privacy, and emotional reassurance [3][4]. A mixed design-research methodology was employed, combining ethnographic inquiry, prototyping, and iterative validation. The AEIOU framework guided the identification of user needs, cultural practices, and environmental constraints. Anthropometric data informed ergonomic modeling and mock-up testing, while the synthesis of qualitative and clinical insights reframed SPD management as a problem of adaptive, technologically mediated design. The outcomes include ergonomic prototypes and contextual design guidelines for discreet, climate-responsive, and sensor-integrated support devices. These findings demonstrate how emerging technologies-when embedded within empathetic design processes-can bridge the gap between clinical efficiency and human experience. The study concludes that technological innovation in healthcare design must extend beyond functionality to embrace inclusivity, adaptability, and cultural relevance. Future directions include AI-enabled monitoring, biodegradable smart textiles, and scalable digital fabrication models for maternal care, contributing to a broader discourse on technology-driven human-centered design.

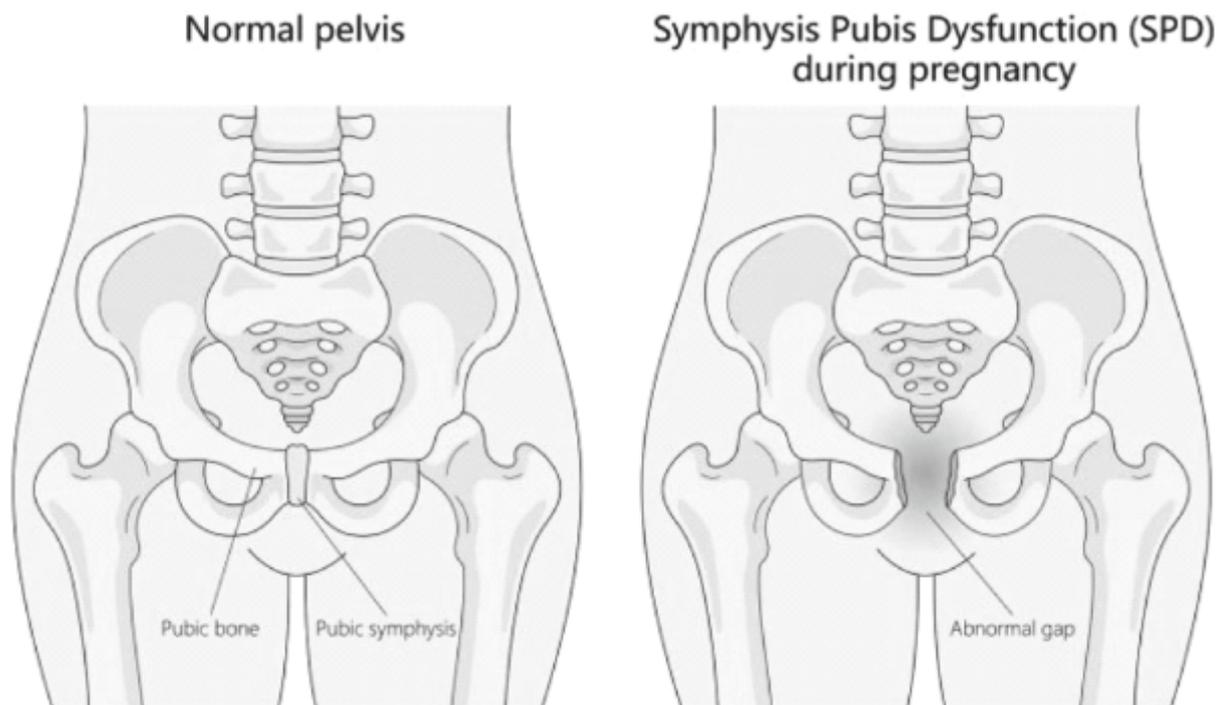


Figure1: Abnormal gap in Symphysis Pubis Dysfunction

Keywords:

Smart Textiles and Wearable Systems, Maternal Health and Ergonomic Design, Human-Centered Healthcare Innovation, Sensor-Based Prototyping, Adaptive and Inclusive Design, Biodegradable and Climate-Responsive Materials

References:

- [1] Quintero Rodriguez C, Troynikov O. The effect of maternity support garments on alleviation of pains and discomforts during pregnancy: a systematic review. *Journal of Pregnancy*. 2019;2019:2163790.
- [2] Schauss G, Arquilla K, Anderson AP. ARGONAUT: an inclusive design process for wearable health monitoring systems. *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems*. 2022; Article 392:1–12. (Presents an inclusive, human-centered design methodology for developing wearable health devices, emphasizing adaptability to diverse body shapes and needs in healthcare contexts).
- [3] Goncu Berk G, Topcuoglu N. A healthcare wearable for chronic pain management: design of a smart glove for rheumatoid arthritis. *The Design Journal*. 2017;20(Suppl 1):S1978–S1988. (Design case study of an e-textile glove with sensor/actuator integration for pain relief, illustrating human-centered development of a smart wearable).
- [4] Matthews J, Soltis I, Villegas-Downs M, Peters TA, Fink AM, Kim J, et al. Cloud-integrated smart nanomembrane wearables for remote wireless continuous health monitoring of postpartum women. *Advanced Science*. 2024;11(13):e2307609. (Introduces a wearable sensor patch for postpartum mothers, featuring flexible smart textiles and real-time physiological monitoring to address maternal health risks).

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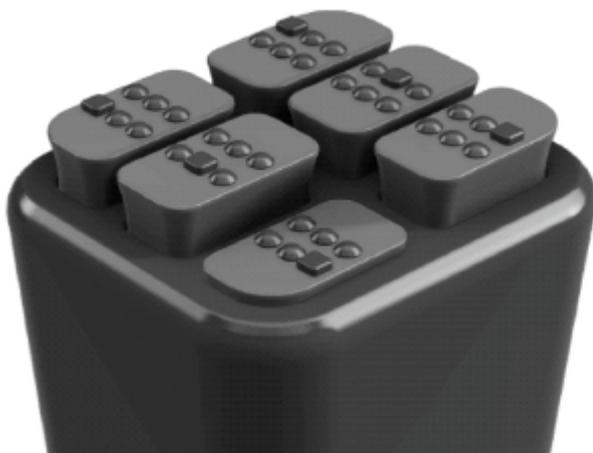
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ClickEase: Redefining Braille Writing through Inclusive and Ergonomic Design

Poorvi Singh, Dipanka Boruah, Bhaktadas Bora, V Ravishankar, Neelarnab Dutta

This study introduces ClickEase, an inclusive Braille writing tool developed to reduce hand strain and improve writing accuracy for visually impaired users. Designed through a human-centered and iterative process [1], the project reimagines the simple act of writing as an experience that can be made more accessible, comfortable, and dignified for individuals with varying physical abilities. The research originated through close engagement with students and teachers at the Jorhat Blind Institute, whose everyday challenges with conventional styluses informed the project's direction. Existing tools often require excessive pressure, leading to fatigue, while electronic alternatives remain prohibitively expensive and technologically complex [4]. ClickEase addresses these limitations through a purely mechanical, spring-based system that reduces the effort required for embossing dots, making Braille writing more intuitive and sustainable. The study followed an iterative, participatory design methodology combining ethnographic observation, ergonomic testing, and user feedback. Multiple mock-ups were created to refine pressure sensitivity, button layout, and grip comfort [3]. Each prototype was evaluated directly by users, and their insights informed successive improvements. The final design features six spring-loaded pins arranged in the standard 2×3 Braille pattern with ergonomic click buttons, allowing tactile precision and reduced exertion. User testing confirmed measurable reductions in hand fatigue and improved writing flow, emphasizing the impact of small mechanical refinements on accessibility. The findings affirm that inclusive design need not depend on advanced technology but can emerge through empathy, simplicity, and direct collaboration with users [2]. ClickEase exemplifies how universal design principles can transform routine tasks into empowering experiences. Future development will explore adjustable variants for different hand sizes and integration with digital Braille education systems, further extending accessibility and independence for diverse learners. Future work will also involve developing quantitative ergonomic evaluation metrics for such assistive devices [5].



ClickEase
Redefining Braille Writing

Figure 1: ClickEase: The inclusive Braille writing tool

Keywords:

Universal Design; Inclusive Design; Assistive Technology; Ergonomics; Human-Centered Design; Accessibility; Braille Writing Innovation

References:

- [1] Ortiz-Escobar LM, et al. Assessing the implementation of user-centred design standards on assistive technology for persons with visual impairments: a systematic review. *Front Rehabil Sci.* 2023;4:1238158.
- [2] Casarotto L, Costa P, Cunico E, Manfroni M and Priola CM. Identifying inclusive design goals for the blind and visually impaired in Venice. *Design Res Soc Conf Proc.* 2022.

- [3] Indalêncio Goulart F and Schmidt Alves Díaz Merino G. Ergonomically adapting the braille writing stylus through a user-centered design approach. *Atacama J Health Sci.* 2024;3(Suppl 2):50–51.
- [4] Zeineddine Z, Sindian S, Ahmad NAH and Ismail G. Low cost electronic braille. *WSEAS Trans Environ Dev.* 2020;16:811–819.
- [5] Azevedo FXM, Heimgärtner R and Nebe K. Development of a metric to evaluate the ergonomic principles of assistive systems, based on the DIN 92419. *Ergonomics.* 2023;66(6):821–848.

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Spaces of Change: Architectural Connect to the Socio-Political Landscape in Hindi Cinema, 1950s–1990s

Aditi Kundu

Architecture has played a serious role in films. Particularly the Hindi movie industry. Architecture has been a part of storytelling through visuals of both interior and exterior spaces. An analysis of the depiction of built and open spaces, significant landmarks and artefacts used in films will reveal the transformation in the socio-political scene of the Indian populace. The black and white era of the movies used light and shadow widely to accomplish various human emotions. While in today's times, movies use vfx technologies to depict the impossible. These films depict the changing face socio-political space in India. The movies from the 1950s to 1990s reflect the evolving human aspirations as well as a shift in value system of the Indian society. The themes begin with nation building in the 1950s to escapism in 1960s as the time line drifts away from the partition period. 1970s see a reflection of the hippie culture of the west as well as the rise of corruption in the political sphere. The emergency period, political unrest and economic challenges are well depicted in a new genre in Hindi movies. Rise in parallel cinema depicts gender and caste discrimination to poverty. The government policies which are still not in support of an open market portray as the affluent in a negative shade. 1980s is the golden era of parallel cinema with a nosedive dip in the quality of commercial cinema. A decade later, a major economic move opens the global market to India and leads to a major change in cinema as well. These depictions are often captured through Architecture and design. For example, to depict the drawbacks of a capitalist society, imageries are generated and a dark back ground is used for upper class, while the spaces belonging to the not so well off is shown in brighter hues. Another example is the use of a grand stair case belonging to the Victorian era seen in homes of the rich. This is a colonial element merging into the palatial architecture of the royals of India. Portraying wild animal heads on the wall reflect a fetish of the bourgeoisie with game of the wild.

Decade-wise Analysis

1950s – Patriotism and Nation-Building

Triggering event: Partition and independence from colonial rule

Post-independence optimism and socialist planning dominate visual culture. Village settings and communal spaces in *Do Bigha Zamin* and *Mother India* embody collective struggle and moral endurance.

1960s – Modernity and Urbanization with rising Aspiration

1960s – Modernity and Urbanization with rising Aspiration

Triggering event: New policies and development of the Nehruvian era, construction of dams, new cities and modern buildings

Industrialisation and migration introduce the architecture of progress—bungalows, railways, and hotels—as seen in *Guide* and *Waqt*. These spaces express aspiration but also moral dislocation.

1970s – The Architecture of Rebellion

Triggering event: Rising corruption in the society, Emergency

Amid political unrest and the Emergency, decaying factories and dense cities in *Deewar* and *Ankur* reflect class conflict and urban alienation.

1980s – Realism and Institutional Decay

Triggering event: Decay of the political system

Films such as *Ardh Satya* and *Jaane Bhi Do Yaaro* employ cramped interiors and bureaucratic buildings to critique corruption and moral stagnation.

1990s – Globalisation and Spectacle

Triggering event: Economic liberalization

The liberalisation era brings glass façades, shopping malls, and diasporic homes (*Bombay*, *DDLJ*, *Hum Aapke Hain Koun*) symbolising prosperity and a hybrid global identity.

Keywords:

Cinema, architecture, politics, collective consciousness, societal value

References:

- [1] Bhatt, V., & Scriver, P. (1990). Contemporary Indian Architecture: After the Masters.
- [2] Bruno, G. (2002). Atlas of Emotion: Journeys in Art, Architecture, and Film.
- [3] Dwyer, R. (2014). Bollywood's India: Hindi Cinema as a Guide to Modern India.
- [4] Lang, J. (2002). A Concise History of Modern Architecture in India.
- [5] Prasad, M. M. (1998). Ideology of the Hindi Film: A Historical Construction.
- [6] Rajadhyaksha, A., & Willemen, P. (1999). Encyclopaedia of Indian Cinema.

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From Access to Experience: Co-Creating Inclusive Heritage for Diverse Communities

Rohit Bharti, Ayla Khan

Heritage is often conserved as a static legacy of the past, yet its vitality lies in the way communities participate in shaping and experiencing it. In India, accessibility efforts for Persons with Disabilities (PwDs) have traditionally focused on ramps and infrastructure, while the cultural and interpretive dimensions of heritage, how people feel, learn, and connect, remain underexplored. This paper reframes heritage as a shared cultural experience that gains depth and meaning through co-creation, dialogue, and inclusive design practices. Two case studies form the basis of this exploration. **The City Palace, Jaipur** demonstrates how collaborative initiatives such as braille panels and audio guides allow multiple modes of engagement with the same heritage narrative. **Project Sparsh**, developed by Asian Paints and St+art India Foundation, invites blind students to participate in tactile art inspired by Rajasthani motifs, transforming spectators into co-creators. Together, these examples reveal that true inclusivity in heritage arises not from compliance checklists but from **creative partnerships** between designers, communities, and marginalized groups. Anchored in global and national frameworks such as the **ICOMOS Charter (2008)** and the **Accessible India Campaign (2015)**, the research underscores the potential of **digital storytelling, sensory design, and participatory workshops** to broaden inclusive interpretation. By situating accessibility as a form of cultural participation rather than retrofitted infrastructure, the paper advocates a shift from physical access to experiential inclusion. In alignment with *Zeitgeist 2026's* call to unite tradition with innovation, this study positions inclusive heritage not as a niche concern but as a vital cultural dialogue, one that merges local wisdom, technological creativity, and community agency to build shared futures rooted in empathy and collaboration.

Keywords:

Heritage, Co-Creation, Accessibility, Community Participation, Inclusive Design.

Acknowledgments:

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References:

- [1] Bhowmick S 2022 An architect is making heritage accessible for the disabled, one monument at a time. (Business Today) [online] available at: <https://www.businesstoday.in/lifestyle/off-track/story/an-architect-is-making-heritage-accessible-for-the-disabled-one-monument-at-a-time-348742-2022-10-01> (accessed January 2024)
- [2] Department of Empowerment of Persons with Disabilities, Ministry of Social Justice and Empowerment, Government of India 2023 Annual report of the Department of Empowerment of Persons with Disabilities for the year 2022–23. [online] available at: <https://divyangjan.depwd.gov.in/content/upload/uploadfiles/files/Annual%20report%2022-23%20Printed%20Final.pdf> (accessed January 2024)
- [3] International Journal of Cultural Property 2008 ICOMOS charter for the interpretation and presentation of cultural heritage sites. (Int. J. Cult. Prop.) 15(4) DOI:10.1017/S0940739108080417 (accessed December 2023)
- [4] Jha M 2016 The history of India's disability rights movement. (The Diplomat) [online] available at: <https://thediplomat.com/2016/12/the-history-of-indias-disability-rights-movement> (accessed 2 December 2021)
- [5] Libena L, Chaloupkova K and Vanicek J 2021 Specific forms of interpretation of cultural heritage for tourists with various forms of disability. (Faculty of International Relations, Department of Tourism, Prague University of Economics and Business, Prague, Czech Republic) DOI:10.18267/pr.2021.krn.4816.6 (accessed January 2024)
- [6] Ministry of Culture, Government of India 2023 Accessible India Campaign: Accessibility standards and guidelines. (The Gazette of India) (Edition: January 21, 2023/Magha 1, 1944) (accessed December 2023)
- [7] NewsVoir 2024 Asian Paints along with St+art India Foundation infuse touch into 'Art' via Project Sparsh at Rajasthan Netraheen Kalyan Sangh School, Jaipur. (ANI News) [online] available at: <https://www.aninews.in/news/business/business/asian-paints-along-with-start-india-foundation->

infuse-touch-into-art-via-project-sparsh-at-rajasthan-netraheen-kalyan-sangh-school-jaiपुर
20240112112943 (accessed January 2024)

- [8] United Nations 2006 Convention on the rights of persons with disabilities. (Treaty Series) 2515 3
[online] available at: <https://www.un.org/disabilities/documents/convention/convoptprot-e.pdf>
(accessed December 2023)

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Negotiating Architectural Identity through the Use of 'Jaalis'

Ruchi Saxena

The 'Jaali' as an architectural element has been notorious for its pleasing appearance while regulating sunlight, promoting wind flow and enhancing privacy and security in traditional buildings. Its usage is still prevalent in contemporary architecture, both as an exterior and interior element. A study of its usage in contemporary times points towards its capacity of negotiating questions of Architectural Identity in the increasingly global world. Architects have recognised its aesthetic and functional appeal, but have also utilised it to reclaim heritage, as a tool of cultural revival or to contextualise their designs. On the other hand, with newer technologies and materials, the same Jaali successfully creates 'global' facades in regional settings. This dual and contradictory usage of the Jaali forms the focus of this paper. The research employs a case-study methodology, examining buildings constructed from 2010 to 2025 A.D. Thematic analysis of these case studies reveals five key themes in contemporary Jaali usage: as a cultural symbol, a sustainable option, a veil for privacy, a modern idiom, and a master of disguise. The study argues that the Jaali's versatility allows it to effortlessly adapt to diverse architectural attitudes, from contextualism to critical regionalism. While its appropriate integration can create a nuanced and uniquely Indian modernity, its indiscriminate use as a mere stylistic element risks cultural appropriation and reduces a meaningful symbol to a decorative cliché. The paper concludes that when thoughtfully integrated, the Jaali can effectively mediate between tradition and modernity, fostering an architecture that is both reflective of its regional context and responsive to contemporary challenges.

Keywords:

Jaali, Architectural Identity, Contemporary Interpretations, Regional Identity, Tradition and Modernity.

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Geometry, Ratio, and Cosmology: Cross-Cultural Perspectives on Sacred Architectural Design

Sunakshi Shokeen, Harmanpreet Kaur, Karan Jain

Across time, from ancient temples to grand cathedrals, architectural forms have woven mathematical precision as a way to express spiritual harmony / to embody the essence of spiritual harmony. This paper attempts to explore how mandala grids, Islamic harmonics and golden ratios (varied geometric frameworks in sacred architecture) transcend aesthetics, harmonizing human activity with cosmological order. This study employs a comparative lens, centered on orientation, symmetry, proportions and archetypes – the circle, square and axis mundi. It expands the scope beyond single monuments to textual insights, historical narratives and geometric analysis to reveal both parallels and contrasts across sacred designs. Case studies from Hindu, Islamic and Christian contexts place Vaastu Shastra in dialogue within a cross-cultural framework. Methodologically, the research combines digital analysis and textual study to trace ratios, alignment and symbols across traditions. Findings demonstrate that while each culture envisions its cosmos differently- through the Vaastu Purusha Mandala to qibla- orientated mosque geometry or cathedral proportions, yet converge to geometry as a shared design grammar. These parallels suggest that sacred geometry bridges human body, spirit, and cosmos. By situating sacred architecture within theory and heritage, the study shows how geometry unites harmony of form along with emphasizing on human attempt to materialize metaphysical and cosmic truths.

Keywords:

Architecture, Geometry, Harmony, Ratio, Sacred

References:

- [1] Hotwani M and Rastogi P 2021 vastu shastra: a Vedic approach to architecture Int J Eng Res Technol 11 V11IS020141.
- [2] Jency P A 2025 towards the future of vastu shastra: a scientific inquiry in design implementation enabling cultural continuity New Design Ideas 9 45–60.
- [3] Dokras U 2020 the geometry of hindu temple Indo Nordic Author's Collective.
- [4] Dabbour L M 2012 geometric proportions: the underlying structure of design process for Islamic geometric patterns Front Archit Res 1 380–391.
- [5] Payandeh M, Fadaei S and Mousavi S 2023 analyzing spiritual messages in the geometric and numeric patterns of Sheikh Lotfollah mosque based on Islamic cosmology J Islamic Archit 8 45–58.
- [6] Khan H and Fatima S 2021 Islamic motifs and sacred geometry: symbolism and interior design in the Wazir Khan mosque, Lahore (1634–1641 CE) Int Res J Arts Humanit Soc Sci 2 12–24.
- [7] Babazadeh-Asbagh N, Cagdas G and Altan E 2023 analysing the divine proportion or the golden ratio on the plan and façade of the churches in the walled city of Famagusta, North Cyprus Proc ICCAUA 2023 Conf (Famagusta: Cinius Yayınları) pp 112–134.
- [8] Ramzy N S 2021 interpreting the gothic cathedral of Notre Dame de Paris as a standing hymn: musical notes of 5:3 (golden ratio) in portal and chancel design Front Archit Res 10 674–690.

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Rafugari: Indigenous Knowledge System of Repair and Sustainability

Dolly Kumar

This research presents a descriptive study on Rafugari—an indigenous knowledge system of repair and sustainability practiced by the Rafugars of Najibabad (Bijnor, Uttar Pradesh). Renowned for their mastery of invisible repair, these needleworkers specialize in restoring damaged antique pashmina, jamawar, and kani shawls of Kashmir that were once desirable by royalty and elites of the 18th and 19th centuries. Their mastery lies in extracting yarns from the same textiles, repairing damage so finely that it camouflages with the original weave, making the repair almost invisible. The process, which may take weeks or even months for completion, reflects the philosophy of slow making, material memory, and care embedded within the fabric itself (Jackson S, 2013). This study positions Rafugari within the theoretical frameworks of sustainability and cultural heritage conservation. Drawing from UNESCO’s Convention for the Safeguarding of Intangible Cultural Heritage (UNESCO, 2003) and the cultural sustainability model proposed by Soini and Birkeland (Soini K, 2003), the research identifies Rafugari as an intangible craft knowledge that sustains both material and cultural continuity. While Kashmiri shawls have been extensively studied, these needleworkers remain socially marginalized and economically undervalued for their contribution in preserving the structural, aesthetic and symbolic worth of the antique shawls. Thus, this research highlights Rafugari as more than a technique of repair, positioning it within the indigenous knowledge system of craft and materiality that upholds the ideals of circular fashion, repair economy, and craft sustainability.

Keywords:

Rafugari, sustainability, indigenous knowledge, repair economy, textile conservation, circular

References:

- [1] Jackson S 2013 Rethinking Repair. In T Gillespie, P Boczkowski and K Foot (eds.), *Media Technologies: Essays on Communication, Materiality, and Society*. MIT Press, Cambridge, MA.
- [2] UNESCO 2003 Convention for the Safeguarding of the Intangible Cultural Heritage. United Nations Educational, Scientific and Cultural Organization, Paris.
- [3] Soini K and Birkeland I 2014 Exploring the Scientific Discourse on Cultural Sustainability. *Geoforum* 51 213–223.

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Positioning Visible Mending as Green Aesthetics for a Sustainable Future

Babita Bhandari

Green aesthetics is an approach that combines aesthetic experiences and evaluation with sustainable values, and it offers an opportunity to mature one's aesthetic experiences in the context of fashion. Upcycling, mending, and repairing could be the new aesthetic paradigm in the aftermath of the sustainability movement. This study investigates the awareness, perception, and acceptance of visible mending among young fashion consumers from a sustainability and conscious design perspective. Due to the growing environmental concerns and the detrimental impacts of fast fashion, young people hold the potential to act as powerful change-makers in transitioning towards more responsible consumption patterns. Culturally, wearing mended clothing in society has been associated with poverty and social stigma. However, recently, the changing aesthetic preferences of people, which involve increasing awareness and receptiveness towards green aesthetics, present a positive aspect of mending to be explored further. Hence, positioning visible mending not merely as a technique to extend the life of clothing but as a form of design activism, this empirical research explores how creative repair practices can engage youth in meaningful dialogue around climate justice and sustainable fashion. Adopting a mixed-methods approach, the study draws on qualitative interviews to examine current consumer habits related to fashion use, disposal, and repair. A series of hands-on workshops was conducted with participants aged 18–25, where they learned and practiced various visible mending techniques on their garments. These workshops aimed to foster both technical skills and emotional connections with clothing. After the intervention, participants wore their mended garments, and their reflections were documented to assess shifts in attitude and social acceptance. Exploring mending as an activity not only supports circular fashion by resisting throwaway culture but also highlights visible mending as a form of design activism that advocates for a more inclusive and sustainable future.

Keywords:

Design activism, Green aesthetic, Inclusive future, Mending, Repair

References:

- [1] Armstrong C M Niinimäki K & Lang C 2020 Consumer perceptions related to clothing repair and community mending events: a circular economy perspective. *Fashion practice* 12 2 133–156 <https://doi.org/10.1080/1756937020201782004>
- [2] Durrani M 2018 “People gather for stranger things so why not this?” Learning sustainable sensibilities through communal garment mending practices *Sustainability* 10 7 2218
- [3] Gordon R & Hill D 2020 Creative repair: Personalisation and the emotional durability of clothing *Journal of Fashion Practice* 12 2 200–214 <https://doi.org/10.1080/1756937020201777586>
- [4] Lee T and Wakefield Rann R 2021 Conspicuous and inconspicuous repair: A framework for situating repair in relation to consumer practices and design research *J of Cleaner Production* 294 126 310
- [5] Scott M 2022 The art of mending: Exploring visible and invisible repair techniques in contemporary textile practice *Textile Cloth and Culture* 20 1 45–62 <https://doi.org/10.1080/1475975620222034>

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Traditional Design and Cultural Continuation: An Analytical Study of Agricultural Fiber-Based Crafts of Bangladesh

Farhana Ferdausi

There is a deep and growing connection between traditional culture and design in agricultural fiber-based crafts made of jute, hogla, kaisa, flax, palm leaf, and other natural fibers, etc. These crafts link urban and international contexts with the roots of rural life. A good number of indigenous term and technology, carried out rural and traditional practice's, have been passed down from one generation to the next. These crafts not only fulfil the daily needs but always carrying the local designs, cultural identity, traditional activities with a message of social hierarchy. The main aims of this research paper are to define the quality of design and the different basketry made of kaisa, palm leaves, hogla. The nature of the design of basketry made of kaisa and palm leaves of Gazipur-Dhaka and Bagura is completely different from the weaving of basketry made of hogla, which is also being made in the Bagura, Rangpur, and Noakhali districts of Bangladesh. This research paper will show a comparative study among the quality of design and weaving techniques among in the basketry of the above districts of Bangladesh as these innovative qualities and aesthetic approaches have never been studied in one indigenous platform The traditional designs and indigenous technology for this basketry will be discussed in this paper for an easy discussion.

Keywords:

Traditional design, Cultural heritage, Fibre-based crafts, Aesthetic qualities, indigenous technology.

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Bridging Tradition and Sustainability: A Mixed-Method Comparative Study of Vāstu Shastra, Feng Shui, and Sacred Geometry

S VJ, B Mudi

The research problem addressed is how various traditional design philosophies, such as Vāstu Shastra in India, Feng Shui in China, along with varied regional applications of sacred geometry, shaped the relationship between architecture and culture. The study uses a comparative analysis, drawing on a literature review of traditional texts and on geometric analysis of spatial ratios and orientations. This study aims to integrate the qualitative approaches, such as oral and written traditions, cultural frameworks, along with quantitative evaluation of geometric patterns, orientation and spatial ratios. Converting the intangible principles into quantifiable variables points out similarities in cardinal orientation, balance, and differences in philosophical contexts shaped by distinct culture and climate. The findings indicate a repeating pattern of orientation and harmony across systems, while spatial philosophies were shaped by cultural and climatic contexts. These systems are observed as contributors to sustainability rather than cultural artefacts. Principles of Vāstu and Feng Shui can be used to align with modern objectives such as energy efficiency, passive design techniques and occupant well-being. Sacred spatial knowledge can function as a resilient design source, both culturally and environmentally responsive when modern metrics are linked with it. In conclusion, traditional and cultural spatial systems, when included in design processes, offer a grounded basis for sustainable architecture, yet their integration is limited today as their adaptation is constrained by culturally specific interpretations, varying user acceptance and the challenges of integrating tradition-based spatial logics into evidence-driven and rapidly evolving contemporary design contexts.

Keywords:

Vāstu Shastra, Feng Shui, Sacred Geometry, Architecture and Culture, Spatial Orientation, Sustainable Design

References

- [1] Han, K.T. and Lin, J.K. (2023) "Empirical and quantitative studies of Feng Shui: A systematic review (PRISMA 2009 item 1)," *Heliyon*, 9(9). Available at: <https://doi.org/10.1016/J.HELIYON.2023.E19532>.
- [2] Kryžanowski, Š. (2021) "Feng Shui: A Comprehensive Review of its Effectiveness Based on Evaluation Studies," *International Journal of Advances in Scientific Research and Engineering*, 07(11), pp. 61–71. Available at: <https://doi.org/10.31695/IJASRE.2021.34103>.
- [3] Patil, N.M. and Bansal, S. (2025) "Role of sacred geometry in vastu shastra," ~ 27 ~ *International Journal of Jyotish Research*, 10(1), pp. 27–31. Available at: <https://www.jyotishajournal.com> (Accessed: November 12, 2025).

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The Evolving Future of Indian Crafts: From Heritage to Craft 4.0

Ritu Singh, Kruti Dholakia, Jaai Kakani

The integration of Indian crafts into fashion and lifestyle industry has become a significant zeitgeist, driven partly by a commitment to UN Sustainable Development Goals (SDGs). This interaction has created a cyclical-reinforcing feedback loop where industry demands and craft ecosystems continually influence each other. This perpetual interaction has fundamentally altered the nature of crafts, shifting them from community-driven, sustainable, local eco systems to market-oriented aesthetic objects. Furthermore, while digital technology offers artisans unprecedented reach to global customers; it simultaneously poses a risk of erasing the original identity and function of the craft. Given these dynamics, understanding the future direction of crafts—as envisioned by policy, institutions, industry leaders, and consumers—is vital. This study aimed to identify the prominent signals driving current trends, pinpoint weak signals, and wild cards for future shifts, and analyze the driving forces exerted by various stakeholders. The research employed appropriate foresight methods, including horizon scanning, PESTEL analysis, and the rule of three. The findings suggest a critical need to flip the value proposition of crafts. This requires moving away from the traditional view of "crafts as vernacular and indigenous knowledge systems" and adopting an indicative framework of craft futures as systems design by incorporating advanced and digital technology. Ultimately, the future mega-trend is envisioned as Craft 4.0. The insights gained from this study will provide crucial directions for the fashion and lifestyle industry to anticipate upcoming shifts and strategize successful product development, while also helping the craft sector devise reinforcing models for its long-term sustainability.

Research Question:

How can the evolution toward “Craft 4.0” redefine the Indian craft sector by balancing technological integration with the preservation of its cultural identity and sustainable value systems?

Aim:

The study aims to explore the evolving relationship between Indian crafts and the fashion and lifestyle industry through a futures-oriented lens, examining how digital transformation, sustainability imperatives, and market forces are reshaping the identity, purpose, and value systems of crafts. It seeks to forecast potential future trajectories particularly the emergence of “Craft 4.0” by analyzing stakeholder interactions and identifying signals of change, weak signals, and wild cards influencing the sector’s long-term direction.

Objective:

1. To critically examine how the integration of Indian crafts into the fashion and lifestyle industry is transforming traditional craft ecosystems—economically, culturally, and technologically.
2. To identify and analyze emerging signals, weak signals, and wild cards shaping the future trajectory of the Indian craft sector through foresight tools such as horizon scanning, PESTEL analysis, and the rule of three.
3. To propose a forward-looking framework for “Craft 4.0” that redefines crafts as systems of sustainable innovation by integrating digital technology, design strategy, and heritage preservation.

Keywords:

Indian crafts, sustainability, foresight, Craft 4.0, fashion and lifestyle, trend forecasting

References:

- [1] Bhatnagar, S., & Chatterjee, A. (2021). Reimagining Indian crafts: The intersection of tradition, innovation, and sustainability. *Journal of Cultural Economics and Sustainability*, 12(3), 45–61.
- [2] Dewangan, R., & Singh, M. (2020). Crafts and the Sustainable Development Goals: Challenges and pathways for India. *Journal of Sustainable Design*, 8(2), 88–102.
- [2] Fletcher, K., & Tham, M. (2019). *Earth Logic: Fashion action research plan*. The J.J Charitable Trust.
- [3] NITI Aayog. (2022). *Handicrafts and handloom sector report: Transforming Indian crafts for the digital age*. Government of India.
- [4] OECD. (2021). *The Future of Creative Economies: Cultural heritage, digitalization and sustainable innovation*. OECD Publishing.

- [5] Tunstall, E. (2020). Decolonizing design innovation: The craft of future-making. *Design Issues*, 36(4), 6–17.
- [6] UNESCO. (2023). *Creative Economy Outlook: Trends in culture, crafts and creative industries*. UNESCO Publishing.

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Beyond Livelihood - Exploring Spiritualism in Craft Aesthetics

Tapasya Bhargava, Promil Pande

Craft is more than just a means of making a living in Kutch. Craftspeople for generations have expressed feelings of community, faith, and belief through their practice. The workplace serves as both an environment of production and a place to call home, where legacy, livelihood, and devotion coexist. The silent energy of prayer exists in every colour stroke, hammer blow, and woven thread where the act of making combines stories and aesthetics recalled at the workbench. This paper examines how craft practices go beyond livelihood to serve as sites of spirituality, meaning-making, and material engagement. Drawing on empirical studies in fields such as theology, anthropology, and craft studies, the authors argue that craft-making involves more than technical skill and product output; it can enact a form of spiritual labour, embedding meaning, belonging, and wellbeing in material practices. This study will shed light through the design anthology and craft practices of the lacquer craft community of Kutch by illuminating the spiritual aesthetics and intangible community beliefs by focussing on the immanent spirituality of craft-making and everyday transcendence by conducting an ethnographic study incorporating anthropological observation, in-depth interviews with artisans, oral and visual documentation of craft processes, rituals, and narratives, alongside an analysis of the existing literature.

Keywords:

Craft-making, spirituality, material culture, design practice, aesthetics, sacred objects

Research Problem: In Kutch, craft is often studied primarily as an art form or commercial activity, neglecting its close connection to spirituality, communal life, and the passing down of knowledge through generation to generation. Current research focuses on the economic and aesthetic lens of the craft and often overlooks the spiritual beliefs embedded in the artisans daily lives.

Research Aim: In order to illustrate the inseparability of labour and devotion, this study intends to explore how lacquered craftsmen's activities in Kutch function as expressions of spiritual belief, cultural continuity, and communal identity. This study will strengthen the understanding of how the craft sustains the visual and communal continuity.

Methods: In order to contextualise and learn about the symbolic and cultural elements of craft-making, the research will involve anthropological observation, in-depth interviews with artisans, and visual documentation of craft processes, rituals, and oral narratives by performing an ethnographic study, alongside an analysis of the existing literature.



Figure:1. Aim of the study

References:

- [1] Reshmi JS, Sandhya S, 2023. Ahir embroidery of kutch.
- [2] Singh, G., & Hashmi, T. (2024). Developing Beliefs: The Religious and Cultural Importance of Metal Craft in India. *Migration Letters*, 21(S7), 1713–1720.
- [3] Vadgama, A. (2021). The New Normal: Textile crafts in kutch amidst the COVID-19 Pandemic. *EXTILE: Cloth and Culture*, 20(3).
- [4] Balaswaminathan, S. (2019). The Real Thing: Craft, Caste, and Commerce amidst a nationalism of tradition in India. *The Journal of Modern Craft*, 11(2), 127-141.
- [5] Myllys I, 2020. Spiritual Yarning: Craft-making as getting along in Everyday Life.
- [6] Martins P, 2021. An essay on Spirituality in Indian Sacred Art: Some Perspectives.
- [7] Keating R. 2008. Connecting art with Spirituality within the Indian aesthetics of Advaita Vedanta.
- [8] Kumar M, 2024. Historical techniques in Indian Craftsmanship.
- [9] Singh G, Hashmi T 2024. Developing Beliefs: The religious and cultural importance of metal craft in India.
- [10] Arooshi A, Sharma N 2025. Wool, Worship, and Weft: Cultural semiotics in the Dhabla weave of kutch.
- [11] Chatterjee A, 2021. Life after Life: Textile Crafts in India and Communities of Practice.
- [12] Bose C, 2019. Perspectives on Work, Home, and Identity From Artisans in Telangana.
- [13] Hacker K, 2016. *The Journal of Modern Craft*.
- [14] Sethi A, 2024. Ritual as image - Materiality, social history, and the gendered economies of agrarian capitalism in central India.
- [15] Wang M 2017. Innovation and development of arts and crafts in lacquer art research.
- [16] Samuel A 20205. From craft to catalyst: Kutch embroidery as a geographical indication in promoting sustainable development goals.

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Symbolism, Ritual, and the Built Form: Understanding Indian Knowledge Systems in Tribal Architecture of Northeast India

Anshika Khurana, Vrinda Mata, Rajat Verma

This paper investigates the profound integration of spiritual, social, and ecological knowledge systems within the architectural traditions of Northeast India's tribal communities. Through detailed examination of the Naga Morung, Mizo Zawlbuk, and Garo traditional dwellings, this research reveals how indigenous tribes embed complex knowledge systems into their built forms, creating architecture that serves simultaneously as shelter, social institution, spiritual space, and ecological interface. The study employs ethnographic analysis, architectural documentation, and symbolic interpretation to understand how these structures embody indigenous worldviews, encode cultural knowledge, and maintain ecological relationships. The findings demonstrate that tribal architecture of Northeast India represents sophisticated knowledge systems that integrate cosmological understanding, social organization, environmental adaptation, and ritual practice into coherent built forms. This research contributes to understanding how indigenous communities create architecture that transcends mere functionality to become repositories of cultural knowledge and expressions of indigenous ontologies.

Keywords:

Tribal Architecture, Northeast India, Indigenous Knowledge Systems, Morung, Zawlbuk, Garo Architecture, Symbolic Architecture.

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Handcrafted Toys and Products as Cultural Indicators: An Analysis of their Practices, Functions, and Societal Significance

Arun Mascarenhas

In India, handmade toys and products transcend their role as mere playthings, serving as cultural artifacts that encapsulate regional aesthetics, narratives, and pedagogical values. This concise analysis offers a critical review of the literature across three domains—visual and material culture, toy-based pedagogy in education, and the political economy of handicraft clusters—to understand how handmade toys function as cultural signifiers in contemporary society. Referring to ethnographic studies, policy reviews, and design research, the analysis highlights material affordances, their roles in cultural socialization, and their renewed significance within the National Education Policy's focus on toy-based learning and foundational pedagogy. This study examines the structural challenges confronting artisans and assesses the ethical dimensions of design interventions and the startup culture. The findings indicate that handmade toys are uniquely positioned to support culturally responsive pedagogy and sustainable design practices, yet they face existential threats from marketization and extractive design collaborations. The article concludes by identifying gaps in the research scholarship and recommending integrative strategies for further academic inquiry at the intersection of craft practices, social design, design education, entrepreneurship, and the economy.

Keywords:

Handmade toys, Cultural signifiers, Toy-based pedagogy, Design education, Craft clusters, NEP 2020, India

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Analytical Study on the Engagement of Mandala Art Artistry with the Students of Design

Sanil Bhawle, Bhavesh Shah

This study explores design students' interactions with Mandala Art, focusing on its significance for encouraging creativity and improving visual aesthetics in design education. Mandala, which means "circle" in ancient Buddhism and Hinduism, is a complex geometric pattern based on spiritual and cultural practices. The mandala, a picture of the universe with circular patterns and symbolic images, represents the bringing together of opposites in art and design [1]. These symbolic representations of the art include detailed symmetrical patterns that portray balance and harmony. Mandala Art has grown beyond its religious roots to become important in art therapy, psychology, and modern design. The use of mandala art therapy as a therapeutic tool has started to receive some attention and recognition [2]. Coloring the detailed, symmetrical, and repeating patterns of a mandala can help in relaxation and meditation, leading to self-discovery and the elimination of negative thoughts and emotions [3]. Mandala Art teaches to focus on details, think about space, and solve problems, all of which are valuable skills in the design industry. Drawing mandalas can also help college students manage their stress and emotions [4]. The research uses qualitative analytical tools such as interviews and questionnaires to assess students' experiences, motivations, and creative expressions using Mandala Art. The survey demonstrates a considerable interest, particularly among young undergraduate Design students who employ Mandala Art for personal, therapeutic, and academic purposes. The findings show that Mandala Art is primarily used for personal projects, therapy, and academic purposes, with traditional methods being the most popular. The study also looks at the perceived benefits of Mandala Art for stress reduction, problem-solving skills, and creativity, emphasizing its importance in design education and practice. Despite various limitations, such as a perceived lack of expertise and significance, Mandala Art has been noticed as stress reliever, enhancing problem-solving and creative aspects amongst the students of design. The study provides insights and ideas on how to integrate Mandala Art into the design curriculum to increase its appeal and accessibility.

Keywords:

Mandala Art, Stress level, Indian visual design pattern.

References:

- [1] Craig Weston Walker (1994). 'Literature as Mandala', The University of Montana Graduate Student Theses, Dissertations, & Professional Papers. 2855.
- [2] Guo-Hui Xie and Qi Wang (2021), 'Mandala Coloring as a Therapeutic Tool in Treating Stress-Anxiety Depression Syndrome', published in Asian Journal of Interdisciplinary Research, DOI:10.54392/ajir 2144.
- [3] Mandala-coloring as a Therapeutic Intervention for Anxiety Reduction in University Students. Sarah Mehmood Noor, Tamkeen Saleem, Javeria Azmat, Kehkashan Arouj.
- [4] Juanjuan Li, Bo Wu (2020), 'The Application of Mandala Drawing in Psychological Education in Universities' published in Atlantis Press SARL, Advances in Social Science, Education and Humanities Research, volume 493, International Conference on Education Studies: Experience and Innovation (ICSEI 2020), DOI:10.2991/assehr.k.201128.105.

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Traditional Clay Dolls & Toys of Bangladesh: An Aesthetical Study

Namirah Farzana

The Traditional clay dolls and toys of Thakurgaon district of Bangladesh have a unique perspective and culture that show the creativity, skill, and life experiences of people in rural areas. They are not only fun to play with, but they are also deeply connected to rituals, social stories, and folk traditions of Bangladesh. The shapes, colors, and textures of clay dolls express the simplicity and identity of the artisans of each district of Bangladesh. They are often used to represent animals, mythical figures, mothers, and domestic life. Dolls are made by hand from local clay that is shaped, dried in the sun, and decorated with natural pigments. The form and size show the artisans' choices in style, which can be anything from geometric abstraction to realistic depictions of people. The colour palette is usually small but bright, creating a strong contrast that brings out expressive qualities. There are social meanings behind the dolls-symbols that tell stories of fertility, safety, and cultural continuity. By looking at these aspects, it becomes clear that traditional dolls are more than just toys; they are also cultural symbols and visual records of everyday life in rural areas. This research will explore the beauty of clay dolls and toys of Thakurgaon district of Bangladesh, elaborately presenting the investigation of significant characters of the artifacts. The design and indigenous quality of playful objects will be discussed in a special manner and this paper will be studied on the basis of field survey. This study will also consider dolls and toys made of clay in a larger context of contemporary folk aesthetics, focusing on how important they are to both modern practice and heritage preservation. The paper also discusses the problems that could hinder the continuation of this craft, such as modernization, the loss of traditional skills, and changes in the market. In the end, it argues that preserving the beauty of traditional clay dolls and toys is important for cultural preservation, ensuring that craft practices in Bangladesh can be sustained in the long run.

Keywords:

Clay crafts, traditional dolls and toys, symbolic meaning, cultural heritage, preservation.

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Narrative Materiality: Contemporary Reflections in the Traditional Craft of Ghurni Doll Making

Antar Biswas, Neelarnab Dutta

This study investigates the traditional clay doll-making craft of Ghurni, Krishnanagar (West Bengal), focusing on how this long-standing practice has evolved in both material and narrative expression. Rooted in a centuries-old cultural identity, Ghurni dolls have transitioned from depicting mythological and rural themes to representing contemporary characters, urban occupations, and popular culture. Through this evolution, the dolls have become narrative artefacts-mirroring the shifting socio-cultural landscape and serving as tangible records of changing community aspirations. While existing literature primarily explores the historical lineage, production process, and economic aspects of crafts [1][2], this research offers a new interpretive lens-positioning Ghurni dolls as cultural texts that embody adaptation and resilience. Employing a qualitative methodology, data were collected through ethnographic observation, artisan interviews, and secondary documentation. The findings were analyzed through a socio-cultural lens [3], examining how material choices, techniques, and subjects collectively reflect broader societal transformations and the artisans' strategies for survival in a competitive, industrialized economy. The study reveals that the artisans' evolving use of materials and themes exemplifies both creative continuity and innovation. Their deep understanding of clay-its affordability, plasticity, and expressive capacity-demonstrates how craft traditions sustain themselves by negotiating between heritage and modernity. For the design community, this research underscores the relevance of traditional craft practices as living models for sustainable and culturally resonant design [4][5]. The artisans' adaptive material intelligence and narrative sensitivity provide valuable insights into how making can remain rooted in local identity while responding dynamically to contemporary culture. The study concludes that craft, as an evolving aesthetic practice, offers a human-centered and ecologically grounded alternative to mass production, reaffirming the enduring dialogue between culture, creativity, and material expression.

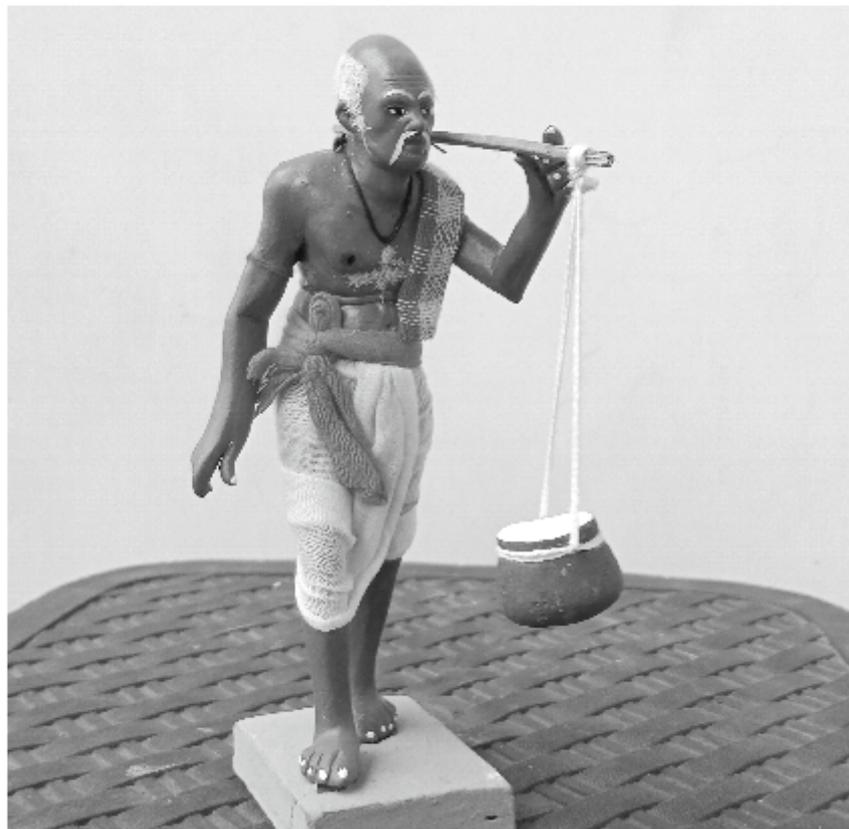


Figure1: A Ghurni Doll illustrating man carrying curd

Keywords:

Ghurni Dolls; Craft and Material Culture; Cultural Adaptation; Narrative Artefacts; Sustainable Craft Practices; Contemporary Aesthetics; Clay Artisans

References:

- [1] Ding C, Ismail NA, Hussein MK, Hussain N. A systematic review of the traditional handicrafts preservation toward sustainable intangible cultural heritage. *SAGE Open*. 2025;15(3).
- [2] Li H, Xue T, Zheng Z, Luo X, Huang G. The innovation of traditional handicrafts and cultural identity: A multidimensional value analysis using the DEMATEL-ISM method. *PLOS ONE*. 2025;20(5): e0322893.
- [3] Makovicky N. The seduction of craft: Making and value in artisanal labour. *Journal of Material Culture*. 2020;25(3):309–323.
- [4] Chauhan M. Navigating “modernization” in craft: Artisan-designers in Gujarat, India. *International Journal of Fashion Studies*. 2022;9(2):299–316.
- [5] Zbucnea A. Traditional crafts: A literature review focused on sustainable development. *Culture Society Economy Politics*. 2022;2(1):10–27.

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The Decorative Vocabulary of Talatal Ghar: Traditional Aesthetics in Contemporary Applications in Assamese Textiles

Sumita Choudhury, Anmol Xaxa, Pranab Kumar Panda

Assamese textiles, renowned for their rich traditions in Muga, Pat, Eri silks, and cotton handlooms, embody the cultural identity and artistic heritage of the region. Traditional motifs—drawn from nature, mythology, and everyday life—have long reinforced community narratives and values [1]. Talatal Ghar, an Ahom-era palace located in the Sivasagar district of Assam, presents a distinctive architectural and decorative vocabulary through its arches, brick reliefs, vegetal friezes, and figural panels. This paper explores the potential of translating these wall art and ornamental elements into textile motifs that preserve authenticity while remaining adaptable to contemporary aesthetics. A methodology of motif mapping, reduction, and adaptation is proposed for handloom techniques such as supplementary weft, brocade, and border repeats [2]. By reinterpreting architectural ornamentation within woven designs, the study highlights pathways for innovation that strengthen Assamese cultural identity, promote sustainable craft practices, and connect tangible architectural heritage with intangible interpretation of aesthetic in weaving traditions. The translation of Talatal Ghar’s decorative language into Assamese textiles underscores the capacity of design to serve as a bridge between material heritage and living traditions.[3] Architectural motifs arches, friezes, and relief panels provide a powerful source for both traditional and contemporised textiles when adapted with technical feasibility and cultural sensitivity [4]. Such innovations preserve the essence of Assamese weaving while opening new opportunities for contemporary markets. Importantly, they reinforce regional pride, support heritage conservation awareness, and sustain craft livelihoods. Future research should emphasise field documentation, collaborative workshops with weavers, and prototyping of textile collections directly inspired by the visual language of Talatal Ghar [5].



Figure: 1. Wall relief of Talatal Ghar.

Keywords:

Assamese textiles; Talatal Ghar; Ahom architecture; Traditional motifs; Contemporised design; Motif translation

References:

- [1] Padaki NV, Barman AK, Das B, et al. Traditional Textile Designs and Costumes of Assam. Guwahati: NEDFi; 2015.
- [2] Indira Gandhi National Centre for the Arts (IGNCA). Textiles of Assam – Motifs and Symbolism [Internet]. New Delhi: IGNCA; . Available from: <http://ignca.gov.in/>
- [3] Government of Assam. Talatal Ghar, Sivasagar – Tourism and Heritage Overview [Internet]. Available from: <https://www.assamtourism.gov.in/>
- [4] Times of India. Heritage structures of Assam under threat: Encroachment at Talatal Ghar [Internet]. 2023 . Available from: <https://timesofindia.indiatimes.com/>
- [5] Sharma M. Talatal Ghar: Architecture and Ornamentation. J North-East Herit Stud. 2021;4(2): [45–56].

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Undoing Postmodern: Indigenous Epistemologies and Art and Design Education

Asit J. Bhatt

In the collection of essays entitled 'Power/ Knowledge', Michel Foucault (1980) noted that discursive practices and institutions through their act of enunciation make claim to have access to a certain 'truth' and in doing so they assume primacy over other equally valid statements by discrediting and denoting them as false, illegitimate or outmoded. In the midst of our current ecological crisis, feminist scholars Stacy Alaimo and Susan Hekman (2008) have argued that due to its centrality in the modernist thought, postmodernism remained quite sceptical about the concept of real/ material; whereas the modernist thought rested upon positivist epistemological groundings with an objective access to a real/ natural world, postmodernism maintained that real/ natural/ material were entirely constituted by language. That is to say that for postmodernists, real was the product of language and had its reality only in language, in other words, in discursive practice. By rejecting the modernist grounding in the material, postmodernists turned to the discursive pole as the exclusive source of the constitution of nature, society, and reality. Far from deconstructing the dichotomies of language/ reality or culture/ nature or discourse/ material, they completely rejected reality/ nature/ material in favour of language/ culture/ discourse. The paper attempts to foreground that it is precisely this postmodern discursive attitude that undermined indigenous knowledge systems and crafts traditions by propagating its relativist as well as dualistic world-view marked by the dialectics or dichotomy of culture/ nature, discourse/ material, thinking/ making and so on, including its postcolonial extension i.e. 'critical regionalism' – a term coined by Frampton (2002), which remains complicit of its colonial legacy, and is still prevailing in our art and design education that is indeed quite problematic and requires urgent attention and decolonisation.

Keywords:

Indigenous Epistemologies, Postmodernism, Power/ Knowledge, Posthumanism, New Materialism, Art and Design Education

Reference:

- [1] Alaimo, S. & Hekman, S. (2008) (ed.) *Material Feminisms*. Indiana University Press
- [2] Foucault, M. (1980) *Power/ Knowledge: Selected Interviews and Other Writings 1972-1977*. Colin, G.(ed.), Harvester Press
- [3] Frampton, K. (2002) *Labour, Work and Architecture*. Phaidon

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Application of Sacred Geometry, Vastu and Cosmological Design in Architecture & Interior Design of Indian Residences: Case of NCR (National Capital Region), India

Varsha Shukla, Vijay Kumar

This paper explores the integration of sacred geometry, Vastu Shastra, and cosmological design principles within the architectural and interior design practices of Indian residences, with a specific focus on the National Capital Region (NCR). It argues that traditional frameworks such as the mandala, Sri Yantra and Vastu Purusha. Mandala can be reinterpreted in contemporary contexts to deliver both cultural resonance and functional performance. By aligning geometric order with natural forces—sun path, seasonal cycles, prevailing winds—and user needs, the study demonstrates how symbolic systems can be transformed into climate-responsive, resource-efficient design solutions. The research outlines strategies for master planning, orientation, zoning, proportioning, material selection, and microclimate management that balance spiritual symbolism with modern regulatory and construction requirements. Examples range from compact urban flats to larger villas, showcasing how mandalic grids, courtyards, central voids, and proportion-based layouts can enhance day lighting, ventilation, thermal comfort, spatial clarity, and psychological well-being. Evaluation metrics such as adaptive comfort indices, daylight factors, energy consumption, and user satisfaction provide measurable evidence of impact. A case-study framework for NCR is proposed, encompassing documentation, simulation, and post-occupancy surveys to validate the effectiveness of these integrated approaches. Limitations such as rigid adherence to tradition, cultural plurality, and regulatory constraints are acknowledged, highlighting the importance of flexibility and evidence-based adaptation. Ultimately, this study demonstrates that thoughtful synthesis of sacred geometry, Vastu, and cosmological design provides Indian residences with not only improved light, ventilation, and thermal comfort, but also deeper cultural resonance, spiritual symbolism, and enhanced occupant well-being. The proposed design framework offers practical guidelines and a research agenda for designers, architects, and researchers undertaking culturally rich and climate-responsive architecture in the NCR, suggesting directions for objective studies and future interdisciplinary collaboration in the field. The findings contribute to a broader research agenda bridging architecture, culture, and environmental performance, and advocate for design practices that honor tradition while addressing contemporary urban challenges.

Keywords:

Vastu Purusha, Mandala, Evaluation metrics, Psychological well-being, Adherence, Cosmological design, Interdisciplinary, Agenda bridging.

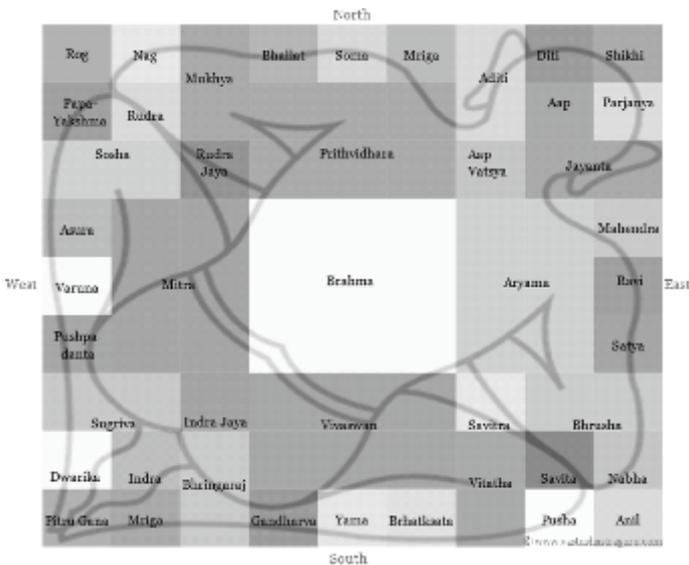


Figure 1: Overlay of Vastu Purusha Mandala on an NCR residential plot, showing functional zoning.

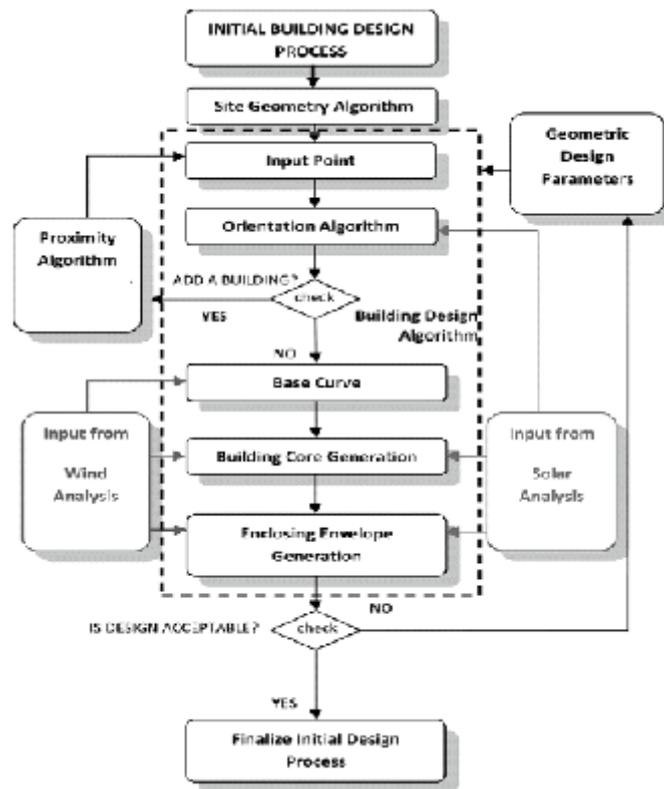


Figure 2: Design process flowchart integrating geometry, climate, and cultural validation.

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References :

- [1] Hardy, A. (1995). *The Hindu Temple: An Introduction to Its Meaning and Forms*. Oxford University Press.
- [2] Michell, G. (2011). *The Hindu Temple: Architecture and Symbolism*. Thames & Hudson.
- [3] Vastu Shastra. (2008). *Treatise on Traditional Indian Architecture (Critical Translations)*. New Delhi: Indira Gandhi National Centre for the Arts.
- [4] Dozzi, G. (1994). *The Power of Limits: Proportional Harmonies in Nature, Art, and Architecture*. Shambhala Publications.
- [5] Olgyay, V. (2015). *Design with Climate: Bioclimatic Approach to Architectural Regionalism*. Princeton University Press.

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Vastu as a Design Catalyst: A Framework for Creativity and Practice

Jayesh Chouhan, Chandni Tandon

Vastu Shastra is deeply entrenched in the Indian epistemological framework. Numerous architects and designers regard it as a constraining structure that curtails creative liberty. The dominant belief is that its orientation-based principles result in designs that are monotonous and rigid. This paper contests that assumption and asserts that Vastu is not a limitation but a fundamental framework for design thinking. By drawing out orientation and spatial arrangement, Vastu establishes a consistent baseline - a reference point from which innovation can arise [1]. This constant facilitates functional clarity while permitting extensive variation, expression, and originality in spatial form, aesthetics, and user experience, rather than obstructing innovation. Based on this premise, the study presents a pragmatic paradigm that converts Vastu's philosophical foundations into an approachable design toolbox for emerging architects and practitioners. The toolkit is developed by a rigorous examination of classical Vastu texts, with Vishwakarma Vastushastram [2] as the principal theoretical reference. The study utilizes comparative textual analysis to differentiate fundamental, function-oriented principles (such as site selection, spatial hierarchy, and orientation) from prescriptive or ornamental guidelines that are spatially or temporally constrained [3]. The recognized research gap exists in the separation between traditional Vastu practitioners and modern architectural practice. This work addresses the gap by reconceptualizing Vastu as a collection of design-oriented, functional principles applicable to contemporary architectural settings. The proposed framework promotes a critical and innovative interaction with Vastu, allowing architects to utilize it as a catalyst for architectural creativity instead of a strict guideline. This article situates Vastu inside design practice, emphasizing its capacity to produce functional coherence and creative variation, thereby renewing its significance in contemporary architectural discourse.

Keywords:

Vastu Shastra, Indian Knowledge System, Architectural Design Framework, Functional Orientation.

References:

- [1] H. Fazeli and A. Goodarzi, "The principles of Vastu as a traditional architectural belief system from an environmental perspective," *WIT Transactions on Ecology and the Environment*, vol. 128, pp. 97–108, 2010, doi: 10.2495/ARC100091.
- [2] Shastri Vasudeva Sri K. and Gadre N.B., *Vishwakarma Vastu Shastram*. 1958.
- [3] R. Patra, "A comparative study on Vaastu Shastra and Heidegger's 'building, dwelling and thinking,'" *Asian Philosophy*, vol. 16, no. 3, pp. 199–218, 2006, doi: 10.1080/09552360600979430.

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Shaping the Invisible: Conceptual Spatial Design

Minnati D Sharma

Shaping the Invisible: Conceptual Spatial Design, aims to examine the translation of intangible narratives into tangible spatial experiences within and beyond scenography. This thesis puts forward the Cascade Method, a linear, non-circular design framework that prioritises clarity, adaptability, and practical rigour. Employing a comparative multi-project case study methodology, the research analyses eight interventions executed at Scenografia Sumant Studio: Jahan-e-Khusrau, Jungly Wellness Festival, Wedding Cocktail Design, ACGS Fundraiser, ACGS Auction, Rose Room Couture Fashion Show (ICW 2025), WHO Installation, and V&A Museum Exhibition. Design approach varies across multiple design professions, such as architecture, interior design, museum design etc. Multiple scales and institutional contexts are applied in this dissertation to identify consistent mechanisms, by which narrative intent informs materiality choices, sequencing, circulation, lighting, and forms of performative encounters. Certain large-scale projects reveal strategies for effective symbolism and visitor choreography, while festival, fashion and event-based works demonstrate how temporality and economy of means produce intimacy and immediacy. The proposed contribution, The Cascade Method, is a structured, iterative, and occasional circular pipeline that translates conceptual narratives into design decisions, allowing for collaboration between designers, clients, and production teams. The thesis positions this method as both a theoretical contribution to spatial narrative studies and a practical toolkit for practitioners seeking to create coherent, immersive, and culturally resonant environments across cultural, commercial, and public domains, without lacking clarity of intent and design direction. Ultimately, while acknowledging that digital and virtual frameworks increasingly shape contemporary life, spatial design reminds us of the irreducible significance of embodied experience. "Despite our new reality being encapsulated by the virtual world, we cannot escape the 3-dimensionality of our existence." [1]

Keywords:

Spatial design, scenography, immersive experience design, event design, narrative translation, Universal design

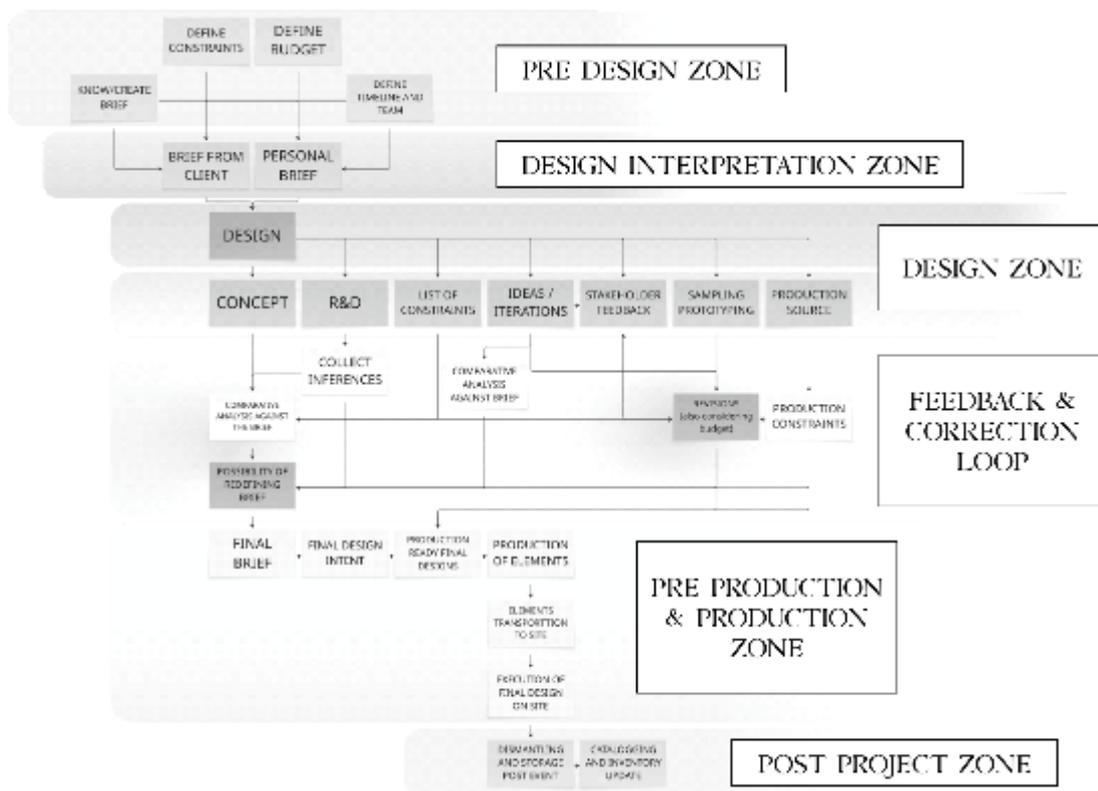


Figure 1. The Cascade Method

| PROJECT PHASE (ROUGHLY OUTLINED) | | | | | | |
|----------------------------------|------------------------------|------------------------------------|-------------------------------|------------------------|------------------------------|-----------|
| | RESEARCH & CONCEPTUALIZATION | DESIGN DEVELOPMENT & VISUALIZATION | COORDINATION & PRE-PRODUCTION | PRODUCTION & EXECUTION | FINALIZATION & DOCUMENTATION | |
| LIST OF PROJECTS | JAHAN-E-KHUSRAH | 2 WEEKS | 2 WEEKS | 2 WEEKS | 3-4 DAYS | 2 WEEKS |
| | JUNGLY WELLNESS FESTIVAL | - | - | 1 WEEK | 2-4 DAYS | 1 WEEK |
| | WEDDING COCKTAIL EVENT | 2-3 WEEKS | 3-4 WEEKS | 2-3 WEEKS | 1 WEEK | 3 WEEKS |
| | ACGS FUNDRAISER | 1 WEEK | 1 WEEK | 1 WEEK | 2 DAYS | 1 WEEK |
| | ACGS AUCTION | 1 WEEK | 1 WEEK | 1 WEEK | 3 DAYS | 1 WEEK |
| | ROSE ROOM COUTURE SHOW | 2-3 WEEKS | 2-3 WEEKS | 2 WEEKS | 2 DAYS | 3 WEEKS |
| | WIO INSTALLATION | 3 WEEKS | 1 MONTH | 2 WEEKS | UNDEFINED | UNDEFINED |
| | V&A MUSEUM EXHIBITION | 3-4 WEEKS | 3-4 MONTHS | UNDEFINED | UNDEFINED | UNDEFINED |

Figure 1. The Cascade Method



Figure 3. (From left to right, top to bottom) Images from the following projects in the thesis: a) Wedding Cocktail Event [2], b) Rose Room ICW 2025 [3], c) Rose Room ICW 2025 [4], d) Jungly Wellness Festival 2025 [5].

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References:

- [1] Sharma M D 2025 Shaping the Invisible: Conceptual Spatial Design vol 1 (Ahmedabad: National Institute of Design) p 19.
- [2] Sharma M D 2025 Shaping the Invisible: Conceptual Spatial Design vol 1 (Ahmedabad: National Institute of Design) p 77.
- [3] Jajodia I 2025 Rose Room India Couture Week 2025 media archive (Delhi)
- [4] Jayakrishnan S 2025 Rose Room India Couture Week 2025 media archive (Delhi)
- [5] Sharma M D 2025 Shaping the Invisible: Conceptual Spatial Design vol 1 (Ahmedabad: National Institute of Design) p 47.

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Trace Elements – The Gleneden Post-War Design Archive

Matthew AE Taylor

The Heritage Quay Archive at the University of Huddersfield houses a collection of hand-painted designs known as The Gleneden Post-War Design Archive. These images of historical significance, created as visual instruction for the construction of Jacquard woven cloth, bare the marks of a working life; their surfaces torn and cracked, have marginal messages scattered around the periphery of their pages, many adjoined to fragments of cloth produced in consultation with the documents. Most of the collection was produced over 50 years ago and the designs no longer in circulation. Consequently, they require reawakening, activating through a human connection to begin another journey where new stories can be told. Trace Elements collects activities in which Dr Matthew Taylor utilising images from this archive, encourages drawing as a research tool. Through processes of drawing and making new works are produced from a co-creative exchange with communities of identity, interest and experience. The practice-led collaborative drawings are produced iteratively with visitors to the project showcase table. Initially a conversation about the archive begins the exchange, later drawing is encouraged, and through these discussions many other topics including the transformative process of inclusive creativity, and how artistic play can bring people together to produce new imagery and stories emerge as a response to this dormant collection. Each drawing activity is simple yet transformative. Guests are instructed to pick up a pen, follow the lines or follow their gut, to trace elements, to alter, add, change, improve or deface, creating a new work that overlays the original image. All responses are welcome as everyone can draw, there are no wrong marks. The resulting image, produced by an assortment of anonymous hands, becomes editable content that can be manipulated and manufactured as a contemporary pattern produced through a dialogue with the past.

Keywords:

Archives, Co-Creative exchange, Drawing, A/r/tography, Workshops

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From Drought to Hope – A Journey with Pani Foundation

Anjali Sunil Patil, A.R. Anupama Sonpitale

Water is one of the most vital natural resources on Earth. It plays a central role in sustaining life, agriculture, and rural livelihoods. However, many villages in Maharashtra suffer from chronic water scarcity, especially during the summer months, which leads to crop failure, unemployment, and large-scale migration. In this context, water conservation is not just a necessity—it is a path to self-reliance and rural empowerment. One of the villages Anjani had faced To tackle this serious issue, Pani Foundation, founded by actor Aamir Khan and producer Kiran Rao in 2016, initiated a statewide movement for water conservation in rural Maharashtra. Their unique approach combined scientific watershed techniques with mass training programs, competitions, and most importantly, people's participation. The flagship initiative of the Foundation, the Satyamev Jayate Water Cup, was a platform for villages to compete in water conservation efforts by learning, collaborating, and acting together. This research paper is centered on the village of Anjani, located in Maharashtra, which actively participated in the Water Cup competition. With immense community spirit, villagers from Anjani engaged in various water conservation activities like contour trenching, bund construction, desilting of streams, and voluntary labor (shramdaan). These efforts were not only about digging soil or constructing bunds—they symbolized a transformation in mindset, a revival of collective responsibility, and a shift toward sustainable rural development. The aim of this study is to analyze the impact of Pani Foundation's model in the context of Anjani village, focusing on both environmental and social dimensions. Using qualitative methods such as interviews, field visits, and document analysis, the study documents how the villagers came together, underwent training, and implemented scientific techniques to address their water crisis. The findings reveal significant positive changes in the groundwater level, agricultural productivity, and even social cohesion within the village. As a researcher who belongs to Anjani village, I take great pride in being able to document this remarkable journey. This paper is not just an academic exercise—it is a tribute to the resilience, unity, and hard work of the people of my village. It reflects how ordinary citizens, when empowered with knowledge and tools, can bring about extraordinary transformation. This case study serves as a model for other drought-prone villages in India. It shows that with the right motivation, guidance, and community participation, water conservation can lead to long-term ecological balance and rural prosperity. The success of Anjani is a testament to what rural communities can achieve when they take ownership of their future, and it reinforces the belief that “the solution to water lies in the hands of the people.

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Empowering Sustainability: Integrating Energy Consumption, Resource Efficiency, and Sustainable Practices in a Mobile Application

Harshil Bhandari, Anupam Rana, Rutvi Chauhan, Sahil Pandavadara

Sustainable practices and responsible energy consumption through an innovative smartphone application. The concept of a smartphone application utilising AI features to inform and motivate individuals to adopt sustainable lifestyles, conserve resources, and use energy efficiently is presented in this contribution. It is built using the Double Diamond design process, interviewing more than 100 users, and conducting stakeholder analysis. In the application, there is a dynamic dashboard that utilises digital sensors, such as GPS and accelerometers, to visualise local air quality data, step counts and calculate the travel-related carbon footprints of users in real time. The application also encourages users to record their sustainable daily activities and connects these online exchanges with useful insights. A notable example of how digital design may increase everyday awareness is the addition of an AI-powered gadget scanner, which allows users to scan household electronics and instantly receive personalised energy consumption insights and carbon effect predictions based on a large language model. Additionally, it suggests replacing older devices that consume excessive amounts of power. The application also recommends local sustainable commuting options, such as bike stations. It also utilises AI prediction and geolocation to evaluate rooftop sunlight for renewable energy potential and offers tailored suggestions for adopting solar or wind energy. This contribution combines deep user involvement, personalisation, and expressive data visualisation to demonstrate how AI-powered digital interfaces can serve as behavioural change agents. The application uses the creative fusion of design, interaction, and intelligence to rethink mobile technology as an active force for sustainable change rather than only an informational tool.

Keywords:

Sustainable practices, Artificial intelligence (AI), Responsible energy consumption, Carbon footprint, Interaction design, Data visualisation

References:

- [1] Sorooshian, & Shahryar. (2024). The Sustainable Development Goals of the United Nations: A Comparative Midterm Research Review. *Journal of Cleaner Production* 453.
- [2] Shen, Y., Bosch, G., Pino, L., & Gopalan, V. (2024). Use of the 'double diamond' design framework to nurture creativity in life sciences research. *Trends Biochem Sci*.
- [3] Filho, W. L., Marisa Azul, A., & Pimenta Dinis, M. (2022). Deploying digitalization and artificial intelligence in sustainable development research. *Environment, Development and Sustainability*, Springer Nature.

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Adaptive Kinetic Facade as a Climate-Responsive Strategy for Sustainable Architecture

Mayank Sardiwal, Harmanpreet Kaur

In the phase of rapid urbanization, buildings are becoming one of the largest consumers of energy, especially in hot climates where cooling and artificial lighting demand is high. Conventional facades, usually fixed glass or heavy cladding, are unable to adjust to the changing position of the sun or seasonal variations. This often results in overheating, glare, and higher energy bills, while also lowering comfort for the people inside. The excess heat gain forces an increased use of air-conditioning, which is not only raise energy consumption but also releases more heat into the surroundings (through A.C. outdoor unit), further contributing to outdoor temperature rise and the urban heat island effect. The main **goal** of the study is to show how dynamic facades, designed with parametric tools, can make buildings more efficient and comfortable while also giving them a modern identity. The process involves designing **movable panels** that could open, close, or rotate based on sunlight and heat levels. Variable types of **origami-inspired folding structures** for maximal movement at minimal energy to provide both functional efficacy as well as design mobility. **Results and discussion** suggest that the kinetic system can reduce direct solar gain, enhance daylighting conditions, as well as contribute to significant energy savings in cooling throughout the building. Beside performance, the dynamic patterns created by panel movement enhance user experience and establish a strong architectural identity for the building.

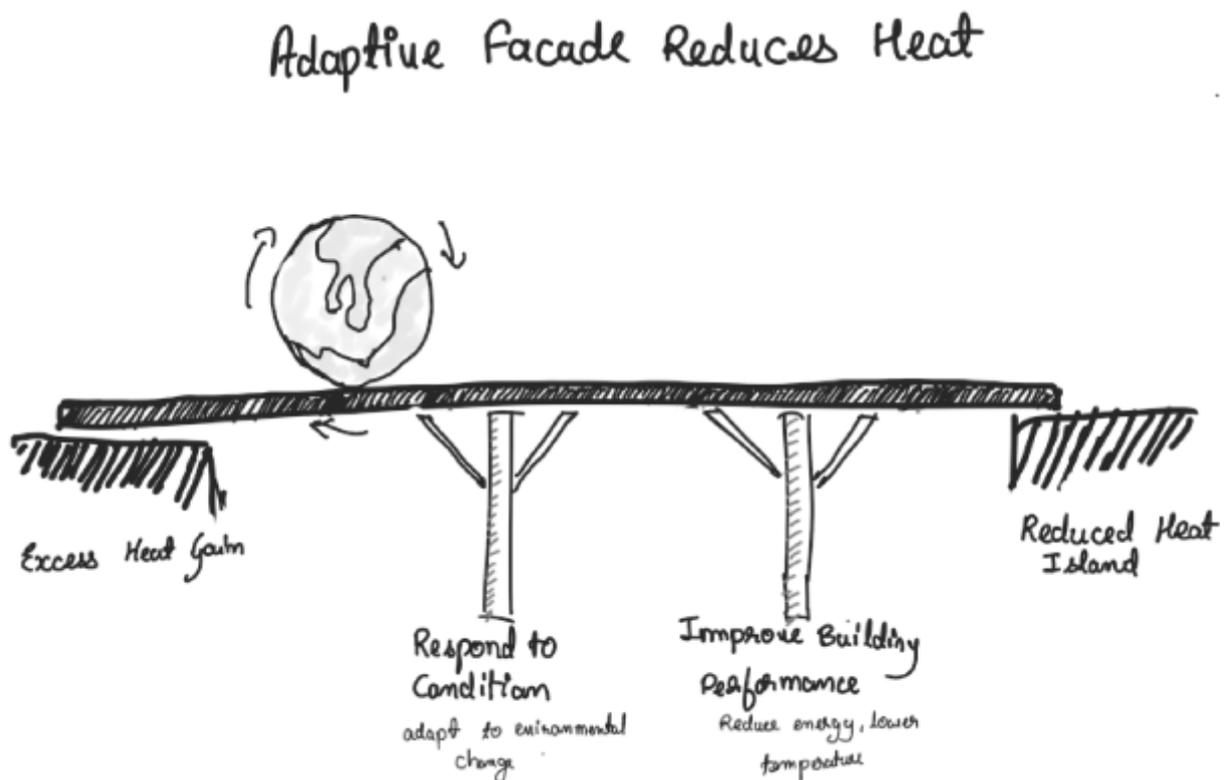


Figure:1. Sketch showing climate responsive design as a bridge.

In conclusion, the project shows that kinetic facades can work as practical environmental solutions for offices, institutions, mixed-use buildings and so-on. They bring together modern design methods and smart material to move from concept to real, buildable strategies for sustainable architecture in Urban areas.

Keywords:

Kinetic Facade, Parametric Design, Origami-inspired System, Energy Efficiency, Urban Heat.

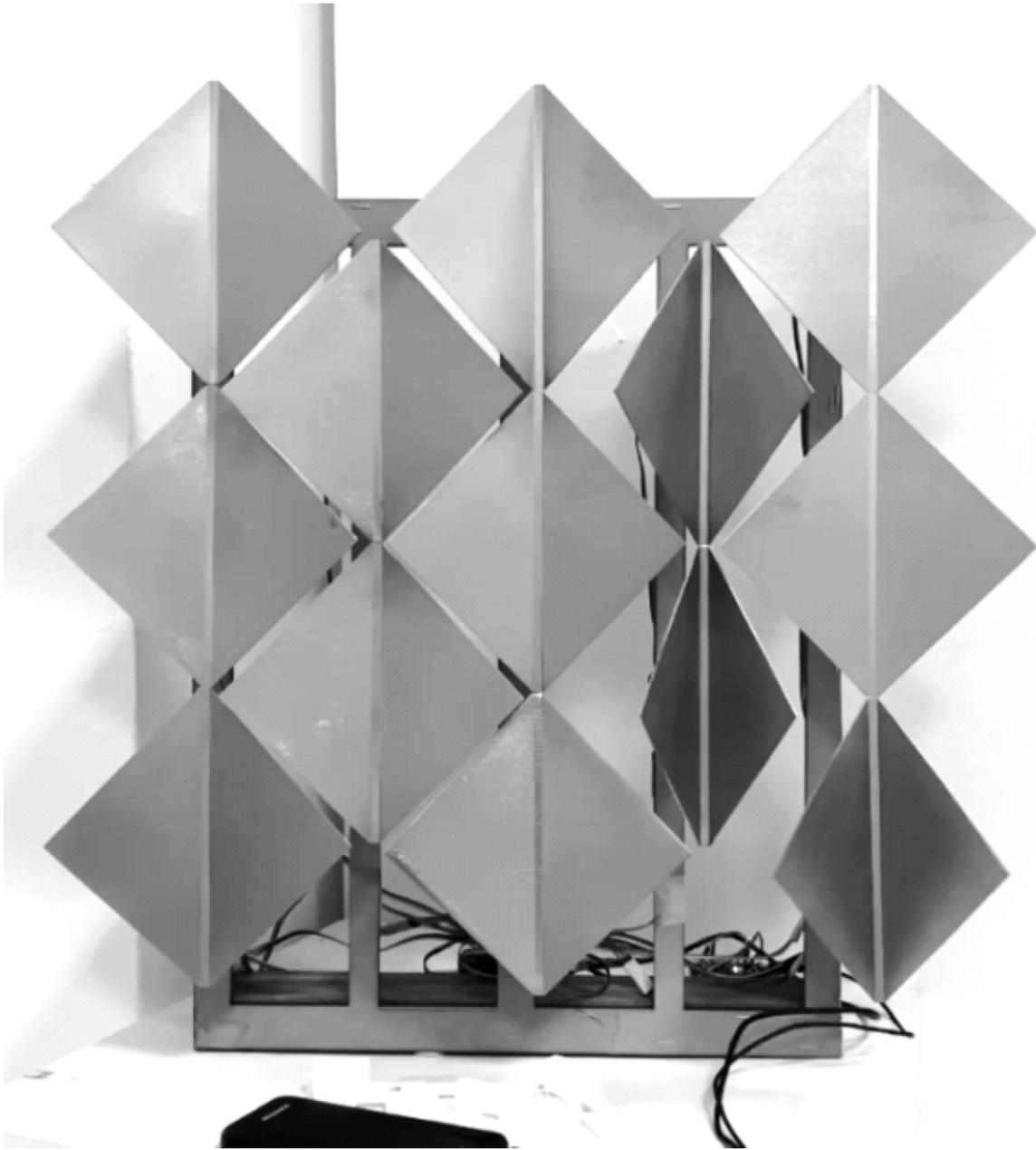


Figure 2. Prototype- Adaptive Kinetic Facade

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Pine Needle Craft, from Utility to Narrative - A Practice-Led Research in Form, Narrative, and Ecological Design

Lavdeep Singh, D Xaxa, S Kumari, M Qureshi

Himachal Pradesh's pine needle craft has historically been practiced in forest-adjacent communities, where fallen needles are collected and woven into utilitarian objects. This craft reflects an intimate engagement with the ecology of the Himalayan foothills and serves as an adaptive response to the abundance of pine forests and the fire hazards caused by fallen needles. Over time, it has also provided supplementary income, particularly for women, and has contributed to local economies through small-scale, sustainable livelihoods. Despite its ecological and socio-economic relevance, pine craft has remained peripheral within mainstream narratives of Indian craft traditions. This submission presents a practice-led body of work on pine needle craft, developed through a decade of sustained collaboration with local artisans. The project investigates how a material rooted in rural utility can be reoriented towards contemporary forms of installation and visual communication. The work is situated at the intersection of design practice, cultural research, and community knowledge. The installations and prototypes presented explore pine needle as both substance and signifier, testing its potential in generating new forms, surfaces, and spatial expressions. Through experimentation with scale, repetition, and abstraction, the craft is released from familiar categories and repositioned as a medium for ecological narratives and cultural memory. The developed forms are conceived as communicative structures that invite audiences to reflect on questions of sustainability, resilience, and regional identity. Methodologically, the research operates through practice-based inquiry and co-design. In addition to the exhibited work, a participatory workshop is proposed for the conference, engaging artisans and participants in exploring pine needle as a living material. By experimenting with techniques and form, participants will encounter the craft as both practice and narrative. This practice-led project positions pine needle craft as a dynamic field of visual and spatial exploration, generating new relevance for an indigenous material tradition.

Keywords:

Heritage, Co-creation, Community, Contemporary Craft Aesthetics, Participatory Design

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Adaptive Reuse of Abandoned Building and City for Urban Regeneration

Sudesh Sanjay Madane, Anupama Sonpitale

In many cities across the world, abandoned buildings and urban areas have become a pressing challenge contributing to urban decline, social deterioration, and environmental degradation. Conventional redevelopment often involves demolition and reconstruction, leading to loss of cultural identity and resource wastage. Adaptive reuse provides a sustainable alternative by revitalizing existing structures for new functions such as community centers, cultural hubs, and mixed-use spaces while retaining architectural and historical integrity. This study explores adaptive reuse as a tool for sustainable urban regeneration, with Lavasa City, India serving as the key case study. However, the original Lavasa project envisioned as a self-sustaining, smart hill city faced significant conceptual and implementation challenges. Over-ambitious planning, ecological disruption, financial mismanagement, and lack of social inclusivity led to its stagnation and partial abandonment. This critique underscores the importance of contextual planning, stakeholder participation, and transparent governance in future urban projects. Through literature review, spatial assessment, and analysis of Lavasa's existing infrastructure, the study identifies causes of urban abandonment and strategies for reactivation. Findings reveal that adaptive reuse can promote economic revitalization, cultural continuity, and environmental efficiency. By reimagining Lavasa's public and semi-public zones as cultural, educational, and eco-tourism hubs, this approach transforms the city's narrative from failed utopia to a model of regenerative urbanism. Conclusively, adaptive reuse emerges as a viable pathway to balance ecological resilience, economic renewal, and cultural identity in contemporary urban redevelopment.

Keywords:

Adaptive reuse, Urban regeneration, Sustainable development, Abandoned buildings, Lavasa City, Cultural preservation



Figure 1. Zoning map development plan of lavasa city



Figure 2. Study area map of lavasa city



Figure 3. Lake side structure



Figure 4. Unfinished abandoned structure



Figure 5. Unfinished Theme Park



Figure 6. Abandoned lake view hotels

Acknowledgment:

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References:

- [1] S. Cascone 5 August 2018, Recovery and reuse of abandoned buildings for student housing: A case study in Catania, Italy (Department of Civil Engineering and Architecture, University of Catania, Catania, Italy).
- [2] Pier Francesco Cherchi, September 2015 Adaptive Reuse of Abandoned Monumental Building as a Strategy For Urban Liveability.
- [3] R. J. Vidyullatha, G. Viswanadha Kumar & G. Dileep, 31st August 2023 Adaptive Reuse Of Heritage Building For Sustainable Urban Regeneration Two Case Study From India.
- [4] Sunitha V. Doraisamy Dileep, February 2017 Abandoned Project Restoration Model (APRM) For Residential Construction Projects.
- [5] Jatin Rawat, 29th April, 2022 Revival Of Abandoned Industrial Buildings Via Adaptive Reuse.

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From Problem to Product: A Participatory Co-Creation Approach to Soft Pastel Packaging

Krittika Kanagaraj, Bisheshwar Haorongbam, Sudip Adhikary

The present study addresses persistent usability challenges associated with conventional pastel packaging [1], used by artists, designers, and students. Traditional formats, typically cardboard boxes with foam inserts [1], often lead to pastel breakage, pigment transfer, and an **overall disorganized user experience**. Users frequently report difficulty in portability, accessing individual pastel sticks, and maintaining a clean workspace, all of which disrupt creative flow. [2] To address these issues, we adopted a **participatory design and co-creation approach** [3], engaging students and practicing artists throughout the design process. Through surveys, focus groups, and iterative design workshops with approximately ten participants, user insights directly informed key decisions. The resulting design, a **modular, stackable packaging system** crafted from recycled plastic, features a tessellated, interlocking tray structure that enhances compactness, durability, and spatial efficiency. This collaborative process ensured that the final solution responded effectively to user needs, improving accessibility, handling, portability, and product protection. By positioning users as co-designers, the project exemplifies the power of participatory methods to create a **functional, user-centred, and aesthetically engaging packaging solution**. Beyond improving usability, the approach fosters a sense of shared ownership, resulting in a more intuitive, organized, and enjoyable creative experience for both professionals and students alike. [4,5]

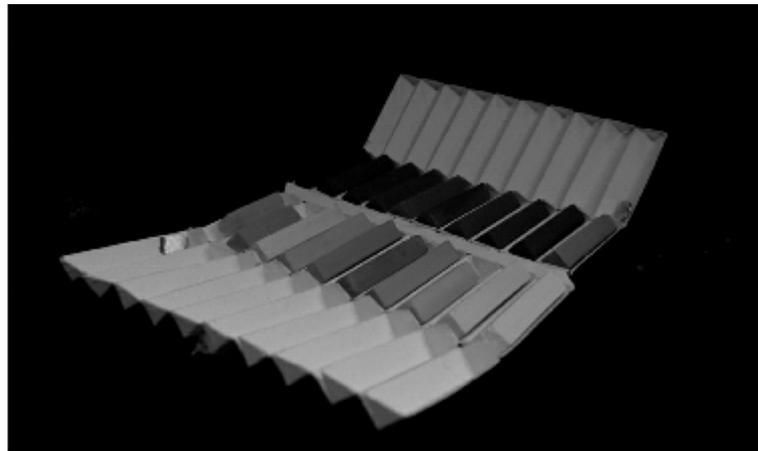


Figure: 1. Prototype of soft pastel packaging box

Keywords:

Participatory Design, Co-Creation, User-Centred Design, Modular Packaging, Usability, Packaging Design

References:

- [1] Himalaya Fine Art (check “Corporate Author”). (2024). Soft Pastels. Retrieved from Himalaya Fine Art: <https://www.himalayafineart.com/collections/soft-pastels>
- [2] Jin, W., Chen, W., & Ma, K. (2024, August 30). Sustainable Packaging User-Centered Design Employing CycleGAN and Deep Learning. Retrieved from Sustainable Packaging User-Centered Design Employing CycleGAN and Deep Learning: <https://bioresources.cnr.ncsu.edu/resources/sustainable-packaging-user-centered-design-employing-cyclegan-and-deep-learning/>
- [3] Harti, A. O. R., Marina, I., Sujadi, H., Fahrudin, M., & Fitria, A. N. (2024, 6 30). Effective Packaging Design as an Empowerment Strategy for Household MSMEs: A Participatory Learning and Action Appra. Retrieved from Unram Journal of Community Service: <https://pdfs.semanticscholar.org/1b80/b8925938a158300ec6667e2d1eda4f61d122.pdf>
- [4] Sabir, L., Praveenraj, D. D., J., M., P., A., & Manisha. (2024). Study of Innovative Packaging Designs that Create a Long-Lasting Impression on the Consumers’ Mind. *Pacific Business Review (International)*, 128–138. Retrieved from https://www.pbr.co.in/2024/2024_month/August/13.pdf
- [5] Shukla, P., Singh, J., & Wang, W. (2022). The influence of creative packaging design on customer motivation to process and purchase decisions. *Journal of Business Research*, 338-347.

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The Effectiveness of Print Media Cutouts in Demonstrating Grids and Layouts

Srutinwita Roy, Lolita Dutta

Grids and layouts form the foundational framework of visual design, guiding how elements such as text, images, and space interact on a page. A grid functions as a systematic design structure that supports clarity, consistency, and coherence across visual compositions. Understanding grid systems helps designers organize visual information coherently while maintaining creative flexibility. These principles are essential across communication media, including posters, magazines, websites, and other digital or print formats, where effective layout directly influences readability and user engagement [1]. In design education, therefore, teaching grids and layouts is crucial for developing students' ability to think critically about composition, proportion, and spatial harmony. This study presents a distinctive pedagogical approach to teaching grids and layouts in design education through the use of print media cutouts. While existing literature largely focuses on digital tools and screen-based exercises for teaching layout principles, this research highlights the learning potential of tactile and material-based engagement [2,3]. Conducted as part of a four-day design module, this one-day workshop involved Bachelor of Design students from diverse disciplines such as fashion, product design, architecture, and management, many of whom had limited exposure to visual composition in their coursework. Students began by exploring the emotional tone and visual rhythm of different compositions. They then collected newspapers and magazines, cutting out text boxes, headlines, and images to manually construct layouts. Each student was asked to create three distinct compositions using the same set of cutouts, which required critical thinking about hierarchy, proportion, and balance within defined constraints (*See Figure 1*). The findings indicate that students developed a deeper conceptual understanding of grid systems, balance, hierarchy of information, alignment, and typographic relationships through this hands-on activity compared to traditional lecture or software-based methods. When compared with similar case studies emphasizing digital layout exercises [5,6], this physical and sensory approach led to higher engagement, stronger retention of design principles, and more inventive use of space. The novelty of this study lies in reintroducing tangible, analogue processes into contemporary design pedagogy, demonstrating that physical manipulation of materials can effectively bridge theoretical understanding and practical application.



Figure 1. Student's work showing three compositions created using the same set of cutout pieces.

Keywords:

Design pedagogy, Layout design, Print media, Visual hierarchy.

References:

- [1] Djonov E and Van Leeuwen T 2013 *Semiotica* 197 1
- [2] Kress G and Van Leeuwen T 2020 *Reading Images: The Grammar of Visual Design* (London: Routledge)
- [3] Lin J, Sun S, Huang D, Liu T, Li J and Bian J 2025 *Proc. IEEE Conf. Comput. Vis. Pattern Recognit.* 8128
- [4] Lu HP, Chen JH and Lee CF 2016 *Int. J. Art Des. Educ.* 35 154
- [5] Kramer R and Bernhardt SA 1996 *Tech. Commun. Q.* 5 35
- [6] Melini E 2021 *de-lite: J. Vis. Commun. Des. Stud. Pract.* 1 1

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Integration of Textile in Headphones: Expression of Fashion in Wearable Technology

Ritu Raj, Umme Hani

Nowadays, headphones are not only functional devices, but have also become lifestyle accessories and fashion statements or trend-setting looks [1]. This paper looks into the implementation of textile-based headphones through the lens of Universal Design, incorporating audio technology with textile innovation to achieve diversity and cultural relevance, along with comfort [2]. Unlike traditional use of plastic or metal structures, the addition of woven, printed, embroidered, or surface-designed fabrics will ensure a soft, breathable, and flexible design for users looking for variety and comfort [3]. The purpose is to enhance the ergonomics of the headphone by reducing weight and pressure by accommodating different head sizes and minimising discomfort during extended use. Beyond comfort, the design allows for personalisation [4] through choices, which will come from fashion trends or from Indian handicraft traditions such as handloom weaving, embroidery or surface embellishment[5]. This will position headphones not only as an audio device but also as a cultural product that celebrates identity and heritage [6]. The study will further analyse fabric behaviour, durability, and performance required in headphones. The purpose is also to prioritise sustainability and inclusivity. The study aims to highlight the potential of textile-based headphone design to merge functionality, accessibility, and fashion while expressing the principles of Universal Design in wearable technology.

Keywords:

Headphone, Textile Design, Innovation, Universal Design, Culture, Fashion

References:

- [1] Kettley S. Designing with smart textiles. *Textile*. 2007;5(1):62–81.
- [2] Stoppa M, Chiolerio A. Wearable electronics and smart textiles: A critical review. *Sensors*. 2014;14(7):11957–92
- [3] McCann J, Bryson D. *Smart clothes and wearable technology*. Cambridge: Woodhead Publishing; 2009.
- [4] Ayala-Garcia J, Harnett P. Comfort properties of textile-based wearable devices. *J Ind Text*. 2020;50(4):1–18.
- [5] Goswami A. *Indian textile crafts: Continuity and change*. New Delhi: Niyogi Books; 2013.
- [6] Post E, Orth M, Russo P, Gershenfeld N. E-broidery: Design and fabrication of textile-based computing. *IBM Syst J*. 2000;39(3.4):840–60.

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User-Centric Study on Functionality of Notebook Binding

Prachi Singhal

Notebook, being a most crucial aspect of providing the tangible experience of writing things down. Even in a world with rising digital equipment's, there is a desire for more mindful and focused work habits, with an elevated notebook experience. Through proper analysis of how people are using notebooks for note-taking, sketching or even planning things out, and observing their habits to understand the common pain points, and using this data in the formation of more structured and functional notebook. Methods used for this research include secondary data analysis, articles/research paper analysis, surveys forms and one-to-one interviews with users. A study and research on the current market techniques, reveals a significant "usability gap" between the most common bindings available. On one hand, where people are using mechanical spiral/wire-o binding for it's excellent lay-flat functionality and 360 degrees rotation but at the same time, the spiral itself becomes an obstruction while writing on half of the pages. This is a more serious issue for people who are left-handed. The binding also gets deformed and is less durable, with no protection to the pages. On the other hand, people opting for standard perfect binding because it gives a clean professional looking spine and is more durable, but it fails to lay flat which creates more usability flaw. This gap is a significant opportunity for improvement and innovation in the market. Quantitative analysis also confirms the broader health and existence of the stationery market. The global market, for paper notebooks was valued at USD 23 billion in 2024, and is expected to reach USD 30 billion by 2033, which is just a small segment of the much larger global market for stationery products. The consistent growing market thus proves to be a suitable environment for the innovation of a new binding technology and its development.

Conclusion:

Binding as a structural core of the notebook, providing the strength and function to it, sets the further use case for it, and significantly impacts the user experience. It can elevate the notebook from a disposable commodity to a durable, desirable object, where the choice of binding technology, cover material, and paper quality are the key factors for creating value and user satisfaction. With a strong unmet demand for a notebook that successfully combines the best attributes of both: a product with a clean, unobtrusive spine that also provides true, effortless lay-flat functionality and can rotate 360 degrees.

References;

- [1] Pablo Fernandez Velasco 2023 The cognitive advantages of the notebook
- [2] Eko Agus Prasetyo and Puteri Annisa Tsamrotul Fuadah 2019 Capturing the Voice of the Customer for Paper-notebook Product Development.
- [3] Clarence D Trussel 1939 Ring binder and method of making the same.
- [4] Jacobo Feldman and Shirley Czuckerberg 1998 Notebook system
- [5] Leonard William Norton Jones 1985 Improvements in and relating to wire binding machines.
- [6] Zhuo Yang 2015 Analysis on the book binding design problem in the new period.
- [7] Kristen Faux 2020 Explorations in book binding techniques.

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Designing Kinetic Educational Toys from Silkworm Cocoon Waste: A Sustainable Strategy for Enhancing Cognitive and Motor Development in Early Childhood

Suvidha P

This research investigates the feasibility of repurposing discarded silkworm cocoon shells, a largely underutilized by-product of the sericulture industry, as a biodegradable material for kinetic learning toys targeting early childhood developmental needs. With nearly 80% of each cocoon shell remaining post-reeling, these natural fibrous structures offer promising physical and ecological attributes: light weight, textural complexity, and safe degradability for educational product design. The study focuses on the design and prototyping of a series of movement-driven toys, aimed at encouraging tactile interaction, coordinated motion, and spatial exploration in preschool-aged children (3–6 years). The development process followed a user-centered iterative design methodology, incorporating inputs from child development experts, caregivers, and observational feedback loops to ensure age-appropriate engagement and safety. Material characterization revealed that degummed cocoon shells possessed a mean surface roughness of 1.35 μm , offering tactile stimulation, and a bulk density of 0.18 g/cm^3 , supporting lightweight construction. Biodegradability trials confirmed full disintegration within 60 days under composting conditions, validating environmental compatibility. Prototype testing was conducted in three preschools involving 42 children over a 4-week period. Structured observations indicated a 23% improvement in fine motor control and a 12% increase in average task engagement time, measured through timed activity logs and educator assessments. Feedback from facilitators yielded a mean satisfaction rating of 4.6/5 for engagement and 4.4/5 for developmental utility. This work introduces a material-led, sustainable design framework for educational toy development that not only diverts organic waste from landfills but also enriches sensory and cognitive learning environments. The findings support the integration of bio waste materials in early learning tools, contributing to both circular design innovation and child-centered pedagogical strategies.

Keywords:

Kinetic Learning Toys, Cognitive Development, Silkworm Cocoon Shells, Sustainable Educational Design, Early Childhood Education

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Blockchain for Artisan Empowerment Ensuring Transparency in Craft Supply Chains

Balbir Singh Dasila and Kavita Chaudhary

Opaque sourcing and unverifiable sustainability claims weaken trust in craft supply chains and keep artisans invisible in the value chain. Buyers and consumers often cannot confirm where materials came from, who made the product, what processes were used, or whether fair compensation was followed. This study proposes a blockchain-enabled traceability system for handmade craft and textile products that functions as a lightweight digital product passport. Each item is linked to a QR code that reveals verified information at key supply chain events such as raw material origin, artisan attribution, processing steps, quality checks, logistics handovers, and final sale. The design uses role-based access so sensitive commercial details remain protected while ethical sourcing evidence and maker identity can be verified without exposing pricing, vendor contracts, or personal data beyond consent. Design science research is used to develop the artefact, including a data schema and workflow suited to small producer networks with multiple intermediaries. The prototype will be evaluated through stakeholder testing with artisans, aggregators, and consumers to assess usability, perceived trust, information clarity, and adoption barriers related to time, cost, and digital literacy. The system also records repair, resale, take-back, and recycling events, enabling lifecycle tracking for circularity claims. Expected outcomes include implementable design principles for low-burden traceability and a governance pathway for shared verification.

Keywords:

Blockchain, supply chain traceability, ethical sourcing, craft authenticity, digital product passport

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WORLD UNIVERSITY OF DESIGN PUBLICATIONS

We are proud to present this collection of research, reflections, and critical inquiry emerging from ZEITGEIST 2026, the International Conference on the Cultural, Spatial and Sensory Futures of Art, Design and Architecture, hosted by the School of Architecture, World University of Design, at Bharat Mandapam, New Delhi. This volume captures the pulse of a world in transition, a moment when creative disciplines are being reshaped by technological change, environmental urgency, and evolving cultural identities.

ZEITGEIST, meaning the spirit of the times, is more than a conference title; it is the lens through which this gathering has been conceived. In an era defined by climate crises, digital immersion, rapid urbanisation, and shifting social values, architecture, art, and design are being called upon to respond with greater responsibility, imagination, and inclusivity. The papers selected for this volume reflect that call, offering diverse perspectives on how space, form, experience, and culture are being rethought for a changing world.

ZEITGEIST 2026 has drawn over two hundred submissions from scholars, practitioners, and emerging researchers across India and abroad. The abstracts presented here represent a carefully curated cross-section of that global dialogue, spanning themes such as sustainable futures, sensory experience, heritage and memory, digital environments, spatial justice, and cultural expression. Together, they map the intellectual landscape of contemporary creative practice and research.

What makes ZEITGEIST distinctive is its interdisciplinary spirit. Here, architects engage with artists, designers converse with theorists, and technologists collaborate with cultural historians. This convergence allows the conference to move beyond disciplinary silos and toward a more holistic understanding of how environments are imagined, experienced, and lived. By bringing together cultural, spatial, and sensory perspectives, ZEITGEIST creates a platform where ideas do not merely coexist, but actively inform and enrich one another.

As you explore this volume, we invite you to see it not only as a record of a conference, but as a reflection of a larger moment in creative thought, one that seeks to shape more humane, responsive, and meaningful futures through art, design, and architecture.



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