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CRITERIA 3

RESEARCH, INNOVATION & EXTENSION


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Key Indicator – 3.3
Research Publications and Awards



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3.3.1 Number of research papers published per teacher in the Journals notified on UGC care list during the last five years

Following is the year-wise list of publications per teacher in the Journals notified on the UGC Care list for the Academic years 2018-2019 to 2022-2023. To aid the same, the publication-specific proofs (including certificates and/or published papers along with the cover & contents pages of Journals) are attached in the document year-wise. Publications in other National and International journals are also included and arranged year-wise.

S. No.	Research Papers - UGC	Author(s)	Page
Academic Year: 2022-23			
1.	Critical Evaluation of Architectural Rudiments from the Perspective of Religion	Ar. Sangam Namwad & Ar. Nikhil Badrike	6
2.	Architectural Design Representation method and Pedagogy	Ar. Sangam Namwad & Ar. Nikhil Badrike	7-8
Academic Year: 2021-22			
1.	Effect of green wall on Indoor air quality	Ar. Prajwal Patil	10
Academic Year: 2020-21			
1.	Agency, Contestation and Subalternity: Re-imaging the Mahim Koliwada as a Disaster Resilient Urban Quarter	Ar. Pritam Dey & Ar. Swapna Deshmukh	12-14

S. No.	Research Papers – National/International Journal	Author(s)	Page
Academic Year: 2022-23			
1.	Changing Dynamics of the Inner Core City of Varanasi: The Relationship between Water and Morphology of the Urban Settlement	Ar. Ritu Deshmukh	16
2.	From Barren Lands to Industrial Hub: Journey of Firozabad, Uttar Pradesh	Ar. Yamini Patankar	17-18
Academic Year: 2021-22			
1.	"Architecture of Happiness"- Approach through Neuroaesthetics analysis towards Architecture and Human Psychology"	Ar. Ruta Pawar & Ar. Neha Pradhan	20-22
2.	Study of Visual aesthetics of Building Envelopes: A case of Hot and Dry region in India. Under sub-theme: Perception of Beauty in Architecture	Ar. Varsha Annadate, Ar. Vinita Deshmukh and Ar. Krisha Shah	23-25



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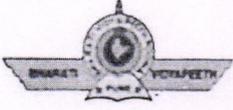
Date :

3.	Paintings along the road: Roadscape of Navi Mumbai	Ar. Kamakshi Vaidya, Ar. Anshul Rai & Ar. Trupti Kamat	26-28
4.	Unappreciated Beauty of Textile Mills: A Case of Textile Mills of Nagpur and Hinganghat	Ar. Ajinkya Vekhande & Ar. Trupti Kamat	29-31
5.	Fishing Village to Mangrove City- Reinstating the Symbiotic Relationship of Mangroves and Fishing Villages for a Sustainable Future	Ar. Steny John	33
6.	Framing the new lens of beauty - Sustainable Architecture	Ar. Sumitra S. Kadam	33-35
7.	Need for Conscious Planning: Residual Spaces - A Consequence of the Current Planning Process	Ar. Ritu Deshmukh Ar. Dipti Shukla	36
Academic Year: 2020-21			
1.	Impact of silica fume on different properties of fibre-strengthened cement	Ar. Milind Bidave	38
2.	Desolated Houses of Displaced Community in Kashmir	Ar. Kamakshi Vaidya	39-41
Academic Year: 2019-20			
1.	Analysis of constant radius and constant angle arch dam using finite element method	Dr. Deepak Patil	43
2.	Community driven approach for heritage conservation A case: 'Pragpur-Garli, Himachal Pradesh	Ar. Shraddha Kapadia & Ar. Smita Gupta	44-46
3.	Maheshwari Handloom Weaving Tradition: A Living Cultural Heritage	Ar. Astha Khare	47-48
4.	Interventions in Indigenous Building form, Rumsu, Himachal Pradesh, India	Ar. Ashwini Bapat, Ar. Shomika Sarkar, & Ar. Yashika Tijoriwala	49-51



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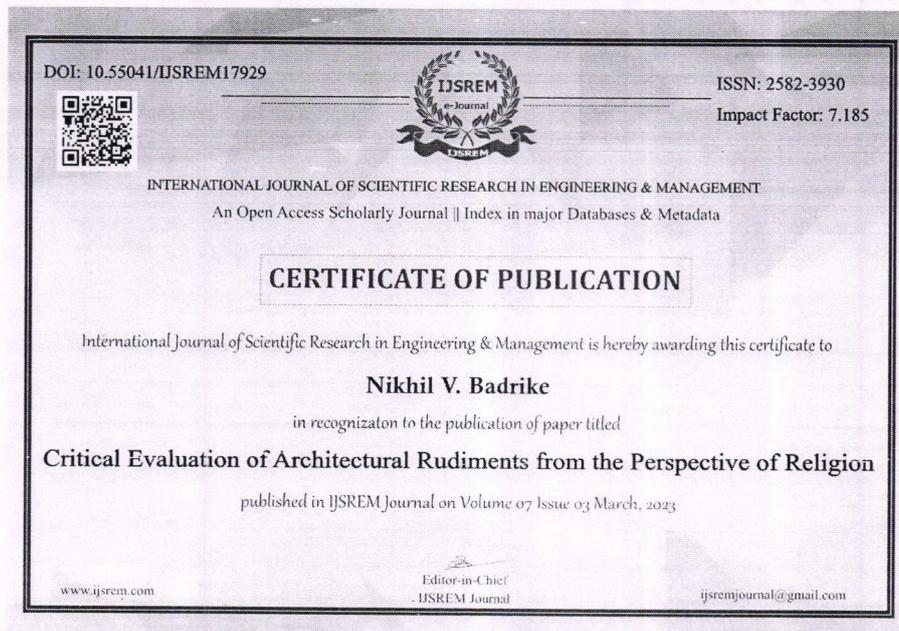
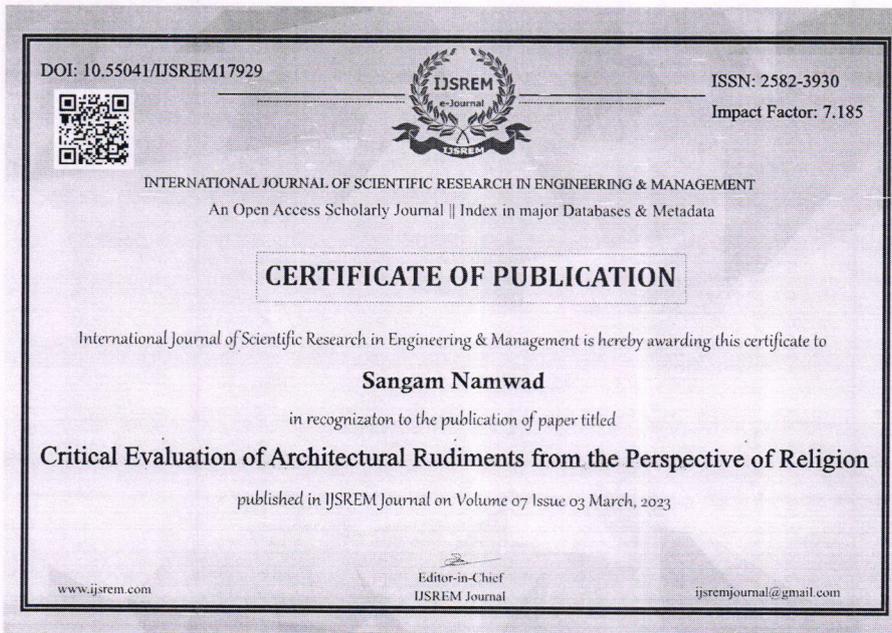
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2. Architectural Design Representation method and Pedagogy

Zeichen Journal

ISSN No: 0932-4747

Architectural Design Representation method and Pedagogy

Nikhil V. Badrike¹, Sangam Namwad², Kartiki Narkhede³

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Abstract

Over the past few decades, the architectural profession has undergone significant upheaval, to which architectural pedagogy has only slowly adjusted. Due to the changes in the modern educational system, it has become urgent to use new technologies to adapt to the current scenario. The COVID-19 pandemic in the years 2019-2021 emphasized the need for these modifications. Architectural education system stages in this COVID-19 years have significant challenges in providing for the pupils. The delivery of instruction from classrooms to websites affects the standard of instruction. The goal of the study article is to compare online and offline studios using a comparison methodology, which demonstrates that the quality of studio work has improved more than that of online systems. From the beginning of school until college, there are fundamental and distinctive ways that humans understand knowledge. The modern educational system is based on literature studies, book studies, classroom instruction, discussions, and teacher-led problem-solving techniques. It needs the fundamental infrastructure, such as a classroom, teachers, conversation, a physical link with the pupils, etc. These components aid in a student's complete comprehension of any subject. Similar to how the method of knowing in every field is unique, so is the field of architecture. A few examples of how architecture students learn to include instruction in studios, conversations with mentors, jury/viva, drawing of plates, sketching, drafting boards, study tours, and visits. Change that entirely in 2019-2021 during the pandemic. Human physical contact is now prohibited to stop the transmission of COVID-19. Due to this, many students and professors in the architectural sector of education are stranded at home. Online education has been offered as a solution to the problem, allowing teachers to communicate with pupils via video meet services. For theory-based disciplines, these systems function as intended; but, for subjects like architectural designs, where students require constant guidance, it might be challenging to communicate the thinking process through physical sketches. However, as they adjust to these new procedures, the students begin to run across technological problems including network problems, a scarcity of computers,

stationery, and more. The method has drawbacks, which are evident in the work completed by the same pupils in both offline and online mediums. After the epidemic, offline lessons were held, and the quality of the work varied significantly. This highlights the value of studio culture and off-campus education in the area of architecture. In the form of a final architectural project design and portfolio presentation with an example drawing, it illustrates the experimental methodology created to measure the productivity of an architectural design firm.

Keywords Architectural Pedagogy, Architectural Design, Architectural Drawing, Presentation skills, Design Portfolio

1. Introduction

According to the Oxford Dictionary, pedagogy is the "study of the teaching methods" [1]. As a result, a well-executed pedagogy methodology will help foster a friendly relationship between the educator and the student as well as an atmosphere of collaboration in the classroom. The majority of architecture departments and schools worldwide use a horizontal studio. In the same setting, a group of students with the same level of education is taught [2]. Thinking, feeling, perceiving, and acting are all components of learning; in it, a person's integrated functioning is what makes them adapt to the world. In light of this comprehensive perspective on the learning process, the design studio examined the cognitive abilities of students [3].

Over the last few decades, the field of architecture has experienced significant transformation and advancements, yet the method in which architectural education is delivered has not kept pace. With the emergence of new challenges such as housing difficulties, rapid construction, development, and limited land resources, it has become increasingly crucial for architects to have the ability to design creative solutions that make efficient use of the latest technologies and knowledge. To meet this demand, there are now elevated expectations for the skills and



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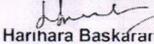
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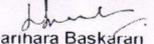
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Research Papers - UGC

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S. No.	Research Papers - UGC	Author(s)	Page
1.	Effect of green wall on Indoor air quality	Ar. Prajwal Patil	10



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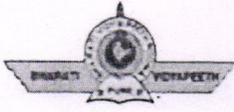
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1. Agency, Contestation and Subalternity: Re-imagining the Mahim Koliwada as a Disaster Resilient Urban Quarter by Ar. Pritam Dey and Ar. Swapna Deshmukh

The image shows the cover of the journal 'Disaster & Development'. The title is in large white font on a dark background. Below the title, it says 'Volume 9 • Number 2 • July to December 2020 ISSN : 0973-6700'. A list of articles is provided, including the one mentioned in the header. At the bottom, there is a logo for 'nidm Resilient India - Disaster Free India' and the text 'Journal of the National Institute of Disaster Management, New Delhi'.

Disaster & Development

Volume 9 • Number 2 • July to December 2020 ISSN : 0973-6700

- Orissa Super Cyclone 1999: Preparedness Strategies for Community through CSR Initiatives at Paradeep Phosphate Ltd., Paradeep
- Perceived Disaster Risk and School Resilience
- Impact of Drought at Household Level: Field Observations from Aspirational District of Karnataka - Yadgir
- Role of Green Governance and Green Finance in Regulating the Environmental Pollution
- A Study of Gender-based Issues on Field of Corona Warriors Amid Lockdown
- Agency, Contestation and Subalternity: Re-imagining the Mahim Koliwada as a Disaster Resilient Urban Quarter
- Governance and Public Health: Indian Response to COVID 19 Disaster
- Geohazards and Challenges in Karst Terrains
- Financing Recovery: A Case of Kerala Floods 2018
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Contents

Volume 9, Number 2,
July to December 2020

Editorial Note	vii
1. Orissa Super Cyclone 1999: Preparedness Strategies for Community through CSR Initiatives at Paradeep Phosphate Ltd., Paradeep <i>Kalyan Kumar Sahoo, Vikash Barnwal and Sangram Singh</i>	1
2. Perceived Disaster Risk and School Resilience <i>Balu I</i>	15
3. Impact of Drought at Household Level: Field Observations from Aspirational District of Karnataka – Yadgir <i>K. Lenin Babu, G.S. Srinivasa Reddy, C.N. Prabhu and S. Jagadeesh</i>	33
4. Role of Green Governance and Green Finance in Regulating the Environmental Pollution <i>Tripura Sundari C.U. and T. Kadalarasane</i>	55
5. A Study of Gender-based Issues on Field of Corona Warriors Amid Lockdown. <i>Vivekanand V. Kadam and Sarika V. Kadam</i>	71
6. Agency, Contestation and Subalternity: Re-imaging the Mahim Koliwada as a Disaster Resilient Urban Quarter <i>Pritam Dey and Swapna Deshmukh Deshpande</i>	87

Disaster & Development, Vol. 9, No. 2, July to December 2020 iii



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Agency, Contestation and Subalternity: Re-imagining the Mahim Koliwada as a Disaster Resilient Urban Quarter

Pritam Dey^{1*}, Swapna Deshmukh Deshpande²

Abstract

A city is a complex coalesce of social pluralities and multiple webs of activities that defines the very essence of it. The people, communities and the activities they perform creates a sense of identity for the city and eventually the morphological dialogue they set up forms the image of the city. Does the developing city with a financial polarization and significant allocation of conveniences considers the criticality, social need, and all the more the crumbling debacle to place the right of the working and the proletariat class in the society? How those situated on the other side of power and privilege do negotiates the conditions of existence of these communities within the same urban territory? What strategies of existence and act of resistance do those trapped and wrung by social, legal and financial orders posit?

This paper in the primary stage studies and presents an account on one such indigenous community and their informal dwelling area (Koli area) squeezed and barely marking its presence in the city of Mumbai. It poses an important question in front of us, how the planning and development framework for a hyper capitalistic city like Mumbai accommodates the agency and representation of these subaltern groups in the city of Mumbai? Do they have right and voice in the regeneration policies of the city? If so what are the important considerations and sensitive strategization needed for a holistic and inclusive urban re-development. These are not new communities and had been living here for a long time, more gentrification happened in these areas by accumulation of more people from outside and exhibits a robust and unique collage of urban informality.

The subsequent stage is to prognosticate and strategise aggregate procedures that would re-affirm the rights of the community and the local area legitimately, thereby

¹ Pritam Dey, B.Arch., Master of Urban Design (SPA, Delhi), Assistant Professor (Anant National University, Ahmedabad), Council of Architecture, New Delhi.

² Swapna Deshmukh Deshpande, B.Arch., Master of Planning (CEPT, Ahmedabad), Associate Professor (Pillai HOC College of Architecture, Mumbai), Council of Architecture, New Delhi, ITPI (New Delhi)

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Disaster & Development, Vol. 9, No. 2, July to December 2020 **87**



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Research Papers - Other Journals

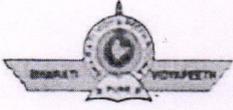
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S. No.	Research Papers – National/International Journal		
1.	Changing Dynamics of the Inner Core City of Varanasi: The Relationship between Water and Morphology of the Urban Settlement	Ar. Ritu Deshmukh	16
2.	From Barren Lands to Industrial Hub: Journey of Firozabad, Uttar Pradesh	Ar. Yamini Patankar	17-18



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1. Changing Dynamics of the Inner Core City of Varanasi: The Relationship between Water and Morphology of the Urban Settlement by Ar. Ritu Deshmukh

**CHANGING DYNAMICS OF THE
INNER CORE CITY OF VARANASI:
THE RELATIONSHIP BETWEEN
WATER AND MORPHOLOGY OF
THE URBAN SETTLEMENT**

Abstract

Traditional Indian cities offer a variety of knowledge systems to learn from and understand a sustainable way of life. Heritage itself is a result of evolution and change over time in the environment, people, and nature. Rivers have been instrumental in the creation of the heritage of places along it. This research attempts to evaluate qualitatively and quantitatively the aspects of Heritage Settlements evolved along the rivers in India and then provide a direction for future growth and dissemination of knowledge about their significance.

In today's context, these complex and diverse river systems of the past are a stepping-stone to formulating the framework for the preservation and reuse of new systems.

Author

Ritu G. Deshmukh
Thomas Jefferson University

Keywords

Regeneration, urban dynamics, heritage
and water relationship, cultural landscapes,
policy making



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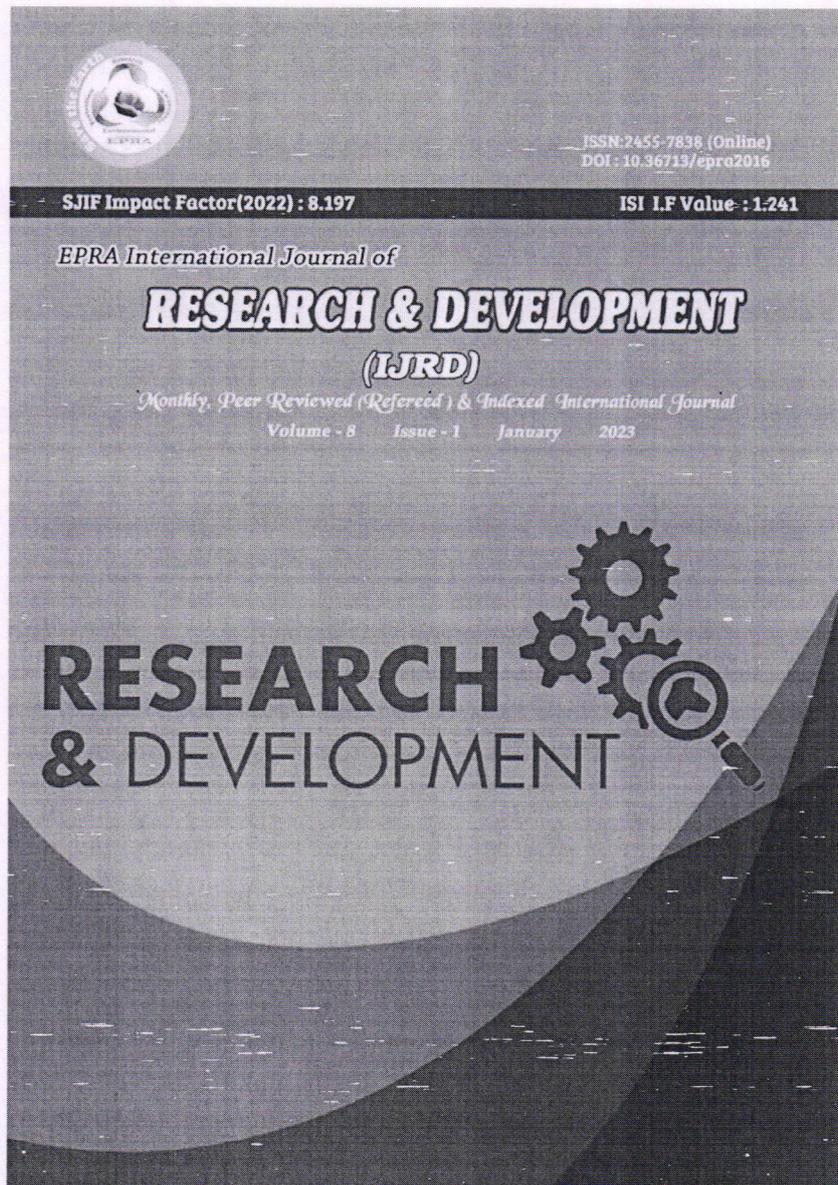
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**FROM BARREN LANDS TO INDUSTRIAL HUB.....JOURNEY OF
FIROZABAD, UTTAR PRADESH**

Ar Akshita Jain¹, Ar Aena Sharma², Ar Yamini Patankar³
Conservation Architect, School of Planning and Architecture, Bhopal

Firozabad is Uttar Pradesh's district headquarters. The industry of creating glass bangles is well-known in the city. On the east side, it is 40 kilometers from Agra and 250 kilometers from Delhi, the capital city of India. The majority of the people is employed in the industry. The towns of Shikohabad and Tundla are located in the Firozabad district. Tundla is situated to the west and east of the city of Shikohabad. Glass bangles are the primary business in the area. Due to over pollution gas business in the city is reduced. Women of the city are employed in their houses to prepare and give the final touch to the bangles. The earlier name of the city was Chandawar from the founder king Chandrasen.

The city has evolved in various time zones like from the time of Chauhan's era to Firoz's era. The city has evolved from the kingdom of Chandwar to District Firozabad. Firozabad had witnessed levels of evolution in terms of regional evolution, aerial evolution, legal evolution and economical evolution. Now it is also called *Suhag Nagari* which is derived from the making of bangles in the city which is the main source of income and economic growth of the city and plays an important role in the settlement pattern of the city.

Firozabad city had evolved in phases. It is evident that downfall of Chandwar became the rising time of Firozabad. Now Chandwar is just a village on the outskirts of Firozabad. Chandwar a place with so much of historical importance from Chauhan's reign to Jaychand fight it had witnessed all. Those ruins are example of negligence over Chandwar. Only religious places like jain mandir, hanuman mandir and sufi dargah are in good shape and maintained time to time. The fort is almost demolished its only wall is left which is in very bad shape. All the brick joints are losing their packing capacity due to which it had almost demolished. All the mosaic art has now blurred and started to chip off from the surface. Thus realization about the importance of the place is necessary.

Firozabad is now developing city from a barren agricultural land. Glass have played an important role in evolution of the town as one of the major factor effecting lifestyle and evolution of a place is economic source. When people came in business of glass and saw the growth many people shifted to the city for economic purposes. They start settling in unplanned manner with narrow roads and less facilities and started to earn. Later the need of resources increase as work load increase and many laborers, economically powerful people and political powerful people joined the force hence residences, school, trade route (buses and rails) and public area evolve periodically.

Glassmaking was the main source of income then and now. The art of curating glass in different shapes and forms is intangible and cannot be performed by any outstation worker. A perfectionist and experienced person would be required to do so. The techniques are shared to close ones and experts make them perfect in the field. The original technique of doing this is only in the hand of the labor who is doing the work. Every tourist or sells man who is buying glass products like bangles or chandeliers of any part of the country would prefer Firozabad manufactured product as they know the value and authenticity of the product. Even the town is known as *Suhag Nagri* for some good reasons. The industry is standing here for a long time and is there to stand strong hence proving its authenticity over these years. Hence Firozabad is settling as industry town.

Despite the glass business and its growth over years some architectural marvels are standing strong showcasing the art of the city. The main attraction is Chadamilal Jain Mandir - constructed in marble and the fine cuts, planning, symmetry, mosaic dome and landscape makes it worth a visit. It is also an attraction due to its location in the core main area of the city. There is lot to explore in those narrow lanes like the *havelis* and religious places.



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3.	Paintings along the road: Roadscape of Navi Mumbai	Ar. Kamakshi Vaidya, Ar. Anshul Rai & Ar. Trupti Kamat	26-28
4.	Unappreciated Beauty of Textile Mills: A Case of Textile Mills of Nagpur and Hinganghat	Ar. Ajinkya Vekhande & Ar. Trupti Kamat	29-31
5.	Fishing Village to Mangrove City- Reinstating the Symbiotic Relationship of Mangroves and Fishing Villages for a Sustainable Future	Ar. Steny John	32
6.	Framing the new lens of beauty - Sustainable Architecture	Ar. Sumitra S. Kadam	33-35
7.	Need for Conscious Planning: Residual Spaces - A Consequence of the Current Planning Process	Ar. Ritu Deshmukh Ar. Dipti Shukla	36



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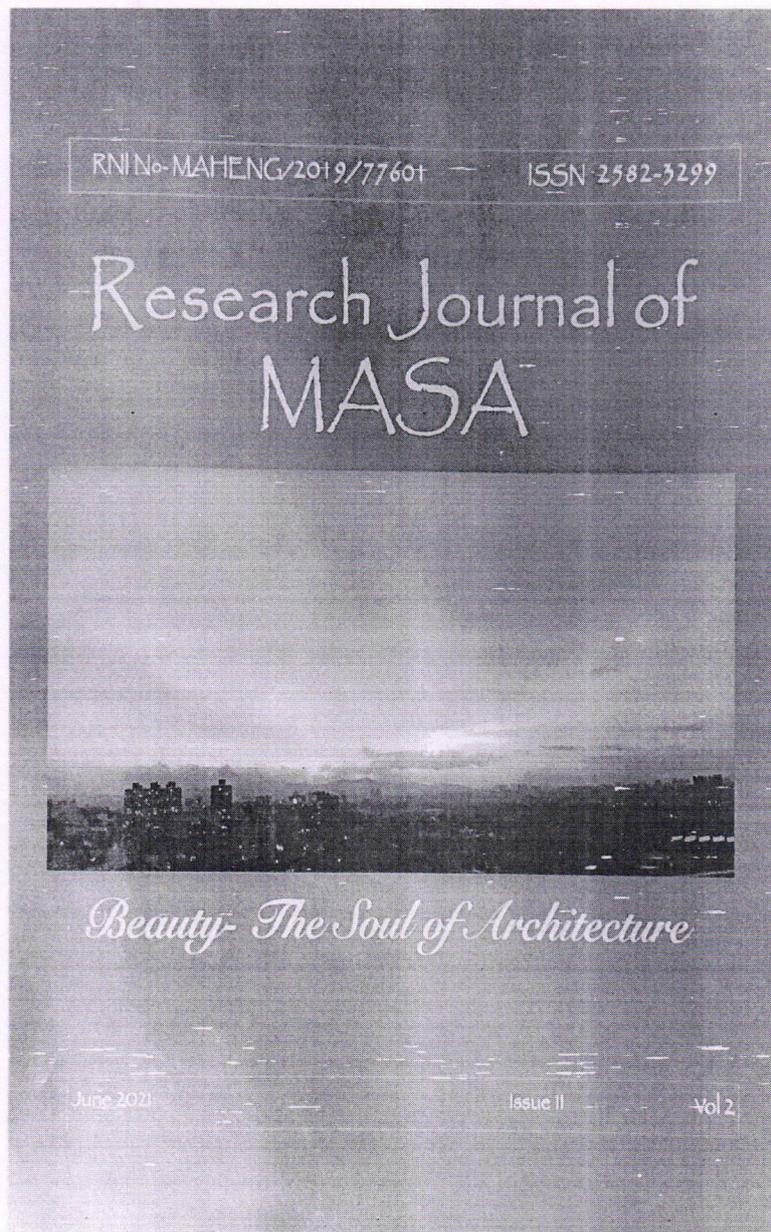
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Contents	
Acknowledgement	ii
From the Editor's Desk	iii
Paintings along the Road, Road-scape of Navi Mumbai Ar. Trupti Kamat, Ar. Kamakshi Vaidya, Ar. Anshul Rai	1
"Architecture of Happiness"- Approach Through Neuroaesthetics Analysis Towards Architecture and Human Psychology Ar. Rupa Pawar, Ar. Neha Pradhan	11
Relation of Architectural Beauty with Architectural Pedagogy and Human Psychology Ar. Kalyani Amol Salvi	25
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Processing Beauty Ar. Pooja Shah	49
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"Architecture Of Happiness"- Approach Through Neuroaesthetics Analysis Towards Architecture And Human Psychology

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Abstract

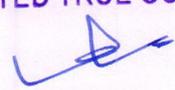
Architects strive to create beautiful forms and spaces that inspire humans within. It is often said, "Beauty is in the eye of the beholder"; whereas the Vitruvian triad illustrates that a building must be strong and structurally stable, meet the functional needs of its occupants, and appeal to their aesthetic sensibilities. The concept of beauty and space are diverse and defined by different disciplines from science and philosophy to art and Architecture where "An object's beauty may not be universal, but the neural basis for appreciating beauty probably is." Indeed, beauty is knowledge and emotion, and as such, is individual since it arises from personal memories and experiences in concert within the culture in which we live. 19th century French writer Stendhal, wrote, "Beauty is the promise of happiness." and happiness is one of our fundamental human needs. The paper tries to reflect about how aesthetic appraisal of beauty in Architecture has psychological involvement in space design and further it focuses on how this experience is contextualised in the persuasive architectural examples from past and present. The interaction between neural systems involved with sensory-motor processes (sensation, perception, and motor system), emotion-valuation processes (reward; emotion; wanting and liking), and meaning-knowledge processes (expertise, context, and culture) are responsible for aesthetic experiences. This paper highlights the neuroaesthetics inquiry to extend how aesthetic experiences could mediate the effects of architecture on behaviour, health and well-being, and its impact on different building typologies, which might modulate the nature of these experiences. The research further evaluates different architectural elements of public buildings of different architectural styles during Pre- and Post-Independence in terms of its human experience of aesthetics vs. perception using Birkoff's theorem to offer a better way of understanding through psychological impact within spaces. This will lead to happy design solutions in future architectural spaces for betterment of society. The factors like context, texture, colour, and the viewpoint of perception with respect to the subject is not taken into consideration.

Keywords - Architecture, Perception, Beauty, Psychology, Emotions

Architecture is a branch, which bridges the gap between humanities and science. We come across the different aspects of Art, sculpture, poetry, music, philosophy, and science in Architecture. It further focuses on the art of designing the buildings for humans taking aesthetics and practical factors into consideration. Architectural design expects holistic understanding of form, composition, mass, spatial organization, volumetric analysis material, texture, light along with construction, technology and cost leading towards functional, artistic as well as Aesthetic solutions. Architecture is honoured more than Engineering due to its creative design application of mathematical and scientific principles. We spend 80-90% of our life in a built

11



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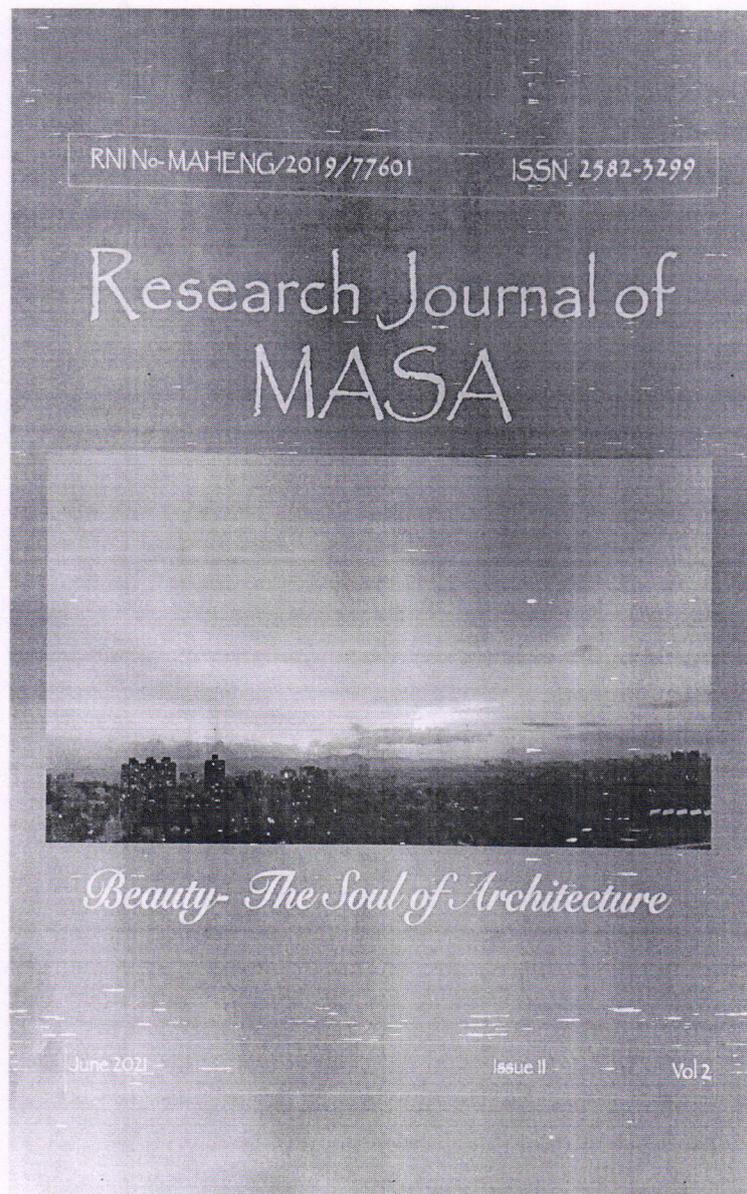
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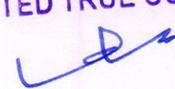
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Study of Visual Aesthetics of Building Envelopes A Case of Hot and Dry Region in India Varsha Annadate¹, Vinita Deshmukh², Krisha Shah^{3*}

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Abstract

Natural building practices and vernacular architecture have enabled man to construct climate-responsive structures to respond to society's need to adapt to the climate. Adhering to the extraordinary variety of climatic zones, India is home to various vernacular styles, which carry logic and harmony in details, evident aesthetic meaning, and the need for expression in the design of building envelopes. Visual aesthetics is also an important criterion that influences the perception of the building envelopes. Lured by the fast-paced and cost-effective construction techniques, inhabitants are now becoming inclined towards more contemporary-looking building envelopes. These solutions, which can be replicated around the world without paying attention to the region's climate specificities, have considerably added the responsibility of architects' in designing the distinctive outer skins for building. It is vital to relate the aesthetics of building envelopes with the past's knowledge systems and our traditional values by incorporating a substantial amount of vernacular knowledge in the contemporary era. This paper explores the perception of visual aesthetic value in building envelopes by analyzing the differences/ similarities of three distinct residential building envelopes from hot & dry climatic zones of India.

Keywords: Vernacular Building, Knowledge Systems, Cultural Identity, Contemporary Architecture, Perception of Beauty, Visual Aesthetics in Building Envelopes

Introduction

India is home to a variety of climatic regions segregated into six climatic zones. Owing to the climatic diversity and the sociocultural conditions, each region has developed unique characteristics of building design in the form of climate-responsive architecture with the wisdom of masons and builders. The human tendency to adapt to the ambient environment led to the development of certain built forms that were distinguished from other places due to the different local materials, traditions, and requirements, forming a region's core identity which carries logic, harmony, attention to detail, and evident aesthetic meaning.

Since the second half of the twentieth century, traditional construction methods have been neglected due to urbanization, technological advancements, and socio-cultural changes. Due to this, the cities are shifting towards contemporary building envelopes, moving away from their regional identity. There has been a change in the way buildings are built and evaluated. The focus has been shifted to more contemporary-looking building envelopes that compete in the race of Globalization. The modern architectural designs are simple, with less ornamentation, utilitarian & technologically advanced.



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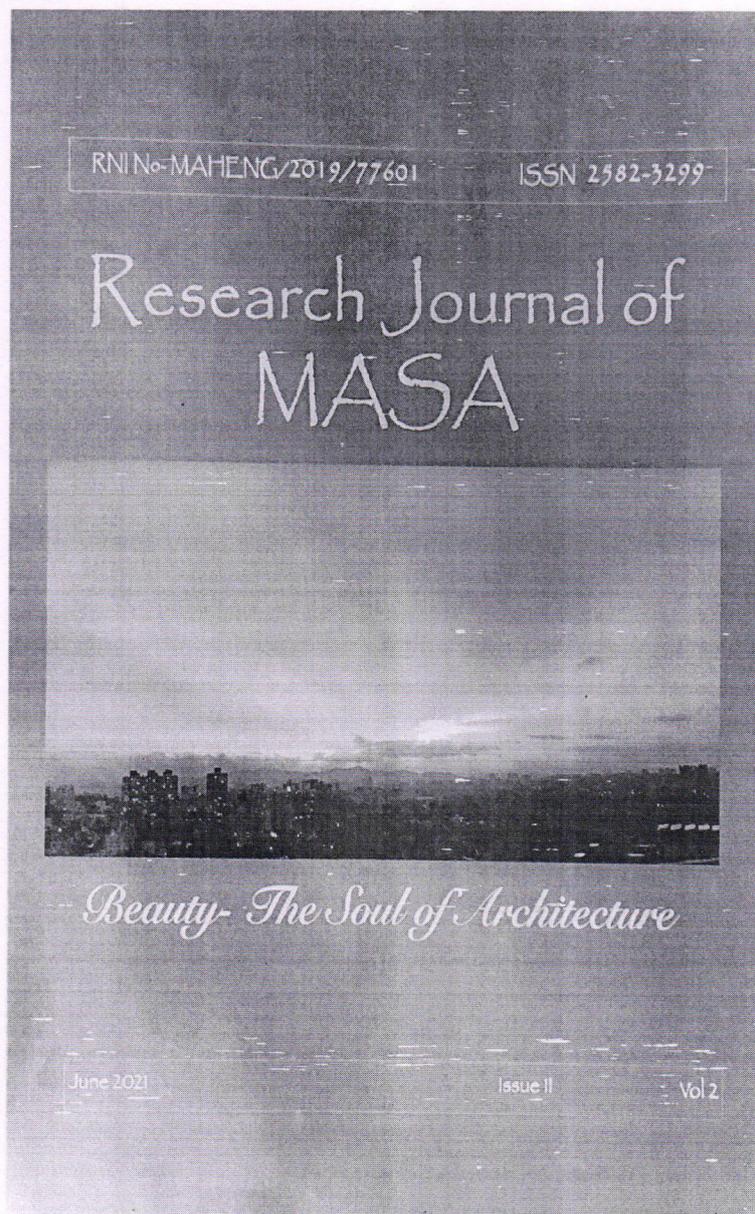
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Research Journal of MASA	Contents
RNI No- MAHENG/2019/77601 ISSN-2582-3290 Beauty: The Soul of Architecture Editorial Board Prof Habeeb Khan Dr Ujjwal Chakradeo Prof Akhtar Chashan Dr Poorna Keskar Editor Prof Shubhada Chapekar Layout and Design Prof Sheetal Tiwari Submission of Manuscripts: Authors are requested to submit their papers electronically to mjournal2017@gmail.com with mention of journal title in subject line. Substantial papers must be in English and should not have been published elsewhere or being currently under consideration by any other journal. The final decision on publication is made by the Editor upon recommendation of the Editorial Board. Frequency of Publication: One Volume, Two Issues per Year Subscription Information: Orders can be placed at masajournal@gmail.com Subscription Rate- INR 2000/- per year © 2019 MASA Printed in India Published by- Maharashtra Association of Schools of Architecture Printed At- Nitya Publications, Bhopal, Madhya Pradesh Contact- +910990291840 Email- info@nityapublications.com Website- www.nityapublications.com Disclaimer- All material published in this journal is protected by copyright, which covers the exclusive right to reproduce & distribute the material. No material published in this journal may be reproduced or stored on microfilm or in any electronic, optical or magnetic form without the written authorization of the publisher. All business correspondence, enquiries and subscription orders should be addressed to the publisher.	Acknowledgement ii From the Editor's Desk iii Paintings along the Road, Road-scape of Navi Mumbai 1 Ar. Trupti Kamat, Ar. Kamakshi Vaidya, Ar. Anshul Raj "Architecture of Happiness"- Approach Through 11 Neuroaesthetics Analysis Towards Architecture and Human Psychology Ar. Ruta Pawar, Ar. Neha Pradhan Relation of Architectural Beauty with Architectural 25 Pedagogy and Human Psychology Ar. Kalyani Amol Sahi Harnessing Beauty for 'Sanitation Buildings' Analysis 35 on Public Toilet Infrastructure Commensurate with Beauty the Soul of Architecture Ar. Bhakti Salunke Processing Beauty 49 Ar. Pooja Shah Study of Visual Aesthetics of Building Envelopes - A 59 Case of Hot and Dry Region in India Ar. Varsha Annadate, Ar. Vinita Deshmukh, Ar. Krisha Shah Framing the New Lens of Beauty - Sustainable 71 Architecture Ar. Sumitra S. Kadam The Proportional Harmonization of Elements of Hindu 85 Temple-Emphasis on Garbhagrha and Sikhara Ar. Sanjivani Mohgaonkar, Ar. Mrinmayee Tiwari Published by: Maharashtra Association of Schools of Architecture  Maharashtra Association of Schools of Architecture CDSA Campus, S. No 585/49/4, Bavdhan Khurd, Paud Pirangut Road, Pune 411021 Website: http://maharch.org



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Paintings Along The Road, Road-Scape Of Navi Mumbai

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Abstract

Cumulative populations agglomerating in urban context need better use of the road-scape for evolving the sense of belongingness amongst the citizens. As a remedial measure to enhance the city & its character, the paper introspects the various modes and methods adopted in public domain. One of the examples is Navi-Mumbai, a town from Maharashtra where a planned city is still undergoing growth in its surroundings to revitalise road-scape as a gesture of alignment with recent national guidelines and provisions. With this motive, the edges and nodes of the road were identified as the canvas for artwork. These works are predominantly sculpture, painting, and digital facades of buildings. The resultant paintings are in fragments that deviate from the median purpose. The artwork should investigate as a visual narrative for an integrated outlook and its impact on the spectators.

The paper discusses the intent and interaction of these artworks with the people. The dynamics of the artwork in public domain is studied using public survey, visual documentation and analyzing the interaction of pass-byers with art. It is a compulsion to revisit our priorities for making our towns inclusive and humane in appeal. There is a need to synthesize the sense of belongingness and harmony in the urban context in today's age and era.

The regard for beauty as an expression in urban spaces and nodes highlights the need to envision holistically, a more pedagogical understanding of public cognizance.

Keywords: Road-scape, Artwork, Character of city, Public Cognizance, Interaction

Background

Indian art history has a vast tradition. The art forms in paintings express beauty through basic design principles, attributed to unity, harmony, balance, rhythm, emphasis, proportion, abstraction, and stylization. Paintings as an art form have been a vital mode of expression. It has celebrated life, scenarios, experiences. It has constantly been evolving through times to convey itself—many beautiful regional arts of our country could be analysed to have stood out for their regional context yet through patterns and motifs imparting a social knowledge of its origin and association. Some of them are.

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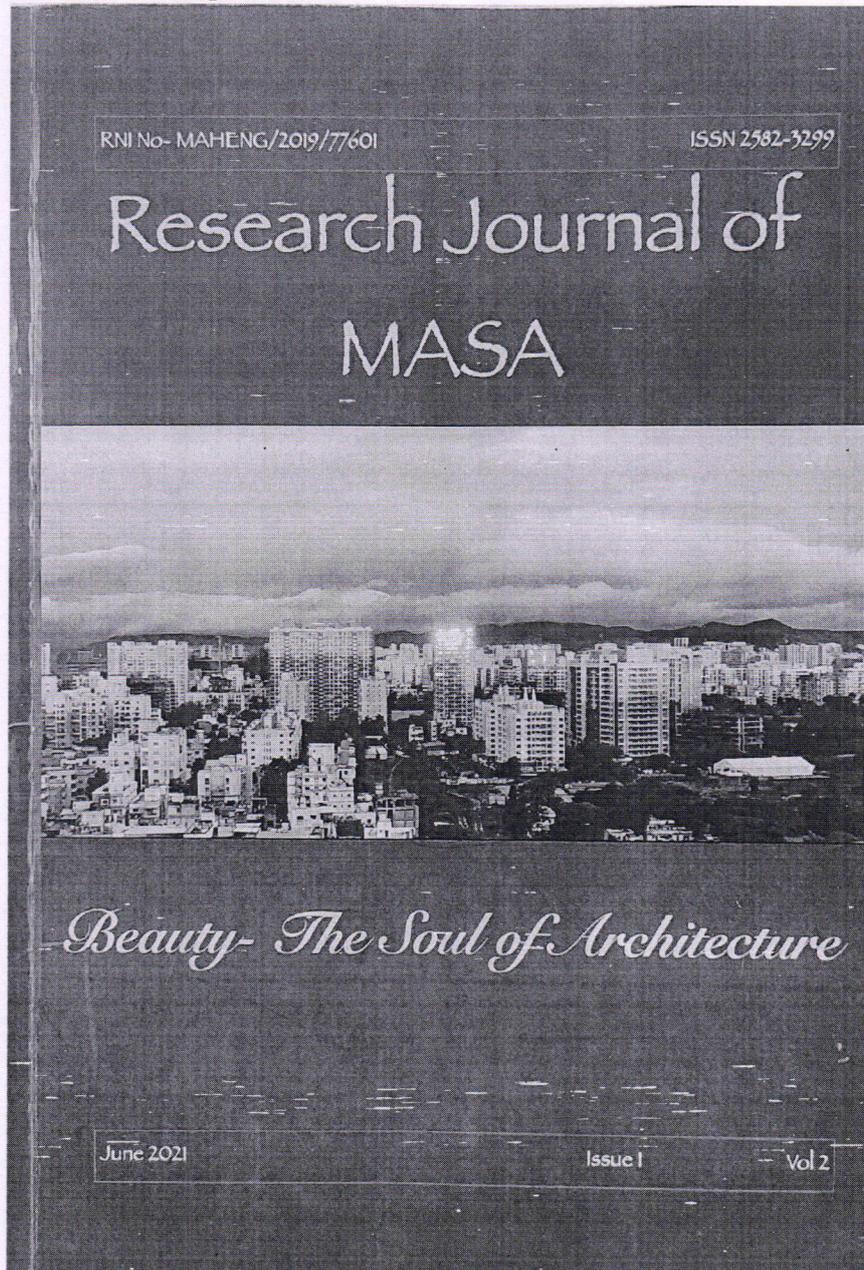
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4. Unappreciated Beauty of Textile Mills: A Case of Textile Mills of Nagpur and Hinganghat by Ar. Ajinkya Vekhande and Ar. Trupti Kamat



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Contents

Acknowledgement	ii
From the Editor's Desk	iii
Importance of Urban Aesthetics in Indian Cities Prof. Ruchira Patkar	1
Structure and Architecture Prof. Satish B Pawar	9
Unappreciated Beauty of Textile Mills: A Case of Textile Mills of Nagpur and Hinganghat Ar Ajinkya Vekhande, Ar Trupti Kamat	17
Beauty in Modern Architecture Ar Mrinal Kashid, Prof. V. N. Tawade	31
Contribution of Architectural Features in Creating Beauty of Wada Facades Prof. Nilesh Pore	39
Exploring the Purpose of Beauty in Architecture Ar Sunanda Satwaha	49
Colour in Architecture Ar Tania Shah	61
The Etymology of Aesthetics: Looking at the Analogies Employed in Defining Beauty in Architecture Ar Kamlesh Gade, Ar Siddesh Kolembekar	75
Building Envelope Design- An Expression of Skin-Deep Beauty of Architecture Ar Tripti Biswas	85

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Unappreciated Beauty of Textile mills: A Case of Textile Mills of Nagpur and Hinganghat

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This was independent research carried out by the authors while working as Assistant Professors in BVCOA, Navi Mumbai. All the photographs, unless mentioned, have been clicked by one of the authors during a primary survey in March 2019.

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Abstract

The textile mills established in the cities of Vidarbha region of Maharashtra at the end of the nineteenth century are one of the finest examples of industrial architecture of that era. These sites established for mass production spread across large chunks of land in the urban centers of these towns. The study focuses on the aspects of beauty of the mills at various scales, for example, decorative elements like cornices at a smaller scale and the skyline of chimney at a larger scale. Because of these mills being located in core areas of the towns, the core manufacturing activities were surrounded by large buffer areas to prevent disturbance to the residential colonies surrounding the mill sites. They constituted natural and man-made water bodies, large patches of green areas and other elements. These buffer areas also served to reduce the effects of air and sound pollution created by mill activities, indirectly preserving the natural biodiversity of the area. These

sites witnessed the intangible socio-economic culture of industrial workers, their housing colonies and development of industrial architecture typology. The paper argues that the perception of beauty of heritage buildings should expand its present definition to include industrial precincts of socio-economic value, which were important physical evidence of economic development of that era.

Keywords – Textile mills, Factory, Parameters of Beauty, Heritage, Archaeology, Textile policy, Aesthetic Integrity

Background of cotton industry of Vidarbha

The Central Zone designated by the Ministry of Agriculture in India produces approximately sixty percent of the total cotton produced in India. The large rain-fed tracts of black soil of the states of Maharashtra and Madhya Pradesh are also known as black cotton soils because of their long tradition of cotton cultivation. The Berar valley in Vidarbha region of Maharashtra is one such belt. (Directorate of Cotton Development Mumbai, 2009) In Vidarbha, some of the prominent industries out of the traditional ones are weaving, dyeing, block-printing work on clothes and iron-smelting. Majority of these industries were dependent on the Berar cotton for raw material, from simple home-based industries to specialized ones. The town of Hinganghat in Berar valley had gained a distinction of being an important cotton trading town by the end of the eighteenth century. A lot of cotton trade shifted to the city of Nagpur after it was connected to other



15
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5. Fishing Village to Mangrove City- Reinstating the Symbiotic Relationship of Mangroves and Fishing Villages for a Sustainable Future by Ar. Steny John

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Fishing Village to Mangrove City Reinstating the Symbiotic Relationship of Mangroves and Fishing Villages for a Sustainable Future

Ar. Steny John
Urban Design
Bharati Vidyapeeth College of Architecture

Abstract—This research mainly aims at studying the depleting fishing communities and mangroves in Mumbai and the eminence of their organic existence for a sustainable future. Firstly by understanding various approaches taken by multiple institutions globally to preserve mangroves and their impact on the fishing villages. These villages are dependent on resources from mangrove forests and fishing for their livelihood. Secondly, analyzing the contribution of mangrove and fishing communities, through their symbiotic relationship to our environment. The research includes national and international attempts to preserve fishing villages, by studying their (villagers') wisdom, and their interest, in protecting these mangroves through a traditional approach. This lead to designing various strategies and modules to preserve both the community as well as mangroves. This module can protect cities or regions like Mumbai (affected by mangrove depletion) from future threats of natural calamities, with the help of various sustainable approaches.

Keywords: Mumbai, mangroves, symbiotic, sustainability, fishing villages

I. INTRODUCTION

Mumbai is a cosmopolitan city today but originally it was distorted into seven islands with small Adivasis and fishing communities called Kolis, completely dependent on forest and sea for their livelihood. The city invited traders and merchants from various states and Persian kingdoms increasing job opportunities. Still, the fishing community did contribute to a major percent of the economy. The villages were moved over time, making space for the migrants and helping with the development of the city.

Industrialization turned the world to the next phase, the city aspired to be a part of the same which sidelined the original inhabitants. With urbanization at its peak in the 20th-century migration to the city was beyond measure, this lead to the reclamation of land which change the geography of Mumbai over decades. With the increasing population, there was a need for more area which then lead to cutting thousands of tons of mangrove over time. This cost about 40% depletion of mangroves today. This changes the course for fishermen from fishing amidst the mangrove to deep-sea fishing.

Urbanization had a huge impact on these fishing villages decreasing the number to a quarter of what it originally was. This impacted the city in many ways, with increasing floods over the years which hit the Koli villages first leading them to deteriorate the communities and pushing

the future generation to opt to look for other opportunities for better income and livelihood. With no mangrove to act as a breeding kitchen for fishes, many species go extinct over the period of time. With increasing housing demands many villages were shifted from their original location with the influence of contractors and Politian's for better livelihood uprooting them from their traditional and cultural techniques of fishing, boat construction, and maintaining mangroves. This also leads to a major disconnect between the fisher folks and the mangroves. With rising disconnect there were no guardians for the mangrove, leaving them abandoned for dumping industrial waste and plastic heaps deteriorating the mangroves and their ecosystem.

II. LITERATURE REVIEW

The no of fishing villages has decreased over time due to excessive fishing and depletion of mangroves. Mumbai lost near half of the mangrove it originally had in the past two decades. Studies show that the sustainability of the mangroves is a crucial challenge because of the difference in interest and diverse value of resources around the ecosystem. It is therefore important to consider the larger picture, target group (which group of the community will benefit the most), and who can maintain the mangrove in the best possible manner, all these factors should be considered for the sustainability of mangroves. But who should we give the responsibility of maintaining mangroves? Who will they maintain the mangrove? These are questions one must ask! The fishing villages are aware of the kind of trees available in the mangrove forest and meet their needs through the forest and water body along the mangrove.

It's only right that they maintain and sustain the mangroves. This way we protect the mangroves and the settlement along the mangroves from high-rise floods or any other threats due to the depletion of mangroves for is it essential that they stay along the mangroves and guard them. This means that the fishermen along the mangrove can play a major role in preserving the mangrove. There might be multiple ways to preserve mangrove but maintain them are important and this is continues process, therefore, it proves essential to put the people who are aware of the information or technique required to maintain the mangroves continue to maintain them.

There are many fishing communities in Mumbai which have been shifted from their original location for urbanization



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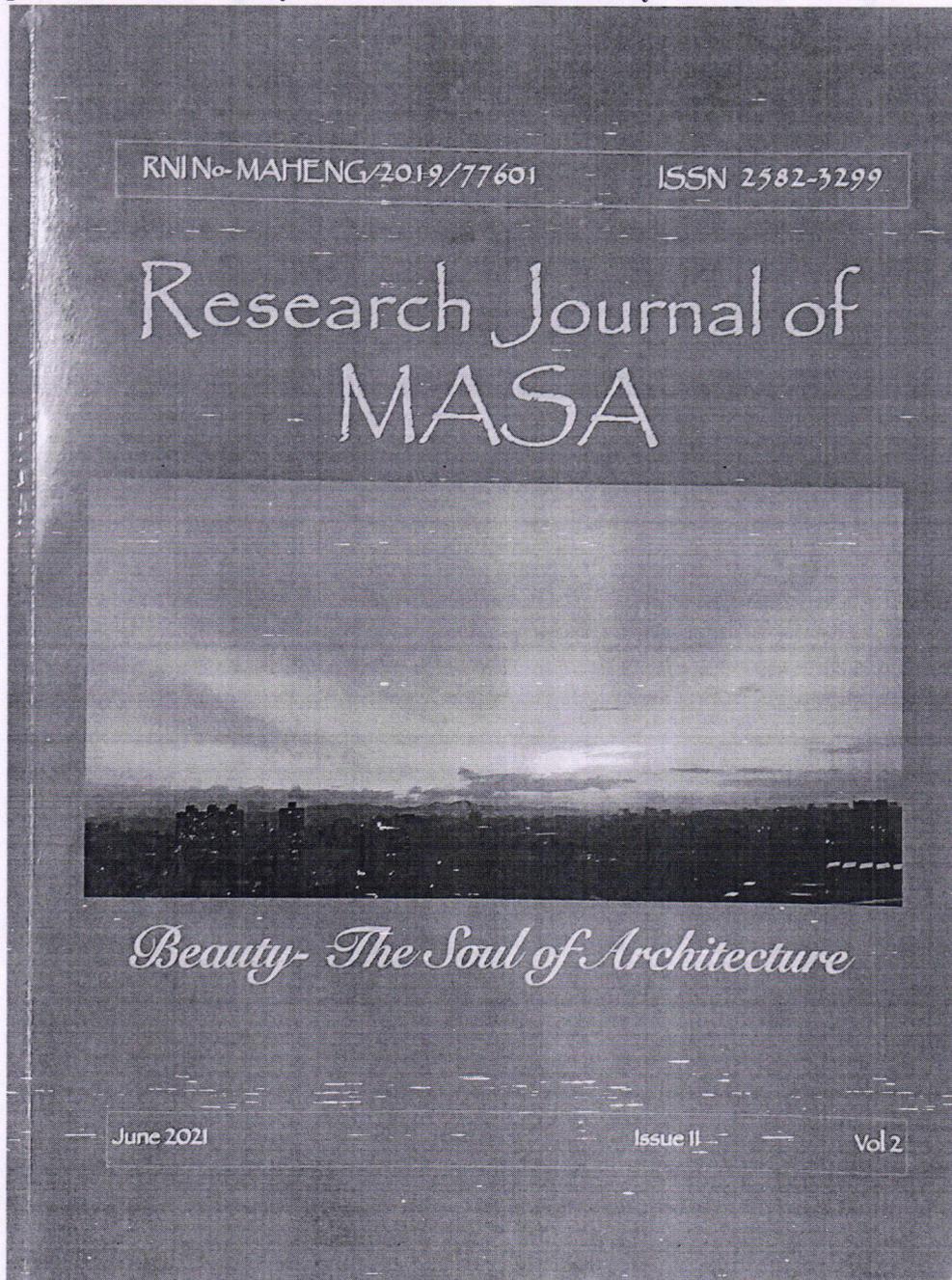
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6. Framing the new lens of beauty - Sustainable Architecture by Ar. Sumitra Kadam



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Contents	
Acknowledgement	ii
From the Editor's Desk	iii
Paintings along the Road, Road-scape of Navi Mumbai Ar. Trupti Kamat, Ar. Kamakshi Vaidya, Ar. Anshul Rai	1
"Architecture of Happiness"- Approach Through Neuroaesthetics Analysis Towards Architecture and Human Psychology Ar. Ruta Pawar, Ar. Neha Pradhan	11
Relation of Architectural Beauty with Architectural Pedagogy and Human Psychology Ar. Kalyani Amol Salvi	25
Harnessing Beauty for 'Sanitation Buildings' Analysis on Public Toilet Infrastructure Commensurate with Beauty the Soul of Architecture Ar. Bhakti Salunke	35
Processing Beauty Ar. Pooja Shah	49
Study of Visual Aesthetics of Building Envelopes - A Case of Hot and Dry Region in India Ar. Varsha Annadate, Ar. Vinita Deshmukh, Ar. Krishna Shah	59
Framing the New Lens of Beauty - Sustainable Architecture Ar. Sumitra S. Kadam	71
The Proportional Harmonization of Elements of Hindu Temple-Emphasis on Garbhagrha and Sikhara Ar. Sanjivani Mohgaonkar, Ar. Mrinmayee Tiwari	85

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Framing the New Lens of Beauty - Sustainable Architecture

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Abstract

The lens of perceiving Beauty in Architecture has never been the same till date. During the Classical times, it was more focussed towards symmetry, scale, and proportions (golden ratio) whereas in Medieval times, it was majorly driven by ornamentation. Modern times focussed on colours, rhythm, and the true use of materials. It's not that these elements were missing in the other eras. For e.g., Symmetry was also given a thought in Medieval times and ornamentation was also a part of Classical times. Material and colour had been always part of all the eras. So, the question arises that 'Why beauty was perceived in different eras through specific lens when actually everything was a part of the whole. What made the people of that era appreciate those buildings through that defined lens and how did people openly accept that specific trend'.

The famous quote by Architect Mies van der Rohe where he says "When one looks at Nature through the glass walls of the Farnsworth House, it takes on a deeper significance than when one stands outside. More of Nature is thus expressed – it becomes part of a greater whole." The quote highlights the importance and need of a definite assembly to perceive and realise beauty. In simple terms, it could also mean that when a conscious effort is made to understand the other side of the story, it is then we realise the beauty hidden in it. The research paper will elaborate on the lens which is required today to perceive Beauty in Architecture and how it can help to flourish a trend of buildings where humans coexist in harmony with nature by adopting methods of sustainable architecture.

Keywords – Beauty in architecture, specific lens, trend of buildings, sustainable architecture

Introduction

The general approach followed to comprehend the history of architecture is to study various 'styles' of buildings which basically represents a group of buildings with common features of a particular era. But while one is studying history of architecture through this specific lens of style, it's very necessary to understand that architecture as a profession also had changing definitions in the timeline and the political and economic setup were one of the major drivers of it. A conscious effort is required while one studies history as one needs to understand that what one sees is what one is shown and if what is shown is changed, the entire history would change. It is some players and intellectuals within the society who decided to portray history by specific built forms. Another possibility could also be that only those buildings of that era got documented as they were associated with strong political origins. So, the platter which one sees today ideally would have been much richer but since many voices got suppressed, some movements went unnoticed and some which did remain in form of ideas and never manifested in the built form is the reason why we read history of architecture through the lens of style. So, if our predecessor could do it so successfully at that time and create a frame for us, so can we do it for coming generations. The intent at that



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7. Need for Conscious Planning: Residual Spaces - A Consequence of the Current Planning Process
by **Ar. Ritu Deshmukh and Ar. Dipti Shukla**

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Need for Conscious Planning
Residual Spaces – A Consequence of the Current Planning Process

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Abstract: The usual process of urban development considers buildings as separate entities sited in the cityscape and not as a part of the larger urban fabric. Decisions about growth patterns are made from two-dimensional land-use plans, without considering the three-dimensional relationships between buildings and spaces or an insight of the user behavior. In this highly simplified approach, urban space is rarely understood as an external volume of the built environment with qualities of form, shape, scale, character, and linkages to other spaces which results into unshaped antispace. "In today's cities, designers are faced with the challenge of creating outdoor environments as collective, unifying frameworks for new development. Too often the designer's contribution becomes an after-the-fact cosmetic treatment of spaces that are ill-shaped and ill-planned for public use in the first place" (Trancik 1986). This paper aims to contribute towards raising awareness for considering 'residual spaces' in the designing process to play a vital role in enhancing the urban landscape. One important step in this direction is to categorize and formulate the various kinds of these left-over spaces, understand how they are formed and comprehend their probable use. Hence, first part of the paper deals with the concept of residual spaces, its uses and meanings, addressed by different authors and redefining it in today's context. Second, it investigates historical cases to understand the process which leads to creation of confused landscapes in a city's fabric. The adverse physical condition of these sorts of public spaces seem to indicate that it is often very uncertain about who manages them post their formation, or who oversees them after they have degenerated, which consequently results into them being universally abandoned. Hence, the research also supports the idea that they can be recognized, avoided and defined during the initial designing process itself. The paper discusses loopholes in the planning process and explores the constraints and possibilities of a 'good process'. It also discusses the various stages in the process that can contribute in the making of well-designed, functional and meaningful spaces in the urban environment.

1.1 Introduction

The erosion of urban space is an on-going process which has been with us for the last 50 years in the guise of a democratic process (Krier 1975).

Krier (1975) defines urban space as 'comprising all types of space between buildings in towns and their localities.' Hence, urban space is the primary element in the organization and infrastructure of towns and cities. It acts as resource which is all-inclusive and comprises of much more than just distinct typologies of parks, playgrounds and city squares as per conventional view. Steven Peterson (1980) talks about today's urban space acting as 'anti-space' in the Harvard Architectural Review. He argues that the traditional design of the built environment including streets, squares

and areas shaped with distinct forms of volumetric void is destroyed by the occurrence of anti-space, which has led to numerous examples of loss of "space", that can be seen all around us. These spaces are a consequence of today's haphazard development of the built environment where the formation of such spaces is unthought of and rarely becomes a part of planning process as it stays as one of the least priorities of architects and planners' intentions. These spaces are mostly seen as exploitable land for densification or urban renewal projects for addition of new functions or expansion of infrastructure.

1.2 Aims and Objectives

The paper addresses urban planning in relation to the enhancement of built environment in urban centers, by



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S. No.	Research Papers – National/International Journal		
1.	Impact of silica fume on different properties of fibre-strengthened cement	Ar. Milind Bidave	38
2.	Desolated Houses of Displaced Community in Kashmir	Ar. Kamakshi Vaidya	39-41



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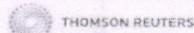
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IMPACT OF SILICA FUME ON DIFFERENT PROPERTIES OF FIBRE STRENGTHENED CEMENT

Milind Bidave

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ABSTRACT

Concrete is the most utilized creation texture in ongoing pattern concrete cement is update by utilizing admixtures including, slag, fly debris, silica smoke to expand the qualities energy of extreme generally execution of cement to have the option to diminish the shrinkage and creep and to increment tractable force, strands are included. The extent of blessing examines accord with the quality properties of cement, at the effect of partially substitute of concrete through silica rage with unmistakable prospects viz 0%, 5%, 7.5 and 10% become utilized inside the solid and polypropylene fiber utilized with percent 0%, 0.5%. Quality Properties research include compressive energy flexural flexibility malleable versatility and scraped spot. In present exploration the forces to be reckoned with of unreasonable force cement of M40 grade at 7 days 14 days 28 days include flexibility with stand-out changing degrees of concrete with silica rage are consideration.

INTRODUCTION

Concrete contains concrete, sand, coarse aggregate and some amount of water. Its success lies in its flexibility as can be expected to withstand harshest circumstances while handling the most powerful structures. Experts and analysts are further endeavoring to fabricate its limits with the help of imaginative mixture admixtures and distinctive strengthening cementations materials SCMs. Early SCMs involved trademark, speedily open materials like volcanic powder or diatomaceous earth. The planning ponders like Roman water frameworks, the Open air theater are instance of this system used by Greeks and Romans. Nowadays, most strong mix contains SCMs which are generally results or waste materials from other mechanical systems. A composite material that contains fundamentally of a coupling medium, for instance, a mix of Portland cement and water, inside which are introduced particles or segments of total, typically a blend of fine and coarse aggregate. Concrete is by far the most adaptable and most by and large used improvement material around the globe. It satisfy broad assortment of execution specifications, not in any way like other structure materials, for instance, regular stone or steel, which generally should be used as they appear to be.

Objective of study

- The goal of the investigation the part of including silica smoke and polypropylene strands to upgrades the quality properties of cement.
- The goal of examination utilize squander material silica flume and polypropylene fiber.
- The results appeared in this investigation will give more data on the conduct of silica flume and polypropylene filaments in concrete.

MATERIAL

In the present study we used coarse aggregate, fine aggregate, cement, silica flume, polypropylene fibers are used to cast beam, cube, and cylinder. The specimen and properties of these materials are as under

1. Cement

OPC of 43 grade is used for the investigation. The results for cement as obtained from various physical tests are as given. Mostly the tests were performed in procedures described in IS: 8112-2003. Cement is a adhesive in nature, a material that hardened and can be used to bind other material with each other. Cement is usually grey powder before being blended with different materials and water. It is utilized in construction can be characterized as being either hydraulic or non-hydraulic contingent on the capacity of the cement to set in nearness of water

2. Coarse aggregate

All coarse aggregate must be evaluate intimately and constantly watch and have to be taken in description into organize toward composed concrete of consistent quality. Coarse aggregates utilized during this research are crushed aggregate of range 20 mm and 10mm. Specific gravity of coarse aggregates 2.58 for 20mm and 10 mm

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[18]

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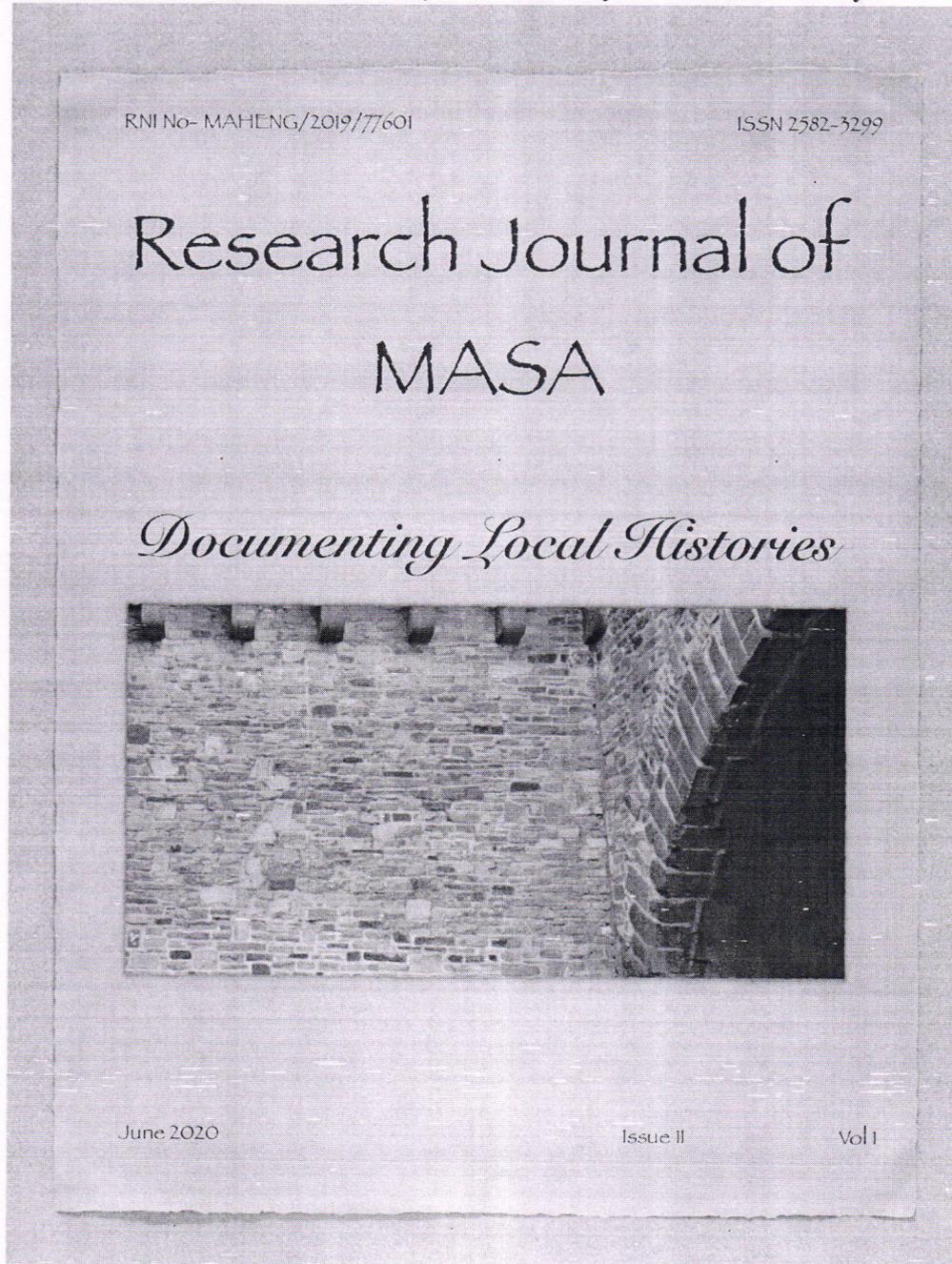
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Contents

From the Desk of President MASA	
From the Editor's Desk	
THEME 1- ARCHITECTURE AND PLANNING	
Urban Morphology- A Historical Attestation for the City of Aurangabad Ar Nupur Soni, Ar Nikita Pawar	03
Learning From Traditional Konkan Housing Ar Swati Tagare	21
THEME 2- CONSTRUCTION TECHNOLOGY	
Transformation of Colonial Bombay's St.Thomas Cathedral, Fort, tracing its dynamics to the Gothic Revival Architecture in Britain, Era: 1840 – 1900 Ar Sonia D'Silva Fonseca	29
THEME 3- CULTURE AND COMMUNITIES	
The unique architectural style evolved by the impact of socio-economic activities – A case of Chettinad Ar Karan Choudhary, Ar Shweta Raut	52
Cultural & Historical layering of historic town Aundh Satara Ar Maithili Kulkarni	65
The Desolated Houses of Displaced Community in Kashmir Ar Kamakshi Vaidya	95

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THE DESOLATED HOUSES OF DISPLACED COMMUNITY IN KASHMIR

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Author Note.

The Author completed her schooling in Kashmir. The Author is an Architect who passed out from Sir. J.J. College of Architecture in the Year 1997. Started her teaching engagements as full time Lecturer at SNDT College, Juhu. Later had an active professional career in the field.

Completed her Post-Graduation in Construction Management from NICMAR, Pune. Completed her Masters in Environmental Architecture from IES college of Architecture through YCMOU.

The author is now a Professor in Bharati Vidyapeeth College of Architecture at Navi Mumbai.

Acknowledgement

Would like to acknowledge the fact that an entire community of displaced people from Kashmir showed enormous courage and grit in times of hardship and stayed by the side of hope and kindled a spirit of encouragement in the coming generations. Having a look at the disaster that the displaced people faced, this paper is written with an intent to summarize the humane perspectives and reinvent the place that Kashmir holds in the minds of its residents who physically were forced to move out from the valley but mentally could never snap the ties with their motherland. Above all it is a great human effort when amidst all problems that the community faced, the children who survived were still nurtured with a positive approach to life.

Acknowledgements to Vaishen Sir, Bhan Sir, Bhat Sir, Dhar Sir, Dullu Sir and Hamida Mam for all the facts and narratives given by them as teachers in school during the years of schooling. Acknowledgement to Prof. Sethna for making the humane perspectives of Architecture visible and important in the learning years at Sir. J. J. College of Architecture.

Correspondence regarding this article should be addressed to Prof. Kamakshi Vaidya, BVCOA, Belpada, Navi Mumbai. (kamakshivaidya@hotmail.com)

Abstract.

The desolated structures of Kashmir owe their condition to the turmoil in the valley since 1989. These structures remain centric to the memories of the people who lived there and now their stories are passed on to generations. Such structures acquire a sculptural expression in terms of conveying a deeper sense to the ongoing cycles of time. The static nature of the abandoned spaces reflects the ethos of the bygone era fixed in a point in time. The structures evolve a new dimension in architectural dialect by conveying a certain timelessness awaiting its occupants.

Such a structure continues its existent role in conveying a meaning to society and accentuating the culture of a place. This paper intends to take a preview of the cultural diaspora through the lens of Displaced Kashmiri Pandit homes after the mass exodus in the valley of Kashmir.



95
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S. No.	Research Papers – National/International Journal		
1.	Analysis of constant radius and constant angle arch dam using finite element method	Dr. Deepak Patil	43
2.	Community driven approach for heritage conservation A case: 'Pragpur-Garli, Himachal Pradesh	Ar. Shraddha Kapadia & Ar. Smita Gupta	44-46
3.	Maheshwari Handloom Weaving Tradition: A Living Cultural Heritage	Ar. Astha Khare	47-48
4.	Interventions in Indigenous Building form, Rumsu, Himachal Pradesh, India	Ar. Ashwini Bapat, Ar. Shomika Sarkar, & Ar. Yashika Tijoriwala	49-51



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**ANALYSIS OF CONSTANT RADIUS
AND CONSTANT ANGLE ARCH DAMS
USING FINITE ELEMENT METHOD**

Deepak Patil

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Pillai's HOC College of Engineering & Technology, Mumbai, MS, India

Shrikant Charhate

Professor, Dept. of Civil Engineering,
Amity School of Engineering and Technology, Mumbai, MS, India

ABSTRACT

There have been numerous studies on analysis of arch dams using different methods. Amongst this finite element method has proved to be more acceptable from last three decades. This paper studies stress analysis of concrete arch dam using finite element method. Dam with full reservoir condition and uniform thickness throughout was considered. The parameters such as height, thickness and properties of concrete are kept constant with varying span. Various cases were considered to evaluate principle stresses, principle moments and maximum nodal displacements. Analysis was formulated using Kirchhoff's theory. Von Mises stress theory was applied to find maximum stress factors in membrane and flexural. Results are presented in terms of displacements and stress factor variation of arch dam with respect to b/h ratio. By comparing the results for constant radius and constant angle arch dams, the benefits of constant angle arch dams were evaluated. It was observed that constant angle arch dams are advantageous over constant radius arch dams.

Keywords: Finite element method, deflections, stress factors, Kirchhoff and Von Mises stress theory.

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CONTENTS

From the Desk of MASA President

Editorial

THEME 1 – ARCHITECTURE AND PLANNING

Interventions in Indigenous Building form, Rumsu Himachal Pradesh, India 1
Ashwini Bapat, Shomika Sarkar, Yashika Tijerwala

Tracing sacred landscape of Trimbakeshwar through ancient religious scriptures 17
Dr. Shubhada Kamalapurkar, Ar. Ritu Sharma

Exploring and Understanding Socio-Cultural and Architectural Fabric of Junnar Town 25
Ar. Pradnya Patil, Ar. Sudhir Deshpande

Understanding the Planning Principles of a Chola Settlement 36
Ar. Prathyusha Ravi

Architectural Features of the Wadas at Nagpur 47
Prof. Kishor P. Rewatkar, Ms. Priyanka K. Rewatkar,

Study of Historic Housing in Kasba Peth, Pune 62
Ar. Kirti Sagarankar, Ar. Madhuri Patil

Analyzing potential of Old Tambat Ali, Nashik for Architectural Conservation 80
Ar. Ketaki Chandrakant Joshi, Ar. Priyansi Nimish Tambat,

Manduva Logli-An overview of Vernacular Courtyard Houses of Andhra Pradesh 88
Ar. Jyoti Kumari

THEME 2 – CONSTRUCTION TECHNOLOGY

Documenting Vernacular: A Learning Experience - A case of Village Satosa, Turia, Madhya Pradesh 95
Prof. Archana Bele, Prof. Rashmi Dande

Influence of Maratha Style on Jain Temple Architecture 109
Ar. Pranoti Lad

THEME 3 – CULTURE AND COMMUNITIES

Understanding Culture through local concepts- A Study of the Gond Community 122
Ar. Renuka Chuike Chakradeo

Community Driven Approach for Heritage Conservation 135
Ar. Smriti Gupta, Ar. Shridhara Kapadia



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COMMUNITY DRIVEN APPROACH FOR HERITAGE CONSERVATION

A CASE: "PRAGPUR- GARLI, HIMACHAL PRADESH"

Ar. Smita Gupta, Ar. Shraddha Kapadia
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Abstract

Heritage gives a community much deserved cultural identity, which further helps in development of individual and society. Heritage conservation is not just limited to tangible aspects of physical interventions by a professional, but a more holistic approach comprising of intangibles i.e. social and cultural context of existing community. This paper analyses the participatory process of a community in conserving and preserving their architectural heritage, thus helping the society in socio-economic upliftment and connecting generation to its roots. This process led Pragpur and Garli in Himachal Pradesh, to the title of 'Heritage Villages'. It further discusses the roles of all strata of society at 'Individual - Community - Decision Makers' level in the process. The villages though having heritage value due to its Indo-European style manors, Havelis and cobbled-stone streets, faced challenges of creating awareness for preserving heritage & lack of tourism leading to lesser job opportunities & migration of youths. Asset Based Community Development (ABCD) approach initiated by an individual helped in highlighting strengths that already existed within the community. Instead of focusing on problems, deficiencies and community needs, the basic idea was to empower and make them self-reliant by discovering, mapping and organizing heritage assets. At Individual level, initially a manor was refurbished for hospitality service which attracted tourism further initiating many home stays. At Community level, subsequently heritage walkways designed to showcase local architectural heritage &



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MAHESHWARI HANDLOOM WEAVING TRADITION: A LIVING CULTURAL HERITAGE

Astha Khare

ABSTRACT

The handloom weaving tradition of India is an outstanding example of traditional craftsmanship. The heritage of weaving is not only limited to the traditional looms, craftsmanship or the *sarees*¹, but also constitutes of the spaces in which weaving is practiced. The houses of craftsmen are examples of vernacular architecture, which has evolved over a large span of time. Maheshwar *Tehsil*² in Madhya Pradesh, is one such outstanding example, where the centuries old weaving tradition has been revived by the Royal descendants. As the city is growing, the vernacular architecture is gradually transforming to modern style, disturbing the authenticity of the tradition as well as living comfort in the houses and workspaces. There lies great potential in this region which has not been documented and needs to be strengthened. This paper, with a qualitative as well as quantitative approach, is an attempt to establish the significance of Maheshwari Handloom weaving tradition as a living cultural heritage. The data collection has been done on two levels - primary as well as secondary, which was further followed by the analysis (including listing & grading) of heritage components. Weavers' houses as well as the weaving techniques have been documented, along with the inventory mapping of the *tehsil*, and factors impacting the heritage are analyzed to propose appropriate conservation strategies to safeguard the vernacular methods in the contemporary time and style. It has been found out through the study that, the weaving tradition in Maheshwar is in its authentic form, but the various issues of the household handloom facilities and also of the unorganised and dispersed weaving clusters in the region are not addressed by the government while proposing various schemes and providing privileges to the bigger weaving societies. In addition, there is lack of education, adequate working capital, proper infrastructure, qwpoor exposure to new technologies, lack of market intelligence, stiff competition and poor institutional framework. Thus based on these findings, guidelines and recommendations have also been proposed.

Keywords: Handloom Weaving, Heritage, Intangible Culture, Traditional Craftsmanship, and Vernacular Architecture

INTRODUCTION

As per the ICOMOS Charter on the Built Vernacular Heritage (1999), "Vernacular building is the traditional and natural way by which communities house themselves. It is a continuing process including necessary changes and continuous adaptation as a response to social and environmental constraints". This Heritage is unique to different context and indigenous communities. The most important attributes of this heritage are its inherent character of adaptability and perceived sustainability. And, it is comprised of both tangible as well as

¹ Traditional dress or long piece of fabric worn by Hindu women.

² A *tehsil* (also known as a *tahsil*) is an administrative division in India. It is an area of land with a city or town that serves as its administrative centre, with possible additional towns, and usually a number of villages.



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II

After the revival of the tradition on a regional level, involvement of the clusters in various activities like the Nimar Utsav would enhance and promote the tradition more. Nimar Utsav is a 3-day cultural festival in Maheshwar celebrated in November. Proposal of a regional level activity on National Handloom Day – August 7.

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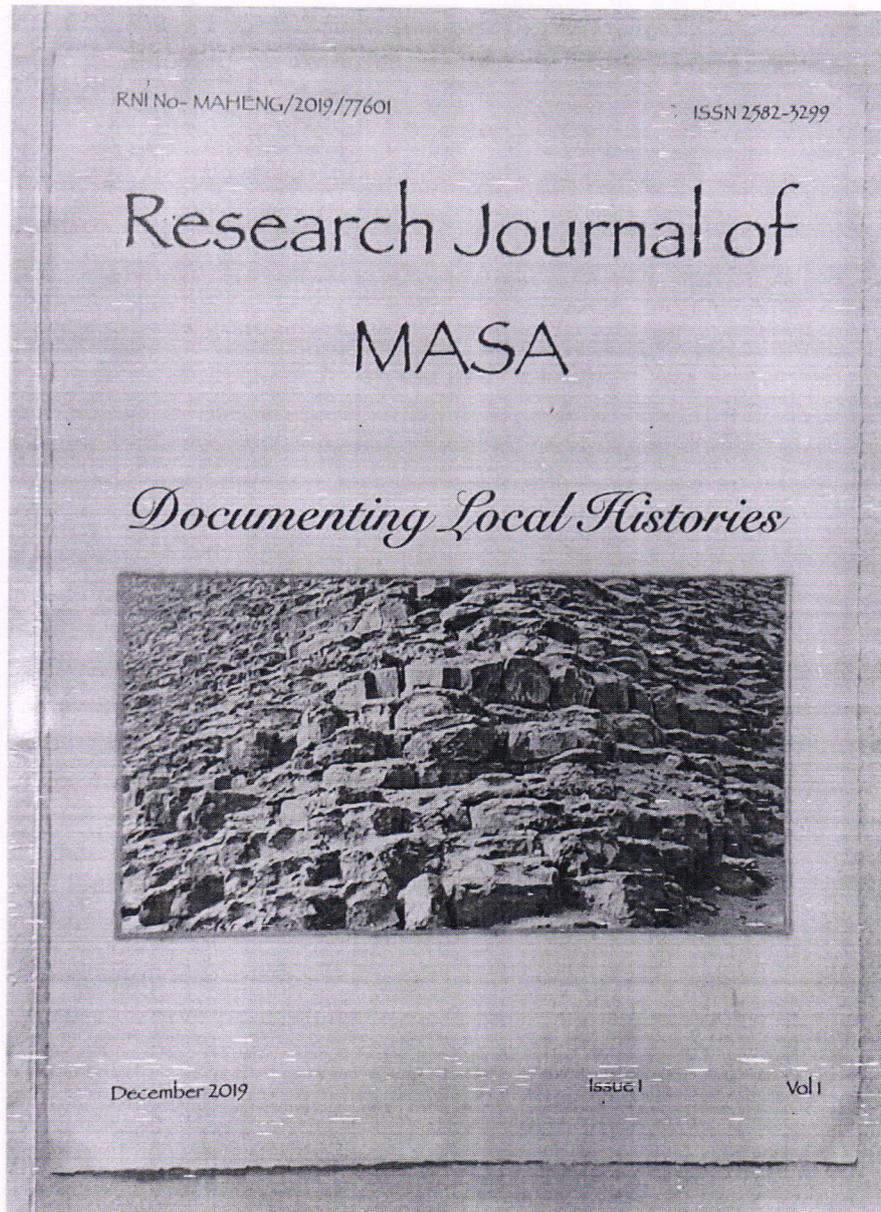
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4. Interventions in Indigenous Building form, Rumsu, Himachal Pradesh, India by Ar. Ashwini Bapat, Ar. Shomika Sarkar, & Ar. Yashika Tijoriwala



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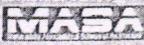
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CONTENTS

From the Desk of MASA President

Editorial

THEME 1 – ARCHITECTURE AND PLANNING

Interventions in Indigenous Building form, Rumsu Himachal Pradesh, India 11
 Ashwini Bapat, Shomika Sarkar, Yashika Tjoristwala

Tracing sacred landscape of Trimbakeshwar through ancient religious scriptures 17
 Dr Shubhada Kamapurkar, Ar Ritu Sharma

Exploring and Understanding Socio-Cultural and Architectural Fabric of Junnar Town 25
 Ar Pradya Patki, Ar Sudhir Deshpande

Understanding the Planning Principles of a Chola Settlement 36
 Ar Prathyusha Ravi

Architectural Features of the Wadas at Nagpur 47
 Prof Kishor P Rewatkar, Ms Priyanka K Rewatkar,

Study of Historic Housing in Kasba Peth , Pune 62
 Ar Kirti Saganekar, Ar Madhuri Patil

Analyzing potential of Old Tambat Ali, Nashik for Architectural Conservation 80
 Ar Ketaki Chandrakant Joshi, Ar Pnyansi Nimish Tambat,

Manduva Logili-An overview of Vernacular Courtyard Houses of Andhra Pradesh 88
 Ar Jyothi Kumari Y

THEME 2 – CONSTRUCTION TECHNOLOGY

Documenting Vernacular: A Learning Experience - A case of Village Satosa, Turia, Madhya Pradesh" 95
 Prof Archana Bele, Prof Rashmi Dande

Influence of Maratha Style on Jain Temple Architecture 109
 Ar Pranoti Lad

THEME 3 – CULTURE AND COMMUNITIES

Understanding Culture through local concepts- A Study of the Gond Community 122
 Ar Renuka Chutke Chakradar

Community Driven Approach for Heritage Conservation 133
 Ar Smita Gupta, Ar. Shraddha Kapadia



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**INTERVENTIONS IN INDIGENOUS BUILDING FORM, RUMSU
HIMACHAL PRADESH, INDIA.**

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Abstract

The village of Rumsu is a site of cultural heritage of significance and demands attention. This hamlet located in the valleys of the lower western Himalayas in Kullu district demonstrates the setting which is very rich in its culture and holds back on its traditional roots but at the same time is trying to cope with the contemporary lifestyle.

With globalization, many useful native design solutions are lost and due to faster growing technology, interventions of conditioned spaces may result into a generic approach towards any house form. The documentation shows that the traditional houses have been preserved physically with several interventions. Some buildings lack living functions due to neglect of socio-cultural, economic and religious aspects and some due to unavailability of traditional material. These traditional houses withstood the test of time and mother natures' fury. The sustenance of traditional architecture ensures cultural continuity.

The study looks at the appropriateness of the new functions of the new buildings in the midst of highly ornate traditional indigenous built forms in Rumsu. A sense of place and culture is ingrained in the minds of the people of Rumsu so much so that the built forms conceived using newer technologies are merely an imitation of the traditional architecture. Selected buildings with different functions and characteristics have been undertaken for the purpose of study

Keywords: Kath - Kunhi - Indigenous building form - Comfort - Culture - Interventio



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