


SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	




SMEF's Brick Group of Institutes, S. No. 50/3, Undri, Pune - 411028 | M:+91 8380886066 | W: www.brick.edu.in

2019-20 to 2023-24

Criterion 3 – Research, Innovations and Extensions


Key Indicator 3.3- Research Publication and Awards



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years




SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

Index (content)

- 1. Flow Chart.....
- 2. Summary Table.....
- 3. Reference Documents.....



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

Summary table

3.3.3


3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

2019-20 to 2023-24

Faculties and students writing in collaboration


Year	23-24	22-23	21-22	20-21	19-20
No. of Chapters	08	08	11	08	08



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)										
Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
2023-24										
1	Ninad Rewatkar, Sharduli Joshi	Book - Reimagining Urban Voids	-	-	-	National	2023-24	ISBN: 978-93-84204-19-8	SMEF's Brick school of architecture, Pune	COA, New Delhi
2	Dr. Poorva Keskar, Ar. Ketaki Gujar, Ar. Sharduli Joshi	Book - Deciphering Aparanta: A journey through Sindhudurga	-	-	-	National	2023-24	ISBN: 978-93-5780-326-7	SMEF's Brick school of architecture, Pune	Brick Publication House, SMEF's Brick Group of Institutes




SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)


Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
3	Shraddha Manjrekar , Shreya Mirpagar, Farhana Kapadiya	Book Chapter - Reimagining Urban Voids	Book - Reimagining Urban Voids	-	-	National	2023-24	ISBN: 978-93-84204-19-8	SMEF's Brick school of architecture, Pune	COA, New Delhi
4	Shraddha Manjrekar , Poorva Keskar		Aligning Architectural Pedagogy with the Global and National Goals for Sustainable Rural Development		" Built Environment and Beyond 2.0: Theory, Practice and Pedagogy"	National	2023-24		SMEF's Brick school of architecture, Pune	BNCA, Pune



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)										
Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
5	Shraddha Manjekar, Rasika Apte		भारतीय संस्कृतीत अंतर्भूत असलेल्या शाश्वत पद्धतीचा अभ्यास	तृतीय राज्यस्तरीय वास्तुकला मराठी परिषद, २०२४ शोधनिबंध पुस्तिका	तृतीय राज्यस्तरीय वास्तुकला मराठी परिषद, २०२४	State	2023-24	ISBN: 978-93-340-0982-8	SMEF's Brick school of architecture, Pune	BKPS College of Architecture, Pune
6	Sudhir Deshpande, Manali Deshmukh		मराठा स्थापत्य शैलीचा वारसा : कसबा गणपती मंदिर, पुणे	तृतीय राज्यस्तरीय वास्तुकला मराठी परिषद, २०२४ शोधनिबंध पुस्तिका	तृतीय राज्यस्तरीय वास्तुकला मराठी परिषद, २०२४	State	2023-24	ISBN: 978-93-340-0982-8	SMEF's Brick school of architecture, Pune	BKPS College of Architecture, Pune
7	Vaidehi Lavand, Onkar Khebudkar	Sustainable Resilient Built Environment sProceedings of SRBE 2022, India	Sacred Groves of Kudase at Sindhurg in India: A Discourse on Collective Identity and	Sustainable Resilient Built Environments Proceedings of SRBE 2022, India	SRBE 2022	International	2024	ISSN 2198-2546 ISBN 978-981-99-8811-2	SMEF'S Brick School of Architecture, Pune	Springer Nature Singapore Pte Ltd.



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
			the Continuity of Tradition							
8	Garima Mutha, Shradha Manjrekar, Akshay Gandhi	Sustainable Resilient Built Environment Proceedings of SRBE 2022, India	Role of Spatial Elements of an Urban Street that Makes It Vital	Sustainable Resilient Built Environments Proceedings of SRBE 2022, India	SRBE 2023	International	2024	ISSN 2198-2546 ISBN 978-981-99-8811-2	SMEF'S Brick School of Architecture, Pune	Springer Nature Singapore Pte Ltd.

2022-23



SSR 2019-20 to 2023-24

Criteria 3- Research, Innovations and Extension


3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years



3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	Manali Deshmukh	Evaluation of the energy-positive aspects for optimal construction efficiency through material realism	Evaluation of the energy-positive aspects for optimal construction efficiency through material realism	BOOK OF ABSTRACTS ICCAUA 2023 6th International Conference of Contemporary Affairs in Architecture and Urbanism (ICCAUA-2023) Alanya University, Türkiye Venue of the conference: Istanbul (hybrid conference) Editors: Hourakhsh Ahmad Nia and Rokhsaneh Rahbarianyazd	ICCAUA Turkey	International	2023	E-ISBN: 978-605-71006-7-2	SMEF'S Brick School of Architecture, Pune	Alanya, Turkey




SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
2	Manali Deshmukh	Evaluation of existing slum dwellings in urban settings to meet the UN SDG goals	Evaluation of existing slum dwellings in urban settings to meet the UN SDG goals	BOOK OF ABSTRACTS ICCAUA 2023 6th International Conference of Contemporary Affairs in Architecture and Urbanism (ICCAUA-2023) Alanya University, Türkiye Venue of the conference: Istanbul (hybrid conference) Editors: Hourakhsh Ahmad	ICCAUA Turkey	International	2023	E-ISBN: 978-605-71006-7-2	SMEF'S Brick School of Architecture, Pune	Alanya, Turkey



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)										
Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
				Nia and Rokhsaneh Rahbarianyazd						
3	Ramiya Gopal	Living Heritage Approach for Sustainability of Agraharams in Palakkad, Kerala, India	Living Heritage Approach for Sustainability of Agraharams in Palakkad, Kerala, India	BOOK OF ABSTRACTS ICCAUA 2023 6th International Conference of Contemporary Affairs in Architecture and Urbanism (ICCAUA-2023) Alanya University, Türkiye Venue of the conference: Istanbul (hybrid conference) Editors:	ICCAUA Turkey	International	2023	E-ISBN: 978-605-71006-7-2	SMEF'S Brick School of Architecture, Pune	Alanya, Turkey



SSR 2019-20 to 2023-24

Criteria 3- Research, Innovations and Extension


3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years



3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)


Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
				Hourakhsh Ahmad Nia and Rokhsaneh Rahbarianyazd						
4	Sudhir Deshpande & Tanay Lalvani	शिवकालीन लष्करी स्थापत्याचा तौलनिक अभ्यास: किल्ले राजगड आणि रायगड	शिवकालीन लष्करी स्थापत्याचा तौलनिक अभ्यास: किल्ले राजगड आणि रायगड	राज्य स्तरीय वास्तु कला मराठी परिषद	भारतीय कला प्रसारिणी सभेचे वास्तुविद्या महाविद्यालय, पुणे	National	2023	ISBN: 978-93-5780-547-6	SMEF'S Brick School of Architecture, Pune	BKPS College of Architecture, Pune
5	Sudhir Deshpande & Gaurav Mali	गुदमरणारे शहर- पुणे: समस्या आणि उपाययोजना	गुदमरणारे शहर- पुणे: समस्या आणि उपाययोजना	राज्य स्तरीय वास्तु कला मराठी परिषद	भारतीय कला प्रसारिणी सभेचे वास्तुविद्या महाविद्यालय, पुणे	National	2023	ISBN: 978-93-5780-547-6	SMEF'S Brick School of Architecture, Pune	BKPS College of Architecture, Pune



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)										
Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
6	Poorva Keskar	Aparanta	Book	DECIPHERING APARANTA A journey through Sindhudurga		National	2023		SMEF'S Brick School of Architecture, Pune	Brick Publishing House
7	Shraddha Mahore Manjrekar	Proceedings of International Conference on Urban Villages A transformational discourse in architecture and planning	Conducive built environment for the promotion of cultural artforms in Konkan	International Conference on Urban Villages A transformational discourse in architecture and planning	2023	National	2023	Urban Village Charitable Trust. New Delhi.	SMEF'S Brick School of Architecture, Pune	Urban Village Charitable Trust. New Delhi.



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	


3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
8	Vaidehi Lavand	Discourse on Lost Pages of History: Architectural Works of Vasudev Kanitkar in Western India	Discourse on Lost Pages of History: Architectural Works of Vasudev Kanitkar in Western India	International conference proceeding book on:Contemporary Affairs in Architecture and Urbanism (ICCAUA-2022)	ICCAUA Turkey	International	2022	10.38027/ICCAUA 2022EN0011	SMEF'S Brick School of Architecture, Pune	Alanya, Turkey

2021-22

1	Ar. Shraddha Manjrekar & Dr. Poorva Keskar	Architecture and Planning for Villages	Built environment of Indian villages:A case study of coastal villages of Maharashtra	Architecture and Planning for Villages	8th [online] International Seminar on Architecture for Masses	National	2021	ISBN 978-81-953960-0-9	SMEF's Brick school of Architecture, Pune	Wellworth Books International
---	--	--	--	--	---	----------	------	------------------------	---	-------------------------------




SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)


Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
2	Ar.Shardul Joshi	Landfill Management :An opportunity to resilient future	Landfill Management:An opportunity to resilient future	International conference proceeding book on:Blurred boundaries: In search of identity	Blurred boundaries: In search of identity	International	2021	ISBN: 978-93-5473-568-4 (Online)	SMEF's Brick school of Architecture, Pune	Brick publication house, SMEF's Brick school of Architecture, Pune
3	Shraddha Mahore Majrekar	"Relating Education To Profession: A Pedagogical Approach" ,	"Relating Education To Profession: A Pedagogical Approach" ,	Skills and Architecture, New Paradigm, Proceedings of the National conference, August 23rd , 24th, 2020	Skills and Architecture, New Paradigm, Proceedings of the National conference, August 23rd , 24th, 2020	National	2021	ISBN 978-93-83827-80-0	SMEF's Brick School of Architecture, Pune	Chetak Books 1280, Fl. No. 1, A Wing, Harinarayans mriti Sahakari Gruharachana Sanstha Maryadit, Sadashiv Peth, Pune, Maharashtra



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	


3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)										
Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
										411030 Ph.: 020 24450424
4	Ar. Shraddha Manjrekar & Ar. Shradhha Gurjar	Dynamism of urban spaces reflecting culture	Dynamism of urban spaces reflecting culture	International conference proceeding book on: Blurred boundaries: In search of identity	Blurred boundaries: In search of identity	International	2021	ISBN: 978-93-5473-568-4 (Online)	SMEF's Brick school of Architecture, Pune	Brick publication house, SMEF's Brick school of Architecture, Pune
5	Dr. Vaidehi Lavand	Discourse on Lost Pages of History: Architectural Works of Vasudev Kanitkar in Western India	Discourse on Lost Pages of History: Architectural Works of Vasudev Kanitkar in Western India	International conference proceeding book on: Contemporary Affairs in Architecture and Urbanism (ICCAUA-2022)	5th International Conference of Contemporary Affairs in Architecture and Urbanism (ICCAUA-2022)	International	2021	ISBN: 978-605-71006-3-4	SMEF's Brick school of Architecture, Pune	Alanya Hamdullah Emin Pasa University, Turkey



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	


3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)										
Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
6	Dr. Vaidehi Lavand	Rethinking Heritage Site of Pateshwar In Today's Context	Rethinking Heritage Site of Pateshwar In Today's Context	International conference proceeding book on:Blurred boundaries: In search of identity	Blurred boundaries: In search of identity	International	2021	ISBN-978-93-5473-568-4	SMEF's Brick School of Architecture, Pune	Brick publication house, SMEF's Brick school of Architecture, Pune
7	Dr. Vaidehi Lavand & Ar. Ramiya Gopalkrishnan	Nature and Conflict:Case of Tilari Bio Region	Nature and Conflict:Case of Tilari Bio Region	International conference proceeding book on:Blurred boundaries: In search of identity	Blurred boundaries: In search of identity	International	2021	ISBN-978-93-5473-568-4	SMEF's Brick School of Architecture, Pune	Brick publication house, SMEF's Brick school of Architecture, Pune
8	Anurakti Yadav	Shodhaditya research journal, International design	case study of creative architecture in mass productions	International design research conference	International design research conference 2021, Monadic architecture	International	2021	ISSN 2347-8403	Aditya college of architecture, Mumbai	Aditya group of institutes



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)										
Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
		research conference 2021	through 3D printing technology							
9	Bhagyashree Bandekar	Within The Gardens We Walk	THE GARDEN THE EDGE -THE PEOPLE FIVE GARDENS-MU MBAI	Within The Gardens We Walk	Within The Gardens We Walk	National	2021	ISBN 13 - 978-81-9 32729 - 4-7	Landscape Environment Advancement Foundation (LEAF)	Landscape Environment Advancement Foundation (LEAF)
10	Ar. Manali Deshmukh & Ar. Sudhir Deshpande	Investigating the role of social dimensions in the design of affordable housing:	Investigating the role of social dimensions in the design of affordable housing: Case Pune city	International conference proceeding book on: Blurred boundaries: In search of identity	Blurred boundaries: In search of identity	International	2021	ISBN-978 -93-5473 -568-4	SMEF's Brick School of Architecture, Pune	Brick publication house, SMEF's Brick school of Architecture, Pune



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	


3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
		Case Pune city								
11	Ar. Sudhir Deshpande	Feasible and flexible design criteria for affordable housing	Feasible and flexible design criteria for affordable housing	State Level Architecture Marathi Parishad	State Level Architecture Marathi Parishad	National	2021	E book	Technical Education Divisional Office, Pune and Architecture of Indian Art Promotion Society Pune	Technical Education Divisional Office, Pune and Architecture of Indian Art Promotion Society Pune

2020-21

1	Ar. Shraddha Manjrekar	Architecture and Planning for Villages	Built environment of Indian	Architecture and Planning for Villages	8th [online] International Seminar on	National	2021	ISBN 978-81-9	SMEF's Brick school of	Wellworth Books International
---	------------------------	--	-----------------------------	--	---------------------------------------	----------	------	---------------	------------------------	-------------------------------




SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)


Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
			villages:A case study of coastal villages of Maharashtra		Architecture for Masses			53960-0-9	Architecture, Pune	
2	Roshni Sethia	Tiny Housing	Tiny Housing: A Future to Better Living Spaces in Pune	Research in Architecture	National Students Research Competition in Architecture	National	2021	In Process-To be received	SMEF's Brick school of Architecture, Pune	D Y Patil School of Architecture, Lohegaon
3	Manas Tungar	Artificial Intelligence in architecture	Artificial Intelligence: Changing practices in architectural practices	Research in Architecture	National Students Research Competition in Architecture	National	2021	In Process-To be received	SMEF's Brick school of Architecture, Pune	D Y Patil School of Architecture, Lohegaon



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)										
Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
4	Riddhi Gupta	Container Housing	Container Housing: Container Housing : Study of the economic feasibility of container housing in Pune	Research in Architecture	National Students Research Competition in Architecture	National	2021	In Process- To be received	SMEF's Brick school of Architecture, Pune	D Y Patil School of Architecture, Lohegaon
5	Neev Rathod	Eco Resorts In India	Eco Resorts In India: Case Study of Resorts In Western India	Research in Architecture	National Students Research Competition in Architecture	National	2021	In Process- To be received	SMEF's Brick school of Architecture, Pune	D Y Patil School of Architecture, Lohegaon
6	Akshay Bafna	Open spaces in High Rise Building	Analysis of Open Spaces in High	Research in Architecture	National Students Research	National	2021	In Process- To be received	SMEF's Brick school of	D Y Patil School of Architecture, Lohegaon




SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
			Rise Buildings in Pune		Competition in Architecture				Architecture, Pune	
7	Rujuta Killedar	Institutional Landscape Design	Institutional Landscape Design : Impact assessment of tangible and intangible aspects of designed open spaces in Architecture Institute	Research in Architecture	National Students Research Competition in Architecture	National	2021	In Process- To be received	SMEF's Brick school of Architecture, Pune	D Y Patil School of Architecture, Lohegaon
8	Aniket Tayade & Sudhir Deshpande	Investigative Study on Quality of Ambient	Investigative Study on Quality of Ambient light in Temples:	Research in Architecture	National Students Research Competition in Architecture	National	2021	In Process- To be received	SMEF's Brick school of Architecture, Pune	D Y Patil School of Architecture, Lohegaon



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	


3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
		light in Temples	Case Study of Temples in Pune district							

2019-20

1	Ar. Divya Mallavarapu	International Conference on Civil and Architectural Engineering (ICCAE)	Green Cover as a Social Catalyst for a city - Case Study: Pune	International Conference on Civil and Architectural Engineering (ICCAE)	Conference session publication - Scanned copy submitted	International	Oct-19		SMEF's Brick school of Architecture, Pune	Conference Proceedings booklet
2	Ar. Sudhir Deshpande	Novateur Publications & Proceeding book of Panchtatva National Conference	Built & Unbuilt Interface'	Proceedings of National Conference on PANCHTATVA in Civil Engineering - Integrating Five Elements of Nature for	National Conference on PANCHTATVA in Civil Engineering - Integrating Five Elements of Nature for	National	2019	ISSN - 2394-3696 ISBN - 978-93-87901-06-3	SMEF's Brick school of Architecture, Pune	Proceeding book - SPPU, SCOE, Success Publishers Journal Publisher - Novateur Publications




SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
				Sustainable Development 2019	Sustainable Development 2019					
3	Ar. Sudhir Deshpande	Proceeding book of International Conference on Sustainable Development	Study of concept of Green Buildings': Practices from the past and it's applicability today	Proceedings of International Conference on Sustainable Development ICSD 2019	International Conference on Sustainable Development ICSD 2019 https://www.ijert.org/admin/papers/1555047352_ICSD%202019.pdf	International	2019	ISBN - 978-93-87901-05-6	SMEF's Brick school of Architecture, Pune	Proceeding book - SPPU, SCOE, Success Publishers
4	Shraddha Manjrekar	Heritage India	Learning from traditional forms of Indian Housing		NCBWT-2NCBWT-2019 Building with Time019 Building with Time	National	2019	ISBN - 978-81-9084018-6-3		



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)										
Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
5	Dr. Vaidehi Lavand	Ninth International Conference on The Constructed Environment Traces "in-Motion": How People and Matter Transform Place : Design and Planning Processes	Colonial Public Markets of Poona: Hegemony of British Raj	Ninth International Conference on The Constructed Environment Traces "in-Motion": How People and Matter Transform Place	Ninth International Conference on The Constructed Environment Centro Cultural Vila Flor Guimarães, Portuga	International	23-24 May 2019		Dr. DY Patil College of Architecture, Pune	
6	Ar. Sudhir Deshpande	Proceeding book of 6th International Conference on Energy and	Panel Construction systems in Prefabricated structures: A smart way for	Scopus Proceedings of 6th International Conference on Energy and city of the future	International Conference on Energy and city of the future EVF 2019	International	2020	Yet to be published with ISSN no.	SMEF's Brick school of Architecture, Pune	MIT ADT, web of conferences



SSR 2019-20 to 2023-24

Criteria 3- Research, Innovations and Extension


3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years



3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
		city of the future	affordable housing							
7	Ar. Sudhir Deshpande , Ar. Manali Deshmukh	Proceeding book of 6th International Conference on Energy and city of the future	Need and proposal of strategies for retaining a city character: Pune core city	Scopus Proceedings of 6th International Conference on Energy and city of the future	International Conference on Energy and city of the future EVF 2019	International	2020	Yet to be published with ISSN no. & scrutiny is in process for SCI & Scopus Index	SMEF's Brick school of Architecture, Pune	MIT ADT, web of conferences, SCI Indexed
8	Ar. Shraddha Manjrekar, Ar. Manali Deshmukh	Proceeding book of 6th International Conference on Energy and city of the future	Exploring Societal Participation in making cities smart	Scopus Proceedings of 6th International Conference on Energy and city of the future	International Conference on Energy and city of the future EVF 2019	International	2020	Yet to be published with ISSN no. & scrutiny is in process for SCI & Scopus Index		



SSR 2019-20 to 2023-24	
Criteria 3- Research, Innovations and Extension	
3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years	

Reference Documents

Year 2023-24





CONTENTS

About The Book	.....10
Foreword by Ar. Dean D’Cruz	.....13
Acknowledgement	.....14
Module 1: Konkan Chronicles	.....15
Narratives of Konkan	.....16
Origin and Significance	.....18
Topographical Zones	.....18
Flora and Fauna	.....19
Climate	.....20
History	.....20
Political Reliance, Social Evolution and Migration	.....21
Community and settlers	.....22
Myths and Mythology	.....24
Literary Description	.....26
Art of Konkan	.....27
Food and Local Flavours	.....27
Architecture and People	.....28
Occupation, Economy and Culture	.....29
Discussions about Konkan	.....30
Module 2: Sindhudurg	.....33
Socio-cultural Identity	.....36
Politics and Administration	.....37
Geographical Settings	.....38
Types of Settlements	.....39
Occupational Influence	.....42
Religious Influence	.....43
Political Influence	.....44
Module 3: Settlement Narratives	.....45
Achare	.....46
Masure	.....70
Dhamapur	.....90
Walaval	.....120
Amboli	.....140
Chaukul	.....147
Sawantwadi	.....154
Conclusion	.....166
Bibliography	.....173

Title: Deciphering Aparanta

Subtitle: A journey through Sindhudurg

Authors:

Dr. Poorva Keskar (Principal, SMEF's Brick School of Architecture)

Ar. Ketaki Gujar (Associate Professor)

Ar. Sharduli Joshi (Associate Professor)

Editorial Team:

Ar. Rama Raghavan (Asst. Professor)

Sharvari Rajwaday (Research & Publication Assistant)

Abhay Khele (Research and Publication Intern)

Shrigandh Malavade (Research and Publication Intern)

Core Research and Documentation team:

Ar. Ketaki Gujar (Associate Professor)

Ar. Sharduli Joshi (Associate Professor)

Faculty and Students of SMEF's Brick School of
Architecture- (F.Y.B.Arch, S.Y.B.Arch, and T.Y.B.
Arch- Batch of 2019)

Graphic Design: Brick Publication House

Cover Page Design: Ar. Bhagyashree Bandekar

Photography Credits: Abhishek Chavan

Ar. Ketaki Gujar (Associate Professor)

Ar. Sharduli Joshi (Associate Professor)

Faculty and Students of SMEF's Brick School of
Architecture- (F.Y.B.Arch, S.Y.B.Arch, and T.Y.B.
Arch- Batch of 2019)

Copyright © All Rights Reserved 2023

Satish Misal Educational Foundation's Brick School of Architecture.

Copyright belongs to SMEF's Brick School of Architecture. No part of this publication may be reproduced- either physically or digitally, stored in a retrieval system, or transmitted in any digital or physical form or by any means without prior permission.

ISBN: 978-93-5780-326-7

Published by:



BRICK PUBLICATION HOUSE

SMEF's Brick Group of Institutes

Survey No. 50/3. Jagdamba Bhavan Marg, Undri. Pune Maharashtra.
411060

Email: brickpublication@brick.edu.in

Website: <http://brick.edu.in>

Book Price:

xyz/- Rs

Satish Mehta Educational Foundation's



BRICK

SCHOOL OF ARCHITECTURE



Council of Architecture
Training & Research Centre

TRC

RE - IMAGINING **URBAN VOIDS**



Verso Page

Title: Re-imagining Urban Voids

Concept:

Prof. Jayashree Deshpande, Director, Council of Architecture Training & Research Centre (COA-TRC), Pune
Dr. Poorva Keskar, Principal, SMEF's Brick School of Architecture, Pune

Contributing Authors (other than the caselets):

Ar. Ninad Rewatkar (Assistant Professor)
Ar. Sharduli Joshi (Associate Professor)

Editorial Team:

Ar. Ramiya Gopalakrishnan (Assistant Professor)
Ar. Omkar Kale (Assistant Professor)

Core Coordination and Research team:

Ar. Sharduli Joshi (Associate Professor)
Ar. Ninad Rewatkar (Assistant Professor)
Dr. Vaidehi Lavand (Associate Professor)
Ar. Rama Raghavan (Assistant Professor)

Graphic Design: Forest Communications, Ar. Omkar Kale

Printing: print@pragati.com

Copyright © All Rights Reserved 2023 and published by Council of Architecture(COA), through COA-TRC, Pune.

The content of this book has been compiled from research and outcomes of the Online teachers training program on 'Reimagining Urban voids' conducted by Council of Architecture Training & Research Centre, Pune in association with Satish Misal Educational Foundation's Brick School of Architecture, Pune in January 2023. Permission of reproduction of other published matter and/or graphics is solely the responsibility of the contributing authors.

Any errors or omissions which might have inadvertently crept in are sincerely regretted.

All rights Reserved. No part of this publication may be reproduced- either physically or digitally, stored in a retrieval system, or transmitted in any digital or physical form or by any means without prior permission from the publisher and contributing authors.

ISBN: 978-93-84204-19-8

Price: Rs 1350/-

Published by COA, New Delhi, through COA-TRC, Pune
Academic Wing of Council of Architecture, New Delhi,
2nd Floor, A-4 (B), Abhimanshree, Off Pashan Road, Pune – 411 008

Contents

1. Preface.....	11
2. Introduction.....	19
• 2.1 Definition of urban voids.....	20
• 2.2 Importance of reimagining urban voids.....	21
• 2.3 Action oriented planning.....	22
• 2.4 Overview of the book's purpose and structure .of the book.....	23
3. Understanding Urban Voids.....	25
• 3.1 Types, causes and consequences of urban voids.....	26
• 3.2 Role of Architects and Urban designers.....	29
• 3.3 Incorporating principles of urban design and placemaking.....	29
• 3.4 Importance of community involvement in urban void transformation.....	31
• 3.5 Addressing social equity and inclusivity in urban void projects.....	32
4. Valuable Lessons from the Training Program.....	33
5. Triumphs in Urban Void Transformations: Compelling Case Studies.....	41
6. Concluding Remarks.....	90
7. Bibliography.....	93

४

,

शोधनिबंध पुस्तिका

ISBN: 978-93-340-0982-8

परिषद संयोजन व शोधनिबंध संपादन समिती:

मा. श्री. पुष्कराज भालचंद्र पाठक
मा. डॉ. विनोद मोहितकर
मा. डॉ. दत्तात्रेय जाधव
डॉ. अभिजीत नातू
डॉ. पराग नारखेडे
प्रा. प्रजा पतकी

Copyright © 2024 BKPS College of Architecture, Pune
February 2024
ISBN: 978-93-340-0982-8

भारतीय कला प्रसारिणी सभेचे वास्तुविद्या महाविद्यालय, पुणे
(सावित्रीबाई फुले पुणे विद्यापीठ, पुणे)

www.bkps.edu

१७	डॉ. सीमंतिनी चाफळकर	बाराव्या शतकातील सोलापूरचे द्रष्टे नियोजनकार श्री सिद्धरामेश्वर	१२३
१८	अमृता बर्वे डॉ. वैशाली अनगळ	शहराच्या वारसा मूल्यांबद्दल जागरूकता वाढवण्यासाठी असलेले खेळांचे महत्त्व	१३०
१९	अश्विनी चंद्रात्रे	मंदिर वास्तुकला कला आणि भारतीय संस्कृती यांचा असलेला परस्पर संबंध	१३६
२०	अनुश्री बोधले नातु	वास्तुकलेमध्ये सर्वसमावेशक रचना: एक संक्षिप्त साहित्य पुनरावलोकन	१४४
२१	श्याम रघुते	पर्यावरणपुरक घरबांधणी ची स्विकार्यता	१४८
२२	प्रा. प्रजा पतकी	महाराष्ट्रातील किल्ले आणि पर्यटन अन्वेषण	१६१
२३	अनुजा जोगदेव-चाफळकर	पट्टदकल मंदिर समूह - वास्तुशैलीचा अनोखा मिलाफ	१६९
२४	पद्मजा पाटणकर	पाण्याशी सुसंवाद - सांडपाण्याचा पुनर्वापर	१७८
२५	अपूर्वा संजय खाटपे	शाश्वत इमारतीसाठी विविध मूल्यमापन प्रणालींचा तुलनात्मक अभ्यास	१८४
२६	श्रद्धा माहोरे मांजरेकर रसिका आपटे	भारतीय संस्कृतीत अंतर्भूत असलेल्या शाश्वत पद्धतींचा अभ्यास	१९२
२७	शिल्पा ढवळे	दुर्गाच्या देशात- किल्ला नळदुर्ग	१९८
२८	मुक्ता देशपांडे डॉ. अमृता पंजाबी,	डिझाइन प्रक्रियेसाठी सर्जनशीलता उत्तेजन	२०४
२९	प्रा. शिल्पा नागापूरकर	किमान जागा व्यापणारी भविष्यातील सूक्ष्म गृहनिर्माण संकल्पना	२१३
३०	सुधीर देशपांडे मनाली देशमुख	मराठा स्थापत्य शैलीचा वारसा: श्री कसबा गणपती मंदिर, पुणे	२२४
३१	जुई बारटक्के आदित्य डागा	गंगाई कोंडा चोलापुरम मधील शिल्पकला	२३०
३२	आर्कि. चिन्मयी माळी आर्कि. कणाद कुंभार डॉ. पराग नारखेडे	शॉपिंग मॉल्स मधील खरेदीदारांच्या सकार्युलेशनवर परिणाम करणारे घटक	२३६
३३	मिहीर सुनील भामरे.	राम मंदिर निर्माणानंतरची अयोध्या	२४२

भारतीय संस्कृतीत अंतर्भूत असलेल्या शाश्वत पद्धतींचा अभ्यास

श्रध्दा माहोरे मांजरेकर,
संशोधन अभ्यासक
अमिटी विश्वविद्यालय, हरियाणा

रसिका आपटे
सहाय्यक प्राध्यापक
ब्रिक स्कूल ऑफ आर्किटेक्चर

गोषवारा

शाश्वत पद्धती ही भारतीय संस्कृतीचा अविभाज्य भाग आहे. वास्तुशास्त्र म्हणजे इमारती आणि शहराच्या भौतिक स्वरूपात, संस्कृती आणि सभ्यतेची कलात्मक अभिव्यक्ती आहे.. लेखिकेने भारतीय पारंपारिक सांस्कृतिक संबंधांचे निरीक्षण आणि विचार केला असता, अशी अनेक उदाहरणे सापडली, जिथे निसर्ग आणि त्याचे संवर्धन दोन्ही ह्या संस्कृतीत जपले जातात. संस्कृतीने स्वीकार केलेल्या अशा अनेक पद्धती अलिखित नियमासारख्या आहेत, आणि जनसामान्यांच्या जीवनशैलीत उतरलेल्या आहेत. वेदिक पद्धतीत नित्य नियमाने जे श्लोक म्हणले जातात, त्यातून दिसून येते कि आपल्या पूर्वजांचा, देशाकडे असलेल्या नैसर्गिक आणि मानवनिर्मित वरशाचा मोठा अभ्यास होता. जेव्हा अशा भरभराटीची जाणीव येते, तेव्हा हा वारसा जपून ठेवणे आणि त्याचे संवर्धन करणे ह्याचे महत्व पण कळते. जणू रोज म्हटले जाणारे मंत्र आणि श्लोक हे सगळं लक्ष्यात घेवूनच लिहिले गेले असावेत. लेखिकेने ह्या शोधनिबंधातून, अशी काही उदाहरणे वाचकांसमोर आणली आहेत.

प्रस्तावना

भारतीय पारंपारिक वास्तुकलेचा संस्कृती सह सखोल संबंध आहे. शहर आणि गावांमध्ये काही सार्वजनिक जागा अशा असतात, जिथे जीवनशैली आणि संस्कृतीचे दर्शन होतं. तसेच वर्षभरात येणारे सणवार आणि परंपरा काही ठराविक ठिकाणीच साजरी करण्याच्या पद्धती आहेत. जरी हे सगळं कुठे लिहून नाही ठेवलं, तरी हे उत्सव आणि त्यांना साजरं करणाऱ्या जागा, जनसामान्यांचा आयुष्यात उतरलेल्या नियमावली प्रमाणे दिसून येतात. भारत देशात पारंपरिक उद्योग आणि चालीरीती दोन्ही वास्तुकलेबरोबर एकजीव झाले आहेत. उदाहरणार्थ, वनराई, देवराई, उपवन, नदी काठी असलेले घाट, गावात असलेले देऊळ आणि त्या समोर असणारा जलकुंड, बारव, तळे, चौकात असलेली वडाच्या झाडा जवळची पार, बाजार पेठ, कचेरी, प्रत्येक वास्तु समोर असलेले प्रवेश द्वार, उंबरठे आणि त्याला निगडित असलेले आत आणि बाहेर वागण्याचे नियम असे अनेक उदाहरण आहेत जिथे, वास्तुकलेच्या मागचा सखोल विचार दिसून येतो. भारतीय वास्तुकला निसर्गाला जपून, हवामानाच्या अनुरूप, समाजाच्या सगळ्या

मराठा स्थापत्य शैलीचा वारसा: श्री कसबा गणपती मंदिर, पुणे

सुधीर देशपांडे,

सहयोगी प्राध्यापक

एस एम ई एफ्स ब्रिक स्कूल ऑफ आर्किटेक्चर, पुणे

मनाली देशमुख,

प्राध्यापक

एस एम ई एफ्स ब्रिक स्कूल ऑफ आर्किटेक्चर, पुणे

गोषवारा :

स्थापत्य, इतिहास आणि सामाजिक राजकीय घटनांचा परस्पर संबंध आपल्याला जगाच्या पातळीवर प्रत्येक प्रदेशात आढळतो. स्थापत्यातील स्थित्यंतरे ही राजकीय स्थित्यंतरांशी अगदी सरळ जोडली गेलेली आहेत. अगदी चोला स्थापत्यापासून, नागर स्थापत्य, द्रविड स्थापत्य, मुघल स्थापत्य, पर्शियन, मराठा स्थापत्य, पुढे क्लोनिअल आणि फ्रेंच, पोर्तुगीज अशा स्थापत्यांपर्यंत विविध स्थापत्य शैलींचा प्रभाव त्या त्या राजवटींमुळे भारतातील आणि खास करून महाराष्ट्रातील हेरीटेज वास्तूवर दिसतो. इतक्या विविध प्रकारच्या स्थापत्यशैली क्वचितच कुठल्या देशात मिळू शकतील. हा शोधनिबंध मराठा स्थापत्य शैलीतील श्री कसबा गणपती मंदिरावर प्रकाशझोत टाकतो. या अभ्यासातून मराठा स्थापत्य शैलीच्या विविध अंगांचा श्री कसबा गणपती मंदिर या उदाहरणातून उहापोह केलेला आहे. या शोध निबंधातून श्री कसबा गणपती मंदिराचा सामाजिक आणि राजकीय इतिहासही मांडलेला आहे. हे संशोधन काही ठळकपणे प्रकाशित झालेल्या शोध साहित्यावर आधारलेले आहे. तसेच काही रेखाटनांचा आणि छायाचित्रांचा वापर स्थापत्य वैशिष्ट्ये दर्शवण्याकरता केलेला आहे. पुण्यामध्ये प्रामुख्याने पेठांमध्ये असलेल्या मराठा स्थापत्य शैलीचा वारसा उधृत करण्याचा या शोधनिबंधाचा उद्देश आहे.

महत्वाचे शब्द : वारसा, स्थापत्यशैली, मराठा, सामाजिक, राजकीय

परिचय :

स्थापत्य, इतिहास आणि सामाजिक राजकीय घटनांचा परस्पर संबंध आपल्याला जगाच्या पातळीवर प्रत्येक प्रदेशात आढळतो. स्थापत्यातील स्थित्यंतरे हि राजकीय स्थित्यंतरांशी अगदी सरळ जोडली गेलेली आहेत. अगदी चोला स्थापत्यापासून, नागर स्थापत्य, द्रविड स्थापत्य, मुघल स्थापत्य, पर्शियन, मराठा स्थापत्य, पुढे क्लोनिअल आणि फ्रेंच, पोर्तुगीज अशा स्थापत्यांपर्यंत विविध स्थापत्य शैलींचा प्रभाव भारतातील हेरीटेज वास्तूवर दिसतो. इतक्या विविध प्रकारच्या स्थापत्यशैली क्वचितच कुठल्या देशात मिळू शकतील. महाराष्ट्रामध्ये सुप्याचा प्रांत शहाजी राजांना आदिलशाहीची जहागीर म्हणून मिळाला.

Advances in 21st Century Human Settlements

Rama Devi Nandineni

Susan Ang

Norwina Binti Mohd Nawawi *Editors*


Sustainable Resilient Built Environments

Proceedings of SRBE 2022, India

 Springer

Advances in 21st Century Human Settlements

Series Editor

Bharat Dahiya , School of Global Studies, Thammasat University, Bangkok, Thailand

Editorial Board

Andrew Kirby, Arizona State University, Tempe, USA

Erhard Friedberg, Sciences Po-Paris, France

Rana P. B. Singh, Banaras Hindu University, Varanasi, India

Kongjian Yu, Peking University, Beijing, China

Mohamed El Sioufi, Monash University, Clayton, Australia

Tim Campbell, Woodrow Wilson Center, USA

Yoshitsugu Hayashi, Chubu University, Kasugai, Japan

Xuemei Bai, Australian National University, Australia

Dagmar Haase, Humboldt University, Germany

Ben C. Arimah, United Nations Human Settlements Programme, Nairobi, Kenya

Rama Devi Nandineni · Susan Ang ·
Norwina Binti Mohd Nawawi
Editors

Sustainable Resilient Built Environments

Proceedings of SRBE 2022, India

 Springer

Editors

Rama Devi Nandineni
Manipal School of Architecture
and Planning
Manipal Academy of Higher Education
Manipal, India

Susan Ang
School of Architecture and Built
Environment
Deakin University
Geelong, Victoria, Australia

Norwina Binti Mohd Nawawi
Kulliyyah of Architecture
and Environmental Design
International Islamic University Malaysia
Kuala Lumpur, Malaysia

ISSN 2198-2546

ISSN 2198-2554 (electronic)

Advances in 21st Century Human Settlements

ISBN 978-981-99-8810-5

ISBN 978-981-99-8811-2 (eBook)

<https://doi.org/10.1007/978-981-99-8811-2>

© The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd. 2024

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd.

The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

Paper in this product is recyclable.

Exploring Spatial Arrangements in an Office Space Through Daylighting Analysis of Shading Device: An Experimental Simulation Model 533
 Akshay Kumar, Roshan S. Shetty, Anam Haque, and Prakash Rao Gurpur

Optimizing Building Orientation, Window-to-Wall Ratio, and Calculated Solar Shades and Strategies to Enhance the Building’s Daylight Performance and Energy-Saving Potential 549
 S. Diksith, Roshan S. Shetty, B. Swarnika, and Prakash Rao Gurpur

Community Resilience and Social Sustainability

The Influence of Socio-cultural Factors on Open Space in Fisherman Settlement, Udupi District—Karnataka 565
 Jambavati Gouda

Urban Planning and Crime Prevention in Public Spaces..... 575
 Dharshan Prabhu and Sweta Sreekumar

Accessible Spaces in Urban Placemaking..... 585
 Ishani Joshi

Mapping Cyclone and Flood Hazard Vulnerability in Puri District, Odisha, India, Using Geoinformatics..... 595
 Keerti Manisha and Vishal Chetty

Community Perceptions of Engagement in Sustainable Building Design/Construction in Rural Context 605
 Gayani Karunasena, Susan Ang, Sachie Gunatilake, and M. F. F. Fasna

Investigating the Migrant Workers’ Housing Situation in Mangalore City: A Dialogue on Inclusive Housing Design 617
 Nagabhoina Tejendra and D. Amruth

Assessing the Walkability of Nagpur City at Neighborhood Level Using Walk Score Index..... 631
 Shivanjali Mohite and Meenal Surawar

Fire Safety of Urban Villages in Noida: Gap Identification in Policies and Building Norms..... 643
 Prerna Sharma and Amit Kumar Jaglan

Impact Assessment of Citizen Participation and Service Quality on Citizen Satisfaction in Smart Cities in India..... 655
 Vikrant Dhenge, Gopi Nimbarte, and Prashant Dhenge

Sense of Security in Urban Recreational Park—An Exploratory Study of Cubbon Park, Bengaluru 823
 Karthik Mohan and P. S. Chani

Heritage and Sustainability

Lessons from Indian Traditional House Forms in Achieving Sustainability 845
 Amanjeet Kaur

Exploring Sustainability Aspects of Vernacular Houses in Contemporary Settings: Case Study of Kankumbi Village..... 857
 Amit Kinjawadekar and Trupti Amit Kinjawadekar

The Unbuilt Sacred Spaces of Indigenous Religious Practices in Coastal Karnataka..... 869
 Vidya Rao, Rama Devi Nandineni, and Shaji Kananchira Pannicker

Self-sustainability Framework for Cultural Heritage: A Case Study of Shekhawati, Rajasthan..... 881
 Tanushree Das

Influence of Culture in Architectural Built Form Elements—Analyzing the Influence of Culture on Architectural Built Forms in Gaud Saraswat Brahmins and Gujarati Community in Fort Kochi..... 893
 T. A. Anjana and Vipin Wilson

Perforated Screens of India: Learning from Traditional and Contemporary Reflections..... 923
 Vanshana Gupta, Navin Gupta, Aakash Khajuria, Abhiney Gupta, and Sourovee Dutta

Sustainable Adaptive Reuse of Interiors in Iraq..... 935
 Zein Alomari, Asifa Mahajabeen Noor, and Arushi Malhotra

The Heterogeneous Layered Urbanism of the Old Port of Mangaluru: Its Significance Within the Cultural Landscape of Tulunadu with a Vision Towards a Sustainable Urban Future .. 947
 Caroline D’Souza

Identification and Selection of Parameters for the Value Assessment of Architectural Heritage: A Case of Odishan Temple Architecture, India..... 957
 Partha Sarathi Mishra and Soumi Muhuri

Intangible as a Driver for the Sustainability of Historic Cities..... 973
 Niyati Jigyasu

Role of Spatial Elements of an Urban Street that Makes It Vital



Garima Mutha, Shraddha Manjrekar, and Akshay Gandhi

Abstract The characteristic of meaningful interactive spaces in the city transforms with change of lifestyle. Certain streets in the urban fabric offer a conducive environment for gathering, and with this attribute, these streets remain lively and vibrant in nature. With time, the buildings get dilapidated, few of them get renovated, and in this process, the architectural character also gets changed. Although the aesthetic character of streets changes, with the developments in the architectural design, the value of urban streets still remains the same in terms of social interaction spaces. Chandni Chowk, Delhi, Mohammad Ali Street and Colaba causeways of Mumbai, Manek Chowk of Ahmedabad, Sarafa Bazaar of Indore and many such streets in the older cities are the spaces that have been attracting people with their traditional food joints and the street elements since many years. The researchers have identified Fergusson College Road of Pune with an objective of studying the spatial aspects of streets and urban vitality that draw people toward them. The study comprises two stages. The first stage includes an interview-based survey of 45 individuals. These visits to a particular street that is covered by eateries and shopping alleys. The second stage includes study of the spatial character of the street under defined parameters with semi-structured interviews and documentation. Remarkably, the documentation covers the nature of the space over the time which have influenced people of three generations.

Keywords Urban vitality · Social interaction · Urban street · Street element · Restaurants

G. Mutha · S. Manjrekar (✉) · A. Gandhi
SMEF's BRICK School of Architecture, Pune, Maharashtra, India
e-mail: iitrshraddha@gmail.com

© The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd. 2024
R. D. Nandineni et al. (eds.), *Sustainable Resilient Built Environments*, Advances in 21st Century Human Settlements, https://doi.org/10.1007/978-981-99-8811-2_63

745

Sacred Groves of Kudase at Sindhurg in India: A Discourse on Collective Identity and the Continuity of Tradition



Vaidehi Lavand  and Onkar Khebudkar

Abstract Kudase village is a one of the significant biodiversity hotspots located near Tillari River in Sindhurg district, India. Tillari bioregion retains its significance as a natural heritage. Being situated close to Talkat forest reserve spotted large number endemic and indigenous species of flora and fauna in the Western Ghats, one of the nominated natural heritage site under UNESCO. Sacred groves around the village still retain their spiritual character and sanctity. These sacred groves are undergoing through many threats such as privatization of forestlands getting converted to mono-culture, and so on. It is essential to document and rethink these natural heritage sites as a potential cultural landscape cases to be listed and protected on a broader platform. This discourse tries to record and analyze six sacred groves around Kudase village. As per IUCN guidelines, critical evaluation of sacred groves is done with the help of literature review, field visits, and interviews with experts and local communities. Along with this background research, actual mapping, and field visits are done to identify various attributes of natural and cultural heritage. As a result of study along with the mapping of these sacred groves, this research identifies tangible, intangible elements associated with groves and the various aspects of continuation of cultural traditions. It is observed that there is very strong relation of nature and culture which is evident in case of Kudase village settlement. Research further tries to identify issues related to the site and discusses future challenges and directions.

Keywords Sacred grove · Natural heritage · Cultural landscape

V. Lavand (✉)
SMEF'S Brick School of Architecture, SPPU Pune University, Pune, India
e-mail: vaidehilavand@brick.edu.in

O. Khebudkar
SKN College of Architecture, SPPU Pune University, Pune, India

CONFERENCE PROCEEDINGS

BOOK OF ABSTRACTS ICCAUA 2023

6th International Conference of
Contemporary Affairs in Architecture and Urbanism (ICCAUA-2023)
Alanya University, Türkiye
Venue of the conference: Istanbul (hybrid conference)
Editors: Hourakhsh Ahmad Nia and Rokhsaneh Rahbarianyazd
E-ISBN: 978-605-71006-7-2



Municipality of Alanya

Manuscript ID: ICCAUA2023EN0145

Applying the Phenomenological Approach to Educational Place: A Case Study Analysis of a College Experience through Time

*¹ B.S. Ahmed Ameen Aqeel, ² Professor Dr. Najla Allani*Department of interior design and architecture, college of engineering, University of Bahrain. Kingdom of Bahrain**E-mail¹: 20124619@stu.uob.edu.bh, E-mail²: nallani@uob.edu.bh*

Abstract

Applying the phenomenological approach to architecture relies on integrating human experiences and sensory aspects into the designed space, materials, and light to create a place that has a lasting impact on the memory in the human mind. This experience can change if the person experiences the space at a different time. This case study focuses on some students' sensory experiences of the college of engineering at the university of Bahrain who attended college during their academic years and then visited it after a long detachment period. This study relies on interviews with the students focusing on their previous and actual college experience to discover the changes in the experience of the same space through different times. The results are promising and showcase that mental images have changed, and students' attachment has become more substantial due to detachment and time.

Keywords: Phenomenology; Educational Place; Case Study; Sensory Experience; Analysis.

Manuscript ID: ICCAUA2023EN0146

Using a Phenomenological Approach for the Analysis of Two Different Houses in Bahrain

*¹ M.A. Hala Abushaqra, ² Professor Dr. Najla Allani*The University of Bahrain, College of Engineering, department of architecture & interior design.**E-mail¹: 20105552@stu.uob.bh, E-mail²: nallani@uob.edu.bh*

Abstract

Phenomenological practices in the design process will create the quality of spaces where the users will feel a sense of place and will last in their memory. Furthermore, it will encourage the user to revisit the place in contrast with the places not achieving a phenomenological approach. Through a phenomenological approach, this study aims to investigate the bodily and sensory experiences of the users in two different houses in the kingdom of Bahrain. The first selected house is one of the cultural heritage sites located on the String of pearl bath, specifically in the old city of Muharraq. The second house is a contemporary one, located in Sharq al Hid, designed by one of the authors. The findings of this analysis are promising.

Keywords: Sensory; Experience; Bodily; Heritage; Culture; Phenomenological; Senses.

Manuscript ID: ICCAUA2023EN0158

Evaluation of the Energy-Positive Aspects for Optimal Construction Efficiency through Material Realism

*¹ Pratik Mour, ² Prof. Ar. Manali Deshmukh*SMEF's BRICK School of Architecture, Pune, Maharashtra, India¹**SMEF's BRICK School of Architecture, Faculty of Architecture and Design, Pune, Maharashtra, India²**E-mail¹: mour.pratik@gmail.com, E-mail²: manalideshmukh@brick.edu.in*

Abstract

Developing upon the tenets of SDG 7 and SDG 11, this paper studies the relationship between materials used in 21st-century construction and their characteristic scope for energy-positive application in the housing sector against criterias of 'optimal construction efficiency through material realism' (OCEMR). On account of climate change being grossly influenced by the construction sector and both further decrementing affordability in housing, there is a need to study the optimum construction efficiency of a material by studying its many aspects to encourage a realistic reduction in energy consumption, and a realistic increase in energy generation. The proposition of a gradation (OCEMR) is analyzed and later formulated based on material choice, regionality of materials, mode of application of materials, alternative technology, material lifecycle studies, etc. The mentioned factors are deduced through case studies which show a co-variation between the factors for gradation but an informed co-relation between optimized energy efficiency.

Keywords: Energy Positive; Climate Positive; Optimum Efficiency; Construction Materials; Optimization.

Manuscript ID: ICCAUA2023EN0156

Installation of Photovoltaic Panels on Historic Buildings and Heritage Areas: Lessons to Learn and Consideration for North Cyprus

¹ Assist. Prof. Dr. **Ayten Özsvağ-Akçay**, ² Assoc. Prof. Dr. **Rifat Resatoglu**, ³ Ph.D. Student. **Shaghayegh Ostovar Ravari**

Department of Architecture, Faculty of Architecture 99138, Near East University, North Cyprus, Mersin 10 Turkey. ¹

Department of Civil Engineering, Faculty of Civil and Environmental Engineering 99138, Near East University, North Cyprus, Mersin 10 Turkey. ^{2,3}

E-mail ¹: ayten.akcay@neu.edu.tr, E-mail ²: rifat.resatoglu@neu.edu.tr, E-mail ³: sh.ostovar987@gmail.com

Abstract

The preservation of heritage areas and historic buildings and the adoption of new technology to reduce energy losses in these buildings are simultaneously crucial. In different cities all over the world, the installation of photovoltaic panels (PV panels) on historic buildings has expanded recently. In this study, the standards for installation and collaboration between PV panels, historic buildings, and heritage areas are reviewed, ten famous historic monuments that use PV panels are studied, and the main impacts, effectiveness, risks, and benefits of installing PV panels in heritage areas are investigated. Finally, the possibility, risks, and benefits of installing PV panels on historic buildings and considerations for collaboration between heritage areas and PV panels in accordance with North Cyprus conditions are discounted. Some recommendations are then made to enhance a planning guide for PV panel installation regulations for historic buildings in North Cyprus.

Keywords: Heritage Areas; Historic Buildings; Installation; North Cyprus; PV Panels.

Manuscript ID: ICCAUA2023EN0160

Religious Territorialism through Architecture: Parametrizing a Dynamic Trend of the Third World

¹ Pratik Mour, ² Ar. Ramiya Gopalakrishnan

SMEF's BRICK School of Architecture, Pune, Maharashtra, India ¹

SMEF's BRICK School of Architecture, Faculty of Architecture and Design, Pune, Maharashtra, India ²

E-mail ¹: mour,pratik@gmail.com, E-mail ²: ramiyagopal@brick.edu.in

Abstract

'Territorialism', 'Architectural Territorialism' and 'Religious Territorialism through Architecture' (RTTA), all implicate the voluntary or involuntary act of territorializing other communities, a noticeable trend for centuries. The hypothesis is explored along Warburton's principal argument on origins, spatiality, and transformative capacity of religious architecture. The discussion is most relevant to the third world scenario, especially India. The paper deals with understanding the trends on local, national, and global scales through court jurisdictions, books, official documentation, and research to plot the variety of factors that influence religious territorialism through architecture in India and the third world countries. Post-identification of the parameters, they are mapped on a thematic map, against their degrees of dependency and co-dependency to transparentize the trend. It is concluded that RTTA is dynamic by nature as a result of the parameters being influential on varying degrees, consequentially sensitizing communities in different ways.

Keywords: Territorialism; Religious Architecture; Warburton's Principles; Architectural Territorialism.

Manuscript ID: ICCAUA2023EN0165

Reflections of the Memories: A Microhistory on Konak Atatürk Square, İzmir, 1960-70s

¹ B.A. **Bengi Şentürk**, ² Dr. **Gülnur Ballice**, ³ Dr. **Eda Paykoç Özçelik**, ⁴ Ph.D. Candidate **Gizem Güler Nakıp**

Yasar University, Graduate School, İzmir, Turkey ¹

Yasar University, Faculty of Architecture, İzmir, Turkey. ^{2,3}

Silesian University of Technology, Faculty of Architecture, Gliwice, Poland ⁴

E-mail ¹: bengisenturk16@gmail.com, E-mail ²: gulnur.ballice@yasar.edu.tr, E-mail ³: eda.paykocozcelik@yasar.edu.tr, E-mail ⁴: gizem.gulernakip@polsl.pl

Abstract

The spaces can be described by the experiences of real characters who lived in that period. In this study, the spatial relations of İzmir Konak Atatürk Square and its surroundings are explained and the reflections of the social and cultural life on the urban and architectural environment are revealed. This study emphasizes the architectural and interior values of the main buildings that give the Konak Atatürk Square its identity and some important public spaces in the city in 1960-1970. The method includes a literature review, photographic examinations, and oral history studies. Spatial stories will be created based on the data obtained and the memories of the characters who lived in the city. The study, which connects people's memories and archival documents through spatial storytelling, creates a different urban story from the past to the present by focusing on microhistory.

Keywords: Urban Narrative; Social and Cultural History; Urban Memory; Konak Atatürk Square; İzmir.

Manuscript ID: ICCAUA2023EN0217

Nigerian Worship Space Based on Religion Culture in North Cyprus

¹ Ph.D. Student **Nadereh Afzhoor**, ² Assist. Prof. Dr. **Huriye Gurdalli**

Near East University, Faculty of Architecture, Nicosia, Cyprus. ^{1&2}

Email¹: nadereh.afzool@gmail.com, Email²: huriye.gurdalli@neu.edu.tr

Abstract

Nigerians are greatly influenced by their cultural heritage, when Christianity came to Nigeria in 16th century continent some cultural practices like the use of herbs, African musical and instruments stopped and new religion culture took over in Nigeria which concern about simplistic in space and dance pray music mix with Christian religion till this moment. Frustration with the socio-economic conditions of the country, along with high unemployment rates, has increased emigration from Nigeria come to north Cyprus for education and have better life, most of Nigerians have strong religion believe so Nigerian follow their religion culture in north Cyprus. The aim of this paper is how Nigerian religion culture effect on worship space in north Cyprus. The study will be describing how Nigerian create worship space based on their culture. mythology compose mixed methods qualitative and quantities research and using observations, interviews with Nigerian who are members of the church and other data sources collected in the field.

Keywords: Nigerian; Religion Culture; Space; Worship.

Manuscript ID: ICCAUA2023EN0221

A Critical Review on the Effect of Gender on Architectural Spaces

* Assist. Prof. Dr. **Ayça Arslan**

Faculty of Architecture and Design, Usak University, Usak, Turkey

E-mail: ayca.arslan@usak.edu.tr

Abstract

This paper, mainly examines the effect of gender on architectural spaces with the case of collective houses, firstly appear in North European countries; Denmark, Sweden and North Germany through the history of architecture, around 18th and early 19th century. The main reasons for the birth of collective dwellings has been researched by Dune Vestbro and Dolares Hayden studies, which both academician indicated the necessity for collective dwellings came forward with the beginning of women to work in industry, and to create democracy inside the house for both women and man. The changes on social structures after industrial revolution, created a grand domestic revolution, as indicated by Dolares Hayden; at her book 'Grand Domestic Revolution' she especially expresses the functional changes in physical structures, was a result of to relocate domestic activities so as to free females from unpaid, household labor. Shared spaces created the main spatial revolution on domestic architecture at industrial revolution time.

Keywords: Collective Houses; Working Class Women; Gender & Space; Spatial Transformations.

Manuscript ID: ICCAUA2023EN0228

Evaluation of Existing Slum Dwellings in Urban Settings to Meet the UN SDG Goals

¹ B.Arch. **Omkar Gund**, ² Ar. **Manali Deshmukh**

SMEF's Brick school of Architecture, Pune, India

E-mail¹: omkargund81@gmail.com, E-mail²: manalideshmukh@brick.edu.in

Abstract

Over the past two decades, urban environmental quality has declined, and slums are seen as the primary concern. Despite numerous slum upgrading strategies to address urban poverty in developing countries, the issue is only projected to get worse. The lack of sustainable slum redevelopment guidelines in India is a policy gap that needs to be addressed. To make sure that the upcoming LIG housing stocks are sustainable, a logical design and planning approach is required to address climate change and the Sustainable Development Goals. This paper focuses on the study and analysis of existing slum dwellings and their living conditions, and from the observations of the study, it aims to propose recommendations for creating sustainable and sensitive redevelopment. As part of a new approach for slum upgrading projects to meet SDG objectives, it will also investigate the criteria required to construct climate-responsive urban dwellings that are closer to Net-Zero Buildings.

Keywords: Sustainable Development; Slum Redevelopment; UN SDG; Climate Responsive; Urbanization.

राज्य स्तरीय वास्तुकला मराठी परिषद

शोधनिबंध पुस्तिका

ISBN: 978-93-5780-547-6

परिषद संयोजन व शोधनिबंध संपादन समिती:

मा. श्री. पुष्कराज भालचंद्र पाठक

मा. डॉ. दत्तात्रेय जाधव

डॉ. अभिजीत नातू

डॉ. पराग नारखेडे

प्रा. प्रज्ञा पतकी

भारतीय कला प्रसारिणी सभेचे वास्तुविद्या महाविद्यालय, पुणे

(सावित्रीबाई फुले पुणे विद्यापीठ, पुणे)

www.bkps.edu

अनुक्रमणिका

अनुक्रमांक	लेखकाचे नाव	शोधनिबंध सादरीकरणाचा विषय	पृष्ठ क्रमांक
१	आनिरुद्ध पावस्कर	नगरनियोजनातील नवीन आव्हाने	१
२	वैशाली अनगळ अभिजीत नातू	पुनर्विकासासंबंधीचे शासकीय धोरण -नियमावलीमध्ये बदल आणि आव्हाने	५
३	अनुजा जोगदेव	वास्तुकलेवरील प्राचीन भारतीय साहित्याचा परिचय	१०
४	मुक्ता देशपांडे डॉ. अमृता पंजाबी डॉ उज्वला चक्रदेव	वास्तुविद्येचे प्ररचन संज्ञान आणि कल्पनाशक्ती	१७
५	पौर्णिमा अनिल बुद्धिवंत	पारंपारिक जल प्रणाली: भूतकाळापासून भविष्यापर्यंत	२७
६	नीता गंगवाल डॉ. माधवी गोडबोले	गर्भगृहाचा आकार व त्याची आधुनिक उपयोजिता	३२
७	सांकृती कैलास भेगडे अर्चना गायकवाड	स्मार्ट शहरांना मोकळा श्वास घ्यायचाय; सार्वजनिक उद्याने	४१
८	वर्षा चौधरी	विषय - हरप्पा संस्कृतीची नगर रचना आणि वास्तुकला	५०
९	पश्मीना विक्रमजीत घोम अब्राहम जॉर्ज	स्वतंत्र भारतातील स्थापत्य शैलीवर प्रभाव टाकणारे घटक	५४
१०	शिल्पा नागापूरकर	स्थानिक वास्तुकला - कर्नाटकातील लक्कुंडी गावातील पारंपारिक घरांचा अभ्यास	५९
११	डॉ.प्रियंवदा चितळे	दापोली- शाश्वत विकासाची गरज	६६
१२	डॉ सीमंतिनी चाफळकर	ब्रिटीश अधिकाऱ्यांचे नगर-विकासातील योगदान	७०
१३	कणाद कुंभार चिन्मयी माळी	ग्रामीण भागातील पांढऱ्या मातीच्या गुणधर्माचा शास्त्रोक्त अभ्यास	७७
१४	चिन्मयी माळी कणाद कुंभार	वेगवेगळ्या हवामानातील जाळीची उद्दिष्टे	८३

१५	शुभश्री दीपेंदु उपासनी डॉ. अरुणचंद्र पाठक	मानवनिर्मित जलस्रोत - ऐतिहासिक, पौराणिक आणि सांस्कृतिक अन्वेषण: (बाणगंगा पुष्करणी, मलबार टेकडी, मुंबई)	९०
१६	ऋषिकेश अष्टेकर देवेंद्र देशपांडे	गावभागातील चौक - पुण्यातील उपनगरीय विस्तारात संस्कृति वारसा जपणारी समाजिक केंद्रे	१००
१७	अवंती गोळे	विद्यार्थ्यांवर भूदृश्य (लँडस्केपचा) मानसिक प्रभाव	१०५
१८	प्रणव आनंद साळुंके	CSW (वेश्या व्यवसायातील महिलांच्या) मुलांसाठी बाल संगोपन केंद्र.	१०९
१९	अमित पिसोळकर माधुरी पाटील	त्रिमितीय छपाई: शाश्वत वास्तुकला आणि बांधकाम साठी उपयुक्त तंत्रज्ञान	११४
२०	स्वप्ना ढवळे, मुग्धा भावे,	ऐतिहासिक वारशांचे पुनरुज्जीवन: दौलताबादचा शाश्वत पर्यटन विकास	११९
२१	दिपीका आरबट्टी	काळानुरूप बदलत गेलेले भारतीय वनांचे स्वरूप : त्यातील संकल्पनांचे पुर्नजिविकरण काळाची गरज	१३०
२२	विद्यावाचस्पती विद्यानंद	अंतर्गत गृहसजावटीचा संबंध व्यक्तिमत्त्वांच्या अंतरंगाशी	१३५
२३	गौतमी बुरा पराग नारखेडे	वास्तुशास्त्र आणि शाश्वत वास्तुकला	१४२
२४	गौरव दिलीप अरबुज	सांस्कृतिक वारसा जगणारी वसाहत : चंदेरी	१४७
२५	अदिती जप्तीवाले, डॉ.अनुराग कश्यप डॉ.स्वाती सहस्रबुद्धे	नृसिंहवाडी पंचक्रोशी : आध्यत्मिक, सांस्कृतिक आणि पर्यावण पूरक संगम	१५२
२६	छाया तिरवीर	पारंपरिक भारतीय संस्कृति आणि पर्यावरणतील शाश्वत गृहनिर्माण पद्धती संबंदचा अभ्यास : सावंतवाडी, महाराष्ट्र, ही एक उदाहरण	१६०
२७	अमयो अविनाश जप्तीवाले अदिती अविनाश जप्तीवाले चैत्रेश संदीप उमराणी	कृष्णाकाठावरील कृष्णाबाईचा उत्सव : एक सांस्कृतिक पर्वणी	१६३

२८	तनय ललवाणी, सुधीर देशपांडे	शिवकालीन लष्करी स्थापत्याचा तौलनिक अभ्यास: किल्ले राजगड व रायगड	१६९
२९	सायली जाधव प्र. प्रजा पतकी	माती चे महत्व व संवर्धना साठी च्या उपाय	१७९
३०	गौरव गुरुबाळ माळी सुधीर देशपांडे	गुदमरणारे शहर: पुणे - समस्या आणि उपायोजना	१८६
३१	प्राजक्ता भागानगरे प्रा. प्रजा पतकी	पुण्यातील व्यावसाहिक इमारतींच्या दर्शनी भागाचे साहित्य व शेडिंग उपकरणांचा अभ्यास करणे.	१९२
३२	जुई बारटक्के आदित्य डागा	हरिपूर तालुका मिरज जिल्हा सांगली या गावांमधील मंदिर वास्तुकला	२०२
३३	गौरव दिलीप अरबुज	डोंगराळ वसाहती आणि शाशवत विकास	२०८
३४	गौरव दिलीप अरबुज	कलाकार बस्ती - दिल्ली	२१६
३५	पियुष दिलीपकुमार अग्रवाल	रस्त्यावरील विक्रेते - ऋषिकेशमधील समुदायाची जगण्याची रणनीती	२२४
३६	मोहन निकम	शिक्षण एक उहापोह; वास्तुरचना-तंत्र शिक्षण एक नैतिक अधिष्ठान	२३१
३७	सुहास जयंत पाठक	वास्तुशास्त्राशी निगडीत असा इतर कुठलाही विषय - मॉक ड्रिल	२३८

। श्री ।

शिवकालीन लष्करी स्थापत्याचा तौलनिक अभ्यास: किल्ले राजगड व रायगड

तनय ललवाणी, सुधीर देशपांडे

ब्रिक स्कूल ऑफ आर्किटेक्चर, पुणे

tanaylalwani24@gmail.com , sudhirdeshpande@brick.edu.in

गोषवारा:

भारत हा देश वारसास्थळांनी भरलेला आहे. राजस्थानचे सुंदर राजवाडे, आसामचे बांबू बांधकाम, दिल्लीचे मुघल स्थापत्य सौंदर्य, दक्षिणेतील द्रविडीयन मंदिरे अशी प्रत्येक राज्याची स्वतःची ओळख असते. त्याचप्रमाणे महाराष्ट्राचा विचार केल्यास सहयाद्रीच्या पर्वतरांगा आणि त्यावरील किल्ले हे गौरवाचे स्थान आहे. महाराष्ट्रातील किल्ले हे छत्रपती शिवाजीमहाराज यांनी स्थापलेल्या स्वराज्याचा कणा होते. या महाराष्ट्रातील किल्ल्यांचे सातवाहन काळापासूनचे पुरावे आहेत. वेळ आणि तंत्रज्ञानानुसार त्याची संरक्षण रचना बदलत राहिली. त्यातील इस्लामी राजवट प्रखर असताना महाराष्ट्रामध्ये छत्रपती शिवाजी महाराजांनी काही दुर्गांच्या स्थापत्यशैलीत आणि संरचनेत काही बदल केले. हा शोधनिबंध वरील बदलांची महिती आणि त्यातील स्थापत्या संबंधीचे बारकावे स्थापत्य ह्यावर प्रकाश टाकतो. यासाठी दुर्ग राजगड व दुर्ग रायगड ह्यांच्या स्थापत्यशैलीच्या ठळक वैशिष्ट्यांची उदाहरण म्हणून मांडणी केली आहे. या संशोधनाचा उद्देश शिवाजी महाराजांनी विकसित केलेल्या दुर्गशैलीचा अभ्यास करणे हा आहे.

प्रमुख शब्द: किल्ले, संरक्षणवास्तुकला, संरचना, स्थापत्यशैली, दुर्ग

1. परिचय:

महाराष्ट्रातील किल्ल्यांचे ३ टप्प्यात वर्गीकरण केले आहे. 1. इस्लामी आक्रमणापूर्वी (१^व शतक ते 13^व शतक) 2. इस्लामी राजवट (१४^व शतक ते १६^व शतक) 3. मराठा राजवट (१७^व शतक ते १८^व शतक). हे संशोधन मराठा राजवटीत संरक्षण वास्तुशास्त्राच्या प्रगतीवर आणि त्यांच्या फायद्यांवर लक्ष केंद्रित करतो ज्यामुळे हे गिरिदुर्ग एक परिपूर्ण संरक्षण संरचना बनली आहे.

2. पार्श्वभूमी आणि संदर्भ:

भारताच्या वैभवशाली भूतकाळात लष्करी स्थापत्यास विशेष महत्त्व आहे. सर्वात जुन्या दुर्गांचे)3500BCE ते 1800BCE (पुरातत्वीय अवशेष सिंधूखोऱ्यातील बनवली, लोथल, धोलावीरा इत्यादी इथे आढळते. कौटिल्यअर्थशास्त्र, नीतीशास्त्र, राज्यशास्त्र आणि पुराण सारख्या प्राचीन ग्रंथातून विविध संदर्भ मिळतात जे दुर्गांच्या तत्वांबद्दल आणि कोणत्याही साम्राज्याचे संरक्षण करण्यासाठी त्यांच्या महत्त्वाच्या भूमिकेबद्दल बोलतात. ग्रंथांमध्ये किल्ल्यांचे 6 प्रमुख प्रकारांमध्ये वर्गीकरण केले आहे, ते म्हणजे भुईकोट (जमिनीवर बांधलेले किल्ले), गिरिदुर्ग (डोंगरांवर बांधलेले किल्ले), वनदुर्ग (जंगलात बांधलेले किल्ले), जलदुर्ग (पाण्यात बांधलेले किल्ले), सागरीदुर्ग (किनाऱ्यावर बांधलेले किल्ले). आणि मिश्रदुर्ग (एकापेक्षा जास्त प्रकारांचे मिश्रण असलेला किल्ला). त्याचे धोरणात्मक स्थान, बांधकामसाहित्य, तंत्रज्ञान आणि उद्देश यासारख्या घटकांमुळे किल्याची जडण घडण प्रभावित होते (जैन, २०२१).

गुदमरणारे शहर: पुणे - समस्या आणि उपायोजना

गौरव गुरुबाळ माळी, सुधीर देशपांडे
SMEF's ब्रिक स्कूल ऑफ आर्किटेक्चर, पुणे
gauravm2401@gmail.com , sudhirdeshpande@brick.edu.in

गोषवारा :

गजबजलेल्या वाटा, घुसमटणारी हवा, काँक्रेट च्याजवळजवळ उभ्या राहिलेल्या टोलेजंग इमारती हे सध्याच्या शहरांचे चित्र आहे. शहरांची समाविष्ट करून घेण्याची क्षमता संपत चालली आहे. जगातील सगळ्याच शहरांची अशीच प्रतिमा डोळ्यासमोर उभी राहते. आणि म्हणूनच शाश्वत विकासाची व्याख्या खरंच शाश्वत आहे का असा प्रश्न बरेच अभ्यासक विचारताना दिसतात. दिवसेंदिवस शहरीकरणाचं अनियोजित पद्धतीने होणारं जाळं वेग धरत आहे. ह्या शोधनिबंधात पुणे शहराचा उदाहरण म्हणून नगर रचनेच्या पातळीवर अभ्यास केलेला आहे, आणि अनियोजित पद्धतीने होण्याच्या शहरीकरणाबद्दलच्या समस्या आणि त्या संबंधीचे उपाय ह्याची साधक बाधक चर्चा केली आहे. हा शोधनिबंध पुण्याच्या शहरीकरणाच्या विकासाची सुसंगत अशा कल्पनांची मांडणी करतो तसेच भविष्यातील उपाययोजनांचा वेध घेतो. शहरांना मोकळा श्वास घेता यावा आणि मनगरांबरोबरच इतर शहरांचा विकास व्हावा असा हेतू या शोधनिबंधाचा आहे.

१. परिचय :

भारत, प्रगतीपथावर अग्रेसर असणारा देश, सर्वच क्षेत्रात उन्नतीचा मार्गावर वाटचाल करतोय, आणि ह्यात वेग धरतय शहरीकरणाच जाळं. झपाट्यानं वाढणारी शहरं दिवसेंदिवस भौगोलिक दृष्ट्या पसरत चाललेली आहेत. शहरांचा विस्तार हा आजच्या काळातील चिंतेचा विषय नाही, हा भारतातील शहर विकासाच्या अनेक दशकांपासून विचाराधीन आणि सतत उत्क्रांत होत जाणारा मुद्दा आहे. भारताच्या स्वातंत्र्यानंतर वाढत्या शहरांमध्ये पायाभूत सुविधांचा विकास वाढत आहे आणि त्यामुळे लोक शहरांकडे स्थलांतर करू लागले आहेत. यामागील प्रमुख कारण म्हणजे रोजगाराच्या संधी आणि शहरी भागातील आधुनिक जीवनशैली.

२. संदर्भ आणि पार्श्वभूमी :

उदाहरण म्हणून पुणे शहराचा अभ्यास करता येईल. पुणे शहर महानगरीय भागात वाढत आहे ज्यामुळे केंद्रीकृत विकास वैशिष्ट्यांना जन्म दिला आहे. आणि यामुळे ग्रामीण भागातून शहरी भागात जलद आणि मोठ्या प्रमाणावर स्थलांतराला चालना मिळाली आहे जिथे आता शहरे एकसमान आणि असंघटित पद्धतीने विस्तारत आहेत. त्यामुळे शहरे भौगोलिकदृष्ट्या वाढत आहेत. [अगरवाल,२०१५]

पुणे शहर हे १९९५ च्या आधी पेन्शनर्स टाउन म्हणून ओळखलं जायचं. मात्र माहिती व तंत्रज्ञान क्षेत्राचा शिरकाव झाल्यानंतर आशिया खंडातील सर्वात जास्त झपाट्यानं विकास झालेल्या शहरांमध्ये पुणे अग्रेसर आहे. ह्यामुळे पुण्याच्या सार्वजनिक क्षेत्रात मोठा बदल होऊन प्राथमिक नागरिक गरजांची उणीव भासू

Title: Deciphering Aparanta

Subtitle: A journey through Sindhudurg

Authors:

Dr. Poorva Keskar (Principal, SMEF's Brick School of Architecture)

Ar. Ketaki Gujar (Associate Professor)

Ar. Sharduli Joshi (Associate Professor)

Editorial Team:

Ar. Rama Raghavan (Asst. Professor)

Sharvari Rajwaday (Research & Publication Assistant)

Abhay Khele (Research and Publication Intern)

Shrigandh Malavade (Research and Publication Intern)

Core Research and Documentation team:

Ar. Ketaki Gujar (Associate Professor)

Ar. Sharduli Joshi (Associate Professor)

Faculty and Students of SMEF's Brick School of

Architecture- (F.Y.B.Arch, S.Y.B.Arch, and T.Y.B.

Arch- Batch of 2019)

Graphic Design: Brick Publication House

Cover Page Design, Divider Page Design, Back Page Design:

Ar. Bhagyashree Bandekar

Copyright © All Rights Reserved 2023

Satish Misal Educational Foundation's Brick School of Architecture.

Copyright belongs to SMEF's Brick School of Architecture. No part of this publication may be reproduced- either physically or digitally, stored in a retrieval system, or transmitted in any digital or physical form or by any means without prior permission.

ISBN: 978-93-5780-326-7

Published by



[Home](#) / [Archives](#) /

Vol. 5 No. 1 (2022): 5th International Conference of Contemporary Affairs in Architecture and Urbanism (ICCAUA2022)

/
Heritage and Cultural Landscapes

Discourse on Lost Pages of History: Architectural Works of Vasudev Kanitkar in Western India

Vaidehi Lavand

SMEF's Brick School of Architecture, Pune India

Onkar Khebudkar

SKN College of Architecture, Pune India

DOI: <https://doi.org/10.38027/ICCAUA2022EN0011>

Keywords: Eclectic Architecture, Colonial India, Local Contractors, Royal Engineers, Public Architecture

Abstract

Ample western historiographical resources are available to understand Colonial Architecture in India. Architectural language evolved during Colonial period in India was a collaborative effort of British Royal and Local engineers from several parts. The eclectic architectural language of British India is a product of the amalgamation of western models and eastern knowledge simultaneously. They worked in collaboration with Indian philanthropists, engineers, contractors and artisans. Much is available to read about royal engineers as pride for the British sovereign but contributions of local engineers who equally built colonial India are lost in the pages of history. This Paper tried to document and discuss works of local contractor Vasudev Kanitkar born in Baroda and worked at several places in Western India. With the help of archival resources and primary secondary surveys conducted this research paper compiles architectural contributions of Vasudev Kanitkar less known for his many landmark edifices he designed and built in western India.

Downloads

D Y PATIL SCHOOL OF ARCHITECTURE

Ajeenkya DY Patil Knowledge City, Charholi (Bk), Lohegaon, Pune-412 105 Ph: 020-35037902

Email: conference2021.dypsoa@dypatilarch.com Website: www.dypatilarch.com



AJEENKYA | THE INNOVATION
BY IASD UNIVERSITY UNIVERSITY

THE 4th EDITION

INTERNATIONAL STUDENTS CONFERENCE

RESEARCH IN ARCHITECTURE

Organized by

D Y PATIL SCHOOL OF ARCHITECTURE

in association with

**MAHARASHTRA ASSOCIATION OF SCHOOLS
OF ARCHITECTURE [MASA]**

Principal

Prof. Shubhada Chapekar

Published By

Allied Publishers Private Limited

Editor

Prof. Nilesh Pore

International Students Conference Research in Architecture

Editor

Prof. Nilesh Pore

Hosted by

D Y Patil School of Architecture, Lohegaon, Pune, India



ALLIED PUBLISHERS PVT. LTD.

Noida • Mumbai • Kolkata • Chennai • Bangalore

ALLIED PUBLISHERS PRIVATE LIMITED

D-5, Sector-2, **Noida**–201 301

Ph. Nos.: 0120-4320295/2542557/4352866 • E-mail: delhi.books@alliedpublishers.com

17 Chittaranjan Avenue, **Kolkata**–700072

Ph.: 033-22129618 • E-mail: cal.books@alliedpublishers.com

15 J.N. Heredia Marg, Ballard Estate, **Mumbai**–400001

Ph.: 022-42126969 • E-mail: mumbai.books@alliedpublishers.com

No. 25/10, Commander-in-Chief Road, Ethiraj Lane (Next to Post Office)

Egmore, **Chennai**–600008

Ph.: 044-28223938 • E-mail: chennai.books@alliedpublishers.com

P.B. No. 9932, No. 15, 3rd Floor (Next to Vijaya Bank), 5th Cross, Gandhinagar, Karnataka, **Bangalore**–560009,

Ph.: 080-41530285 / 22386239 • E-mail: bngl.journals@alliedpublishers.com / apsabng@airtelmail.in

Website: www.alliedpublishers.com

© 2023, D Y Patil School of Architecture, Lohegaon, Pune

ISBN: 978-93-90951-55-0

No part of the material protected by this copyright notice may be reproduced or utilized in any form or by any means, electronic or mechanical including photocopying, recording or by any information storage and retrieval system, without prior written permission from the copyright owners. The views expressed in this volume are of the individual contributors, editor or author and do not represent the view point of the centre.

Published by Sunil Sachdev and printed by Ravi Sachdev at Allied Publishers Pvt. Ltd., D-5, Sector-2, Noida–201 301

- Prof. Suruchi Ranadive
 - Ar. Divya Shah
 - Ar. Renuka Chutke
 - Prof. Prashant Gatkal
- Advisory Board**
- Prof. Shubhada Chapekar
 - Dr. Vasudha Gokhale
 - Dr. Prajakta Baste
- Dr. Kartik Vora
 - Prof. Veena Shenvi
 - Prof. Aparna Mhetras

List of Winners

<i>Sr. No.</i>	<i>Category</i>	<i>Name of Winner</i>	<i>Name of Institution</i>	<i>Title of the Research Paper</i>	<i>Position Secured</i>
1.	B.Arch	Tanya Jose	SMEF's Brick College of Architecture, Pune	Redesign to Live Longer: Architecture and Mental Health	Best Paper
2.	B.Arch	Alafiya Talib	Allana College of Architecture, Pune	A Time Travel through the Residential Heritage Precinct of Shahjahanabad – The Havelis	First Runner Up
3.	B.Arch	Sanika Bhide	Indian Education Society's College of Architecture, Mumbai	The Sattriya Theatre: A Modern Perspective	Second Runner Up
4.	B.Arch	Shweta Deshpande	CTES College of Architecture, Mumbai	Reverence: Giving Dignity to Alzheimer's Patients	Special Mention
5.	M.Arch	Swapna Hankare	L.S. Raheja School of Architecture, Mumbai	Reinventing the Image of the City through Brownfield Landscapes	Best Paper
6.	M.Arch	U.S. Bijayeeni	CTES College of Architecture, Mumbai	Disaster Resilient Environment, Economy and Livelihood in the state of Odisha	First Runner Up
7.	M.Arch	Nitaasha Rana	School of Art and Architecture, Sushant University-Gurugram, India	Urban Wilderness and The City Dwellers – Case Study of Eco Restoration Chakkarpur Bundh	Second Runner Up
8.	M.Arch	Nainika Choudhary	School of Art and Architecture, Sushant University-Gurugram, India	Mapping the Change in Habitable Spaces in rural Haryana	Special Mention
9.	Ph.D	Shruti Joshi	MKSSS's, Dr. B. N. College of Architecture, Pune	Study of Gentrification Dynamics and Migration Patterns in City of Pune	Best Paper
10.	Ph.D	Shilpa Dhawale	Allana College of Architecture, Pune	Daulatabad Fort – A Study of Late Medieval Landmark of the Deccan	Special Mention

Contents

<i>Message from Chairman</i>	v
<i>Message from Advisor</i>	vii
<i>Message from Principal</i>	ix
<i>Message from Advisory Committee</i>	xi
<i>Message from Convener</i>	xiii
<i>Conference Committees</i>	xv
<i>Faculty Coordinators Committee</i>	xvii
1. Redesign to Live Longer: Architecture and Mental Health <i>Tanya Jose and Ar. Rama Raghavan</i>	1
2. A Time Travel Through the Residential Heritage Precinct of Shahjahanabad— The Havelis “Stewarding the past to conserve the endangered present” <i>Alafiya Talib and Prof. Shilpa Dhawale</i>	9
3. The Sattriya Theatre: A Modern Perspective <i>Sanika Bhide and Dr. Shilpa Sharma</i>	21
4. Reverence: Giving Dignity to Alzheimer’s Patients <i>Shweta Deshpande and Ar. Kirti Desai</i>	29
5. Reinventing the Image of the City Through Brownfield Landscapes <i>Ar. Swapna Hankare and Ar. Devayani Upasani</i>	37
6. Disaster Resilient Environment, Economy and Livelihood in the State of Odisha <i>Ar. U.S. Bijayeeni and Prof. Ar. Alka Tawari</i>	45
7. Urban Wilderness and the City Dwellers—Case Study of Eco Restoration Chakkarpur Bundh <i>Ar. Nitaasha Rana and Ar. Deepika Raina</i>	52
8. Mapping the Change in Habitable Spaces in Rural Haryana <i>Ar. Nainika Choudhary and Ar. Aruna Bhardwaj</i>	65
9. Study of Gentrification Dynamics and Migration Patterns in City of Pune <i>Ar. Shruti Joshi and Dr. Vasudha Gokhale</i>	86
10. Daulatabad Fort—A Study of Late Medieval Landmark of the Deccan <i>Ar. Shilpa Dhawale and Dr. Supriya Nene</i>	92
11. Green Concrete vs. Conventional Concrete: A Comparative Study <i>Shubham Singh and Dr. Tejwant Singh Brar</i>	104
12. The Lesser-Known Heritage of Navratangarh: An Archaeo-Historical Research on its Cultural Landscape <i>Amidha Priya and Dr. Suchandra Bardhan</i>	112
13. Globalization to Localization: A Sustainable Shift for Tribal Communities of Palghar District <i>Nidhi Shirsolkar and Ar. Tanvee Joshi</i>	120
14. Impact of Green Spaces <i>Vaishnavi G. Karwa and Prof. Tejaswini Marode</i>	125
15. Influence of Classical Art—‘Sculpture’ on Modern Architecture in Indian Context <i>Swaraj Ajay Mate, Ar. Shubhashree Upasani and Ar. Hrishikesh Purandare</i>	131

Redesign to Live Longer: Architecture and Mental Health

Tanya Jose

Rama Raghavan

josetanya@gmail.com

Abstract: The spectrum of mental health is broad; it has several variables in relation to one's daily activities and interactions with the environment. However, one's physical environment is observed to affect the behavioral pattern of the user. This paper will focus on different parameters that affect the quality of life of the user. It presents a framework for experiential design that is reflective in the built environment that may enhance one's lives through a connection with the senses. Since research shows that engaging with stimulating environments yields greater mental benefits and increases longevity. In addition, with the introduction of COVID-19, the aspect of mental health has become a pressing concern, where homes have replaced workplaces, schools, gyms, where many are spending more time in them than ever before.

The intended audience are people who wish to break the boundaries of conventional dwelling norms to heighten the living experience that could potentially be a stepping stone for architects to redesign to live longer!

Keywords: *Isolation, Dwelling, Mental Health, Experiential Architecture, Sensory Stimulus.*

INTRODUCTION AND BACKGROUND OF STUDY

According to WHO definition, "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. "While well-being is described as the state of being happy, healthy, or prosperous."

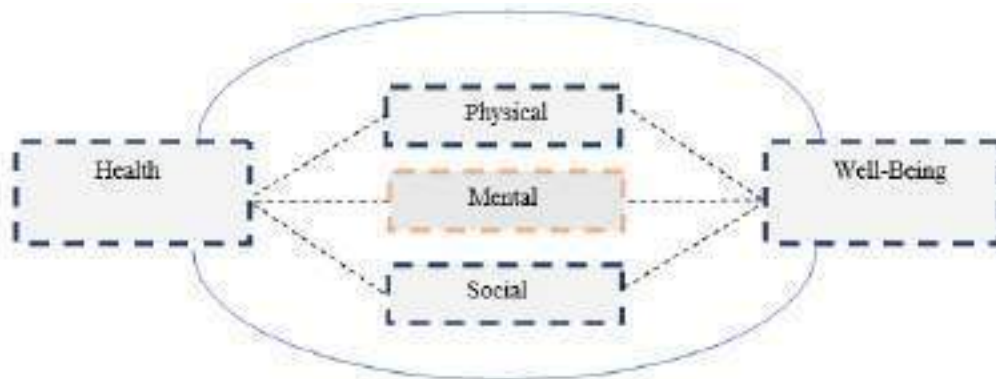


Figure 1: Relation of Health and Well-Being

It is observed often, the physical well-being has been given more priority than the mental and social wellbeing, especially in Architecture. The built Spaces do not consider the overall experience of the end-user. Moreover, the aspect of the Covid-19 pandemic has added fuel to the fire and study shows that deaths due to mental health in times of isolation have surged higher reaching an overwhelming 35% increase in India. Hence, the physical environment plays an important role in affecting the behavioral pattern of the user. The **aim** of this paper is to relate the study to the importance of the built environment with the senses and hence present a framework for designing an "optimal space" in the future based on the current scenario posed by the COVID-19 outbreak.

- **Objectives:** To study different parameters based on the Well Building standards with respect to the mind that affect the quality of life of the user.
- **Scope and Limitations of the Study:** The environments that force humans to engage stimulus in day-to-day activities, can push one to experience life exponentially by observing the world through the senses and mind. Thereby, strengthening the empirical evidence for bridging the gap between architecture and mental health and raising its priorities in both design research and design practice. However, the **limitation** of this study is that there are many

Lakshmi Relating Built Environment to Crime and Peace in Alleys of Communities

Dhanya Babu* and Manali Deshmukh

SAMEER BIRUK School of Architecture, Pune
dhanya14@gmail.com

ABSTRACT: This research proposal is focused on unwinding the concept of crime and its relation to the built environment, with keeping in mind the psychological factors facilitating it. The scope of study is limited to compact ‘alley-ways’—for a preferable visual frame. The methodology is to start by listing spaces with crime already committed. The independent variables are varying, which is to be solidified via survey.

This research will help in understanding the tangible criminal enablers better—that can be avoided in the planning stage itself by listing the components that need a preventive measure to be implemented. Visual surveys are to be the major tool, with a questionnaire targeting unbiased participants residing far from the space in question, to receive observational opinions. The relationship between built environment and status of violent crime committed—if any, is to be revealed as a conclusion to this study.

Keywords: *Crime, Alley, Fear, Built, Proportion, Visual.*

INTRODUCTION & BACKG

The concept of an alley can be conceived as one of the oldest forms of land for common public use, and thus one of the richest sites to understand social relationships between people (Rebecca 2019). There have been studies to understand alleys in Japan (‘roji’) and Shanghai (‘lilong’) as informal community spaces. (Ima Heidi, 2015; Non-Arkaraprasertkul, 2013). In the city of Covington, Kentucky—honey cart alleys (3 to 5 feet wide), 10 to 15 feet wide service alleys, and 20 to 24 feet center access alleys are omnipresent (Paul Voos, 1993). Hence, passing time always brought with it a new functionality for the typical ‘alley-way’.

An alley is usually perceived to be a space with a negative impact—the uncertainty in management and ownership to the said shared spaces, create convenient opportunities for crime (Aiden Sidebottom, 2017). Among the locational typologies of alleys, back alleys—present in high density cities providing services for major urban blocks—are often overlooked by the urban authorities (Bin Jiang, 2017).

Research Questions asked: First of all, why is it that some spaces have more factors contributing to crime than the others? Secondly, what is the relationship of the built environment to the crime committed?

Aim: To state the relationship between built environment and the status of crime committed, considering the factor of fear.

Objective: To let observers share their unbiased opinions, which are to be analyzed to formulate a pattern.

Limitations: The concept of an ‘alley’ has been put into use majorly in countries outside of the Indian context. Whenever this term is taken up henceforth, the scope of the research paper is to be taken into consideration.

Scope: An ‘alley’, ‘alleyway’ or ‘alley-way’ when mentioned in this research paper, has been defined by its function—which is anything which provides rear access to an urban block.

LITERATURE REVIEW

Photograph surveys have been actively contributing in studying the safety of alleys in order to come up with respective preventive measures (Mona Seymour, 2010). The Likert scale can be a means to analyze the safety perceptions of a certain space via imagery—which ranges from “very unsafe (1),” “unsafe (2),” “uncertain (3),” “safe (4),” to “very safe (5)” (Bin Jiang, 2017). The methodology is to list all the visible characteristics of a photograph in order to narrow down to the most

Architecture & Planning for Villages

Ed.

S.M.Akhtar

Foreword by **Dr Radha Vallabh Tripathi**

Content

Foreword

Dr. Radhavallabh Tripathi

i

Preface

Professor Hina Zia

ii

Editorial

Dr. S.M Akhtar

iii

Outline of Thought Connecting the Profession of Architecture to Villages

Anand Khatri

ix

ARCHITECTURE IN VILLAGES

Earthen Construction in Countryside: Materials, Techniques, and Stereotypes

Mohd Hasan Sohaib, Aniruddh Tomar & Hiba Khan

3

Loss of Vernacular Architecture in Kusmhi Village

Md Shahroz Alam

9

Diminution of Vernacular Architecture: For and Against

Umme Habiba Beg, Madiha Shahid & Mohd Hasan Sohaib

19

Development of Green Infrastructure for Rural Areas

Poonam Upadhyay

31

Extinction of Vernacular Architecture with Modernization- In Terms of Generating Ethics of Local Architecture

Aftab Alam, Sara Tamkeen & Mahrosh Fatma

39

Earthquake resistant Vernacular Architecture of Kashmir

Aashna Arora & Jyoti Arora

47

Reviving Vernacular by Implementing the Modern Technologies and Green Building Strategies

Dania Irshad, Ilma Nafees, Sameena Parveen

51

Sustainable Development in Indian Villages through Revival of Vernacular Architecture

Ayesha Mathur, Niti Negi

57

Transformation of Building Material and Architectural Layout in Rural Indian Settlement

Case: Raunahi Village

Priyanka Pahuja, Mohd. Afzal Khan

64

“Not A Suppress Village 2030”: Mitathal Tehsil (Bhiwani, Haryana)

Bushra Ali

71

Loss of Vernacular Architecture: Case Study of Nagaland Region

Ruchi, Kusum Choudhary

81

Some Thoughts on the Holistic Development of Villages in India

Dr. Nisar Khan

91

Containing Villages Aabadi Area for Protecting Agriculture

Zoya Kidwai

102

Sustainability in Villages: Interconnectedness of Underlying Processes, Materials and Assets Leading to Inclusive Life – A Case of Pisawa	108
<i>Shreya Teotia, Poorva Singh</i>	
Dynamics of Urban Villages: Mapping the Transformation of Shahberi Village Greater Noida	112
<i>Kamini Singh, Anant Pratap Singh</i>	
Decay of Vernacular Architecture in Rural India	118
<i>Hiba Gul, Aditi Arora</i>	
Understanding the Role of Architects to Meet the Challenges for the Villages of India	123
<i>Amit Kumar Baronia</i>	
ENVIRONMENT IN VILLAGES	
Flood Resilient Architecture for the Disaster Affected Communities of Assam	129
<i>Tanveer Singh Channa, Anshuman Dubey</i>	
Material Mountains; Tracing Transformation Through Extractive Episodes of Himalayan Foothills	140
<i>Ashim Kumar Manna</i>	
The State of Quality of Life in Urban Villages – A Study of Naharpur	146
<i>Chetna Garg, Rekha Bhaskaran</i>	
Built Environment of Indian Villages: A Case Study of Coastal Village of Maharashtra	154
<i>Shraddha Mahore Manjrekar, Prof. (Dr.) Pallavi Sharma, Dr. Poorva Keskar</i>	
Environment & Development Issues Leading to the Extinction and Changes in the Traditionally Built form Typologies of the Aabadi Area of Dujana Village	160
<i>Akshita Nagar, Kaveri Rai</i>	
Rural Tourism and Wetland Conservation	164
<i>Prakriti Goswami</i>	
A Case-Study of Waste Management Project in Villages of Bhojpur, Bihar	168
<i>Samiya Mahwish</i>	
Building Material and Geographies: Mapping the Shrinking ‘Vernacular’ of Rural Bengal	173
<i>Iqtedar Alam</i>	
Regional Cultural Landscapes: Understanding the Villages of Braj	185
<i>Yogesh Yadav</i>	
Impact of Greenfield Development in the Rural Areas of Uttarakhand State	195
<i>Shraddha Bahukhandi</i>	
Solid Waste Management in Dhauni Village, Tarapur Block, Munger	201
<i>Shagufta Khan, Wasiullah</i>	
Rural Expansion and Loss of Rural Imagery a Case of Rural Settlement in Mysore Region	208
<i>Anuradha H R</i>	
Water Stress in Rural Areas of Narmada Middle Sub-Basin due to Mega Industrial Led Infrastructure Projects	214
<i>Yogesh Bhardwaj</i>	

PLANNING AND LEGISLATION IN VILLAGES

The Impact of Rural Planning on Urbanization and Economic Growth; Case Study: Banadkook-Dize village in Taft County (Yazd, Iran) <i>Mobin Asgharnejadtehrani</i>	223
Energy-Efficient Techniques Used in Indian Vernacular Architecture: A Case Study of Jalali, Uttar Pradesh, India <i>Tahura Fatima, Mohammad Osaïd Farooq, Madiha Shahid</i>	237
An Integrated Development of the Village of Nuh, Mewat through Rural Tourism <i>Mohd. Tanveer Khan, Ayla Khan</i>	243
Rural Tourism <i>Anjora Khatri, Akshita Nagar, Manya Jindal</i>	249
Design Based Planning: An Approach to Policy for the Organization of Built-Dujana <i>Anand Khatri, Anjora Khatri</i>	254
Rural Landscapes in Central National Capital Region, India: Transformations in Land Use and Spatial Organization <i>Sadaf Faridi, Faraz Farooq</i>	262
Disaster Resilient Amphibious Community Houses <i>Shuja Rehman, Aftab Alam</i>	270
Transition and Transformation in Traditional Settlement of Kathmandu Valley & Its Impact <i>Anita Tamrakar</i>	281
Transformation and Transition Pattern in Villages of Upper Beas Region <i>Arshi Warsi, Aditi Sandhu</i>	286
Regional Architecture of Kerala - Evolution, Loss, and Mutations Studies of the Sacred and the Mundane <i>Sindhushree R Prasad, Ashfaq K Aliar</i>	299
Urban in Rural: A Critical Appreciation of Rurban Mission <i>Mariya Zama</i>	304
The Impact of Rurban Mission Implementation and Withdrawal: Case of Mohana Village <i>Bushra Saba</i>	307
Co-designing a Framework for Sustainable Rural Development <i>Nitesh Dogne, Prajakta Sonar, Sakshi Godara</i>	313
SOCIO ECONOMICS OF VILLAGES	
Transformation of a Weavers Settlement: A Case Study of Mangalagiri <i>Maneesha Keerthi Kavuri</i>	321
Investigating Urban Livelihood in Fishing Villages of India: Case of Versova Koliwada, Mumbai <i>Shreya Khurana</i>	332
Impact of COVID-19 on Migrant Villagers <i>Vinita Yadav, Deeptanshu Singh</i>	340

Social Capital and Micro Enterprise Development towards Occupational Diversification in Rural Context	344
<i>Jogeswar Mahato, Dr. Manish Kumar Jha</i>	
Mothers of Mewat	348
<i>Abhishek Bhardwaj</i>	
Social Impacts of Transport Infrastructure Projects: Insight of Local Residents	352
<i>Sadia Khanam</i>	
Transportation and Sustainability for Villages & Rural Sector	356
<i>Prof. Alok Ranjan, Priyanka Kumawat</i>	
Conservation of Chorten (Stupa) by community initiative at Gya Village, Ladakh	362
<i>Sheikh Intekhab Alam</i>	
Regulating Migration towards Urban Cities through Rural Development Planning	368
<i>Ameed Inam, Bushra Fatima</i>	
Revisiting Gandhiji's Village Swaraj – A Study of Social, Economic and Environmental Aspects of the NCR	373
<i>Aila Azeem, Himani Chahal, Taha Masoodi</i>	
Street and Built in Pinna Village – A Definition of Agrorban	379
<i>Prof Anand Khatri, Ritika Gupta</i>	
Folk Music and the Spaces in the Settlements: Village and Music Study of Culture through the Planes of River Ganga	385
<i>Pourvi Mishra</i>	
URBAN VILLAGE CHARITABLE TRUST CHARTER	
<i>Introduction</i>	
<i>UVCT Charter</i>	
<i>UVCT Oath</i>	

Built Environment of Indian Villages: A Case Study of Coastal Village of Maharashtra

Shraddha Mahore Manjrekar

Brick School of Architecture, Pune, iitrshraddha@gmail.com

Prof. (Dr.) Pallavi Sharma

Amity School of Architecture and Planning, Gurgaon

Dr. Poorva Keskar

S.M.E.F.'s Brick School of Architecture, Pune

Abstract

The built environment of the villages is characterized by the buildings, streets and the spaces within the buildings. The culture, occupation and life of the villagers remains within these spaces. Organic or human intervention, these spaces represent village life. The traditions, culture of the villages correspond to sustainability principles, and responsiveness towards the environment in a number of aspects. The village housing evolves around the traditional occupations and culture. The occupational activities are integral parts of the overall built environment. There are learnings from rural way of living, and these lessons are worth preserving for sustainability of the resources, culture and people. These characteristics of built environment, culture and traditions must be taken as base for formalizing any plan or policy for rural development. This paper is about a study done in a historical coastal village in Maharashtra. This village is one of the most scenic and ecologically important parts of the Indian Western coast. The built environment is subject to change with the tourism activities happening here because of beaches and ecology and historical character. The threats of ecological degradation and loss of architectural character are realized looking at the developments happening in the other coastal villages. With this concern it has been realized that the base of development can be prepared with the understanding of the original character of the area. This paper documents the learning from this village in terms of environment consciousness, sustainable architecture and lifestyle of people. Author has tried to create a base on which the developments and planning can be done for such kinds of villages.

Keywords: Built environment, Harihareshwar, Indian villages, Rural character, West coast

INTRODUCTION

The 720 km long coast-line of Maharashtra State, commonly known as 'Konkan' has a number of places of historical, cultural and ecological importance. The ecology of this stretch is identified by rich biodiversity (S., 2015) and attraction for researchers and nature lovers. There are landmark examples of island and hill forts and temples in these places that attract tourists. Alibag, Murud – Janjira, Harihareshwar, Srivardhan, Dapoli, Amboli, Sawantwadi, Vengurla, Malvan, Sindhudurg, Vijaydurg, Sindhudurg and Ratnagiri and Raigad districts are the places of pilgrimage, leisure, and heritage and are major attraction of tourist activities in Maharashtra State. At present the whole stretch is rural and has strong character throughout the area.

The mention of the development for this area is evident in the 20 years perspective plan of sustainable tourism in Maharashtra, prepared by Ministry of Tourism & Culture, Market Research Division, Department of Tourism of India (Dalal Mott MacDonald, 2003), the Sahyadri-Konkan corridor project (Anon., 2021), and plans of Maharashtra State Road Development Corporation (MSRDC).

The major differences between this area from the other rural parts of India are its history rich biodiversity, culture and the unique architectural character and independent attitude of the people. The farmers in Konkan live with self-esteem, and generally lead a balanced life. In the period of 2013-18 15,000 farmers have committed suicide in Vidarbha, and Marathwada regions of Maharashtra, but none of these numbers were from Konkan (Upadhyay, 2019).

This paper is based on a study about understanding the relationship between culture and environment, and their impact on the present built environment area and to create an inventory of how future development can be done in harmony with the original character of the area.

CULTURE, OCCUPATION AND BUILT ENVIRONMENT

The culture and built environment elements are interdependent by function. The natural character of the area and site conditions are major factors in generating the design of the built environment. In the case of traditional settlements, they organically evolve within nature. The dependency on nature for their livelihood, and affection of the place seem to be very related to the culture, where people regard and worship nature. The built environment can be considered as an outcome of culture. Once built, it becomes a major factor to shape future generations, as it serves as an active and functional medium for the transmission of norms, customs, and values (Thompson, 1980).

Amos Rapaport in his book "Culture, Architecture, and Design" discusses the relationship between culture, the built environment, and design (Rapaport, 2005). The context of this text seems very relevant in the study area. The primary occupation of the area seems to be a major factor in impacting the built form and built environment of the settlements in Konkan. The author has observed four types of villages in Konkan. One is on the relatively flat terrain where farmers communities live, have large front and back yards in their houses, e.g., Dive Agar and Shrivardhan. The second type is fishermen villages, where the organically developed settlements are seen, these are generally very near to the coast, e.g., Adgaon. The third type is the communities of Hindu priests, who



Contents

1. Relation of urban population density and urban identity (resilience): Example of Mumbai's residential development	214
Deepak Desai ¹ , Nitinad Kantare ²	
2. Heritage or contemporary- myriad expressions of plurality: A case of Brick School of Architecture, Pune.	220
Ar. Dr. Manish Jadhav ¹ / Arnavale ²	
3. Society of Urban Landscapes- Realising relationships between settlements and environs in Darganj Prayagraj	228
Sanku Shyam	
4. Stimulus: Tracing the social characteristics of Built and Unbuilt spaces	236
Devesh Bhatnagar ¹ , Ar. Tarunish Joshi ²	
5. Bridging the gap between education and profession of Interior Design in Indian context	243
Kamini Gaurani	
6. Addressing Poverty through City Development Strategies	251
Ar. Harshada Wagh ¹ , Dr. Sanjaykumar Sonar ²	
7. Landfill Management: An Opportunity to Resilient Future.	263
Ayush R. Topdiya ¹ / Ar. Shardul Joshi ²	
8. Addressing Urban Resilience through Urban Design Principles for Built Environment	275
Mrudula Manigalkar ¹ / Prajakta Sonar ²	



Landfill Management: An Opportunity to Resilient Future

Ayush R. Tapliya¹, Ar. Shayulji Joshi²

¹Student, IIT Bombay, BRICK School of Architecture, India

²Assistant Professor, IIT Bombay, BRICK School of Architecture, India

Abstract

Urban India generates 62 MT of municipal solid waste each year. Of this, about 43 MT is collected, and 11.8 MT is treated. About 31 MT is dumped at landfill sites. With changing consumption patterns and rapid economic growth, it is estimated that urban municipal solid waste generation will increase to 165 MT in 2030. The current scenario depicts that the impacts are created over public concerns like air quality, odour, leachates, groundwater, neighbourhood level noise, vibrations, street vacuum along the roads, etc. Many researchers have stated the repercussions of solid waste on natural resources, public health, fire and flood, diseases, corruption, NCCs, and policy level decisions have resolved solid waste management to an extent. Still, the issue of landfill sites is not addressed to its full potential yet.

The paper discusses the concept of landfill site management and tries to analyse efficient waste management systems that do not require landfills, which can be available and sufficient all over India, contributing to the sustainable goals of urban planning.

The methodology with which this research is conducted is descriptive and exploratory. The data collection is done through primary and secondary sources. Primary methods are case studies of best practices with respect to landfill site management, interviews of experts and secondary through various published research. The paper also reviews the waste management policies in India and ground realities across India.

The objectives of this research are related to landfill site management and possible methods to a thorough issue of waste management efficiently and sustainably.

Keywords: Solid Waste Management, Landfill, Recycling, Waste Management Policies.

Introduction :

Most Indian cities, especially megapolitan areas, are fast developing into major urban and suburban agglomerations, with so-called “mega-cities” where rural elements are still intermingled into the urban fabric. MSW is commonly disposed of in low-cost locations without any safeguards in operational terms. It includes actions related to the generation, storage, collection, transfer, and transport of solid wastes, as well as their processing and disposal. However, the MSWM system in most areas consists of only low scientific waste generation, collection, transportation, and disposal. As a result, uncollected solid waste is one of India's most serious environmental issues.

For all countries, MSW management necessitates sufficient infrastructure, maintenance and interventions. One of the serious and uncontrollable growth of metropolitan areas, this becomes increasingly expensive and complex. The inability to provide the appropriate degree of public service in metropolitan areas is frequently typical in the controlling municipal corporations' bad financial situation (The Institute of Urban and Regional Studies, 2007; Institute of Urban Studies, 2011; Chatterjee and Ghosh, 2012).

Landfill siting is the most widely used solid waste management technique in the world. Municipal garbage, industrial or agricultural residues, municipal sludge, industrial fly ash, etc. deposits, and/or created hazardous wastes have all been treated and disposed of in these landfills.

Cities can effect change and begin to fill trust for greater action in this area. Therefore, there is a huge opportunity for cities to pursue this one, through solid waste management initiatives. Local decision makers can effectively allocate resources, good practices and transfer, and design policies and procedures to fulfil the community's needs by harnessing the benefits and drawbacks of various management technologies. With a series of excellent practices from around the country leading to better economic, social, and environmental results for cities, the Good Practice Guide follows as the main Guide critical to delivering a successful solid waste management system.

Title:
Conference Proceedings
International Conference On
Blurred Boundaries: In Search Of An Identity

Editor:
Dr. Poorva Keskar
Principal, SMEF's Brick School of Architecture, Pune

Editorial Team:
Ar. Ketaki Gujar
Associate Professor

Ar. Sharduli Joshi
Assistant Professor

Ar. Rama Raghavan
Assistant Professor

Compiled by
Ar. Kanchan Shinde
Ar. Bhagyashree Bandekar
Ar. Akshay Gandhi

Cover page by Forest Communications

ISBN: 978-93-5473-568-4 (Online)

Published By: Brick Publication House
Survey No. 50/3, Jagdamba Bhavan Marg, Undri, Pune Maharashtra. 411060
Email: brickpublication@brick.edu.in/ conference@brick.edu.in
Website: brick.edu.in
Contact: 7276043700

Copyright © All Rights Reserved 2021
Sastish Misal Education Foundation's Brick School of Architecture.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means without prior permission. The authenticity of the information (textual and visual) contained in the Manuscripts is the responsibility of the contributing participants. Publishers are not responsible for any discrepancy or copyright infringement.



Contents

Preface	6
Convenor's Message - Ms. Pooja Misal	8
Co-Convenor's Message - Dr. Poorva Keskar	9
Advisor's Message- Ar. Vishwas Kulkarni	10
Conference Chair's Message - Ar. Ketaki Gujar & Ar. Sharduli Joshi	11
A. Heritage as an Anchor	16
Session Chair: Dr. Emanuela Garofalo	
B. Resilience in the Era of Change	212
Session chair: Ar. Robert Fleming	
C. Space as an expression of Democracy.	284
Session chair: Dr. Amit Srivastava	
D. Identity and Sustainability	430
Session chair: Dr. Abel Tablada, Dr. Ham Wei Kua	
E. Architecture and the local community	564
Dr. Shaji K. Panicker	



Dynamism of urban spaces reflecting culture

Shraddha Mahore Manjrekar¹, Shraddha Gurjar²

¹Associate Professor, S.M.E.F.'s B.S.O.A., Pune,

²Assistant Professor, S.M.E.F.'s B.S.O.A., Pune

Abstract

India is a rich nation in terms of cultural heritage, hence it becomes essential to recognize and appreciate the features of a country's culture for sustainable development (Abakerli, 2012). The relation of culture with the built environment in the world has been considered under parameters like number of theatres, museums, art galleries, world heritage sites, concert halls, etc. However, there are a number of intangible aspects of the cultural activities that happen in the backdrop of the built environment. In the process of evolution of urban form, each aspect of the built environment is created to fulfill human purpose, giving space to accommodate the complex and manifold urban activities. These spaces are a reflection of the way of living and culture. Cultural activities bring vitality and vibrancy in the day to day lives. The routines are associated with the design of neighborhoods. The festivals are associated with a number of spaces in the city. In this regard, the Indian cities have a number of spaces with dynamic character, that signify changing character with respect to time and occasion. The same spaces function in a different way at different points of time. For example, the market lanes become the processional path at the time of festivals and public squares take different shapes at the time of ceremonies. In order to accommodate cultural activities, like processions and celebration of festivals the cities represent flexible quality. This paper explores the relationship of the spaces in the city with the culture. Pune city has been taken as a study area and various factors of the festivals are studied that bring in dynamism in the spaces. It is based on the mapping of the activities in certain parts of the city that change character during festive times. Authors have studied some major festivals and related activities around the year and tried to map the city's response to these festivals.

Keywords - Pune Culture, Intangible heritage, built environment, Space dynamics.

1. Introduction

Historically the word culture has been always spelled with civilization. The set of values that shapes the behavior of the society at different levels has been called as culture, whereas civilization is a physical form of human-made environment. Cultural development has been considered as one of the important factors in Subjective well being of the people (Denzhu Ye, 2015). If culture is considered as the mind of society then civilization is the body to house it. Any society and any geographical area have both culture and civilization at the same time (Hambarde, 2013). Cities represent the spatial deliberation of the economic, social, cultural, and political activities. The ancient cities of India have been transmitting the culture of the respective regions. Development of culture can be observed at national as well as at city, town or village level. In India, there is significance of the 'imagined landscape'. These imagined landscapes are the identified routes and locations in the country that are identified as pilgrimage places (tirthas). The network of these destinations of pilgrimage have long served to create a complex sense of place—locally, regionally, and nationally (Eck, DI, 1998). This imagined landscape has been an integral part of Indian culture and has also played a role in development of spaces in the cities and generated economies in the area. The examples of these imagined landscapes are Char dham yatra of Uttarakhand (Shardul Semwal, 2019), Kavar yatra of Haridwar, Pandharpur Wari (Dehu and Alandi to Pandharpur) (Pendharkar, 2016), Dwadash (twelve) Jyotirlinga Yatra, Ashta Vinayak yatra, Shakti peethas yatra, etc. All these yatras (routes) mark entry on particular routes on a map of India, and the locations on these yatras have spaces related with this pilgrimage. At the city level, the culture is impactful, as the cultural activities generate economies with involvement of people, at multiple locations at various points of time in a year. Culture and spirituality has been interpreted as a major factor in maintaining peace in the city (Sunil Rai, 2020). Other than generation of economy, they positively impact the cities in terms of reduction of crime, educational development and well-being of the people.

The historical Indian cities have been representing the culture in their built form. Both the tangible and intangible forms of culture can be experienced in these cities. The tangible aspects of culture that can be seen in the form of built (physical) heritage such as, river ghats, auditoriums, concert halls, stadiums, places of worship and various places of celebrations and performing rituals, like marriage gardens, crematoriums, burial grounds etc. The intangible aspects of culture like customs, traditions, festivals, fairs, festive markets etc., which though not in the built form but represent culture in a vibrant manner. A number of festivals have given identity to the cities, for example Durga Pooja of Kolkata, Rathayatra of Jagannathpuri, Ganpati festival of Pune or Dahi Handi and Krishna Janmashtami of Mumbai etc. These festivals are not only the celebrations or gathering of people at one place, but are housed in the city at distinct places, and change the cityscape dramatically. Cities provide flexibility in the form of accommodation of these celebrations in their existing built forms. Some of the spaces are named or identified with these festivities. For example, in north India some grounds are named as Dasherai maidans, as on the occasion of Dasherai, the major public gathering happens in these

DOI: 10.38027/2021ICCAUAXXXXXX (we will add the DOI number so please keep this part as it is)

Discourse on Lost Pages of History: Architectural Works of Vasudev Kanitkar in Western India

*Academic Title: Dr. **Vaidehi Lavand**¹

Ar. **Onkar Khebudkar**²

*SMEF's Brick School of Architecture, Pune India*¹

*SKN College of Architecture, Pune India*¹

E-mail¹: vaidehilavand@brick.edu.in

onkar.khebudkar@gmail.com

Abstract:

Ample western historiographical resources are available to understand Colonial Architecture in India. Architectural language evolved during Colonial period in India was a collaborative effort of British Royal and Local engineers from several parts. Eclectic architectural language of British India is a product of amalgamation of western models and eastern knowledge simultaneously. They worked in collaboration with Indian philanthropists, engineers, contractors and artisans. Much is available to read about royal engineers as a pride for British sovereign but contributions of local engineers who equally built colonial India lost in the pages of history.

This Paper tried to document and discuss works of local contractor Vasudev Kanitkar born in Baroda and worked at several places in Western India. With the help of archival resources and primary secondary surveys conducted this research paper compiles architectural contributions of Vasudev Kanitkar less known for his many landmark edifices he designed and built in western India.

Keywords: Eclectic Architecture; Colonial India; Local Contractors; Royal Engineers; and Public Architecture

1. Introduction and framework of study

Role of Locals in building Western part of colonial India

Western India was mostly under the presidency of Bombay during British rule in the nineteenth century. Royal engineers in collaborations with locals proposed and construct notable architectural works under Bombay presidency. Many local engineers and contractors were involved in decision-making at various levels during the actual implementation of public buildings on site. There were roadblocks in the execution process, including as opposition from locals and a lack of funds. Colonial sovereignty was built on democratic ideas to some extent. Documents such as old newspapers and municipal records may be sufficient proof that choices appear to be made democratically with the cooperation of local leaders and people. Correspondence between officers and commissioners about decisions made in the selection of appropriate sites for specific projects and its character in general can be found in municipal and PWD archives. Detailed estimates, material selections, and local community responses appear in the overall paperwork, although names of local contractors appear to be included in the files linked to public buildings completed very rarely. (**Fig. 1 and Fig. 2**) Framework shows how colonial rule was percolated and reached at grassroots levels. How the architectural vocabulary of colonial urban heritage and landscape could be interpreted in time and space. (Munasinghe, 2022)

Numerous articles published in Professional Papers on Indian Engineering by Indian local contractors such as Teekaram, who worked primarily in Lucknow, Babu Shumbhoo Dass, whose works can be seen in Bahawalpur, Pakistan, Rai Bahadur Kunhya Lal's and Sir Ganga Ram's legendary projects in Lahore, Pakistan, Muncherjee Beyzunjee at Hyderabad during the Nizam reign, are excellent resources indicating their contribution to the architectural vocabulary developed^{1 2} (Chopra, 2011) (Lavand, 2017) Researchers such as Preeti Chopra states extraordinary works of Murzbaan in Mumbai in her writings. On the other hand local engineers such as Narso Ramchandra, Vasudev Kanitkar from Pune and some other towns in Deccan were never got recognized and documented extensively for their contributions in the development

¹ Preeti Chopra in her Book *A Joint Enterprise* on the page number 76 mentions name of Sir Ganga Ram as legendary figure who worked for PWD in Lahore now in Pakistan.

² Lavand Vaidehi, "Public Architecture And Role Of Local Contractors In Late Nineteenth Century, Case Of Pune." In *Urban Regeneration*. Nashik, 2017



Contents

1. Session chair's Note 19
2. Architectural Heritage Assessment Model through Analytical Hierarchy Process and Complex Proportional Assessment: A Case of Odishan Temple Architecture 20
Partha Sarathi Mishra¹, Soumi Muhuri²
3. Shaivite Temples of the Western Chalukyas: A case at Sankeshwar, District Belagavi - Kama t a k a 32
Parwa ti Pa til¹, Ar. Sidhi Tendulkar²
4. Echoes from Nagpur City's Heritage... Stories of Built and Un-built spaces 41
Ar. Sneha Mandekar Tirale¹, Ar. Pradyumna Sahasrabhojane²
5. Analysis of Urban Histories for Future Urbanization A Case Study on Prayagraj, India 48
Arundhati Gupta¹
6. 'Simla to Shimla' - Allegory of the built & unbuilt Heritage 54
Prof. Priyanka Lele¹ Prof. Richa Raut²
7. Architectural Character of Built Heritage of the Pune Cantonment A need for Respect and Appreciation towards Heritage 60
Ar. Ruta Pawar¹, Ar. Neha Pradhan²
8. Critical reflection of Eclecticism at a public square: Case of Maharaj Bada, Gwalior 71
Ar. Radhika Sarda¹, Ar. Harshita Sharma², Dr Anjali S. Patil³
9. Preserving Traditional Heritage in Modern times: A case of Bhuj town, Kutch 85
Ar. Aishwarya Kulkarni
10. Human Movement in Space impacted by Architecture with Historical Narrative- Study of Sabar m a t i Ashram, Ahmedabad 92
Rutva Trivedi, Suja n Uma r a n i y a²
11. Concatenating the elements of urban structure to perpetuate the sense of place: A Case of Ashok Rajp a t h, Pa t n a 104
Arunima¹
12. Urban Heritage Conservation And Sustainable Methods Of Development In Mylapore 112
A. Ashwa th¹, L. Nithish Srira m¹, G. Vikra m¹, Vigneswaran²

13. The Thread of Intangible Heritage Stitching Through Time: An Illustrious Case of Kolkata . . .	118
Kripa Thomas ¹ , Rashi Karkoon ² , Upasana Patgiri ³	
14. Historic Urban Landscape The twenty-Úrst century paradigm for Urban Heritage Conservation	126
Kuldeep Kaur Bhatia ¹ , Nikhat Parvez ²	
15. An Enquiry of Space Making Elements in Memorial Architecture	135
Prachi Champa Nerkar, Sujan Umara niya ²	
16. Heritage, urbanity and transition: methods and tools for a possible future.	147
Rosa Maria Vitrano ¹	
17. Sikh Heritage Architecture - Attributes of Architecture in construction history of Sri Harimandir Sahib, Amritsar	155
¹ Ar. Jagdeep Kaur, ² Dr. Mazharul Haque, ³ Dr. Ravish Kumar,	
18. Rethinking Heritage Site of Pateshwar in Today's Context	164
Dr. Vaidehi Lavand ¹ , Ms. Sailli Palande Datar ²	
19. Heritage as a Social and Economic Institution	171
Sana Fatma ¹	
20. Investigating Masunda Lake precinct as a cultural heritage and exploring its role in shaping the identity of Thane city	177
Ar. Kavita Pradhan ¹ , Ar. Neha Korde ²	
21. Revenant architecture: the values and significance of reused elements in the reconstruction of Sicilian cities (17th-18th century)..	184
Amando Antista ¹	
22. Heritage Integration with Urban advancement for the cities in India	192
Ar. Antima Kuda ¹ , Ar. Dipti Shukla ² , Ar. Ankur Kuda ³	
23. Sustainable Heritage: Adaptive Reuse of a Heritage Site	197
Ar. Shreyasee Shinde ¹	
24. Deciphering the Historic Core of Pune through Phenomenology.	204
Ar. Siddhi Joshi ¹ , Ar. Mahesh Bangad ²	

Rethinking Heritage Site of Pateshwar in Today's Context

Dr. Vaidehi Lavand¹, Ms. Saili Palande Datar²

¹ Professor at SMEF'S Brick School of Architecture, Pune, Conservation architect, vaidehilavand@brick.edu.in

² Trustee, Samvidya Institute of Cultural Studies & Founder-Director, Heritage Insights from Pune, sailikdatar@gmail.com

Abstract

Pateshwar is a unique and significant heritage site located near Satara city in Maharashtra. The site offers an incredible visual experience to visitors. The secluded location of the site contributes to the mystic character to the site and it leaves the audience in a sense of awe, respect, and intrigue. It is therefore necessary to explore the secrets of Pateshwar with scientific inquiry by the experts of various disciplines. The history of the site goes back approximately by eight centuries in the past. The research paper tries to identify, understand and document diverse typology of architectural elements and remains on site. Research is compiled with the help of primary and secondary surveys. Using photographic documentation, GIS mapping, and interviews of locals help to ascertain different architectural layers of history in this unique heritage site.

Discussion underlines the importance of the small but unique site of Pateshwar in the context of the Satara region's multifaceted cultural identity. The previous researches conducted for the site provide anecdotal informal and description of some iconographic details. The site needs to be studied and analyzed beyond its mysterious character and few iconographic depictions. The paper tries to document its significance from heritage point of view.

This unique heritage site is undergoing many threats that it is essential to look at the site from a conservation management point of view. It is imperative to rethink this heritage site as a potential place to develop sensitive heritage tourism and open it for further research. Paper tries to identify issues related to the site and discusses what might serve as future guidelines for the site. This study can be a first step towards bringing Pateshwar under heritage listing and seeking to secure its protection in collaboration with the locals.

Keywords: Heritage; Conservation management; Religious Typology; Restoration; Cultural tourism

1. Introduction

It is quintessential to address at the beginning, what is meant by a "heritage" site. To understand its literal meaning, heritage site is a site displaying the history and culture of the place with its tangible and intangible attributes. While defining it in the Indian context we have more elements to define heritage with its history, art, culture, architecture, and oral traditions. In addition to the physical attributes, any heritage site has to be looked at from its cultural context in Indian cases. Heritage site of Pateshwar can thus be appreciated as heritage in its cultural context. As mentioned in Nara Document "Cultural Heritage is understood to include monuments, groups of buildings and sites of cultural value as defined in article one of the World Heritage Convention". (Nara document, 1994) From a broader perspective understanding the term beyond built it is articulated well in this statement "The cultural heritage may be defined as the entire corpus of material signs - either artistic or symbolic - handed on by the past to each culture and, therefore, to the whole of humankind." Living heritage comprises heritage sites that have continued in use and are changing due to current use that needs extra protection and a scientific approach to care holistically in our fast-running world. The term 'cultural property' includes not only the established and scheduled architectural, archaeological and historic sites and structures, but also the unscheduled or unclassified vestiges of the past as well as artistically or historically important recent sites and structures. (Jokilehto, 2005) Despite its long history and artistic excellence, the Pateshwar temple is a place where history goes many centuries back and reflects the peak of cultural representations that have not been listed and protected yet from a preservation point of view.



Figure 1: Location of Pateshwar in the context of Satara



Figure 2: Shivalinga in Varhad Ghar

Nature and Conflict: Case of Tiları Bio Region

A. r. Onkar K hebudkar¹, Dr. Vaidehi Lavand², A. r. Ramiya Gopalkrishnan³

¹ Asso. Professor at SKN College of Architecture, Pune

² Professor at SMEF'S Brick School of Architecture, Pune,

³ Assistant Professor at SMEF'S Brick School of Architecture, Pune,

Abstract

Tilari region is well-known for its rich biodiversity that is part of Western Ghats¹ listed under UNESCO natural heritage category. Unique geographic and natural setup of the Tilari region, imparts significance to its context. Tilari river originates in Tudai Chandgad in Kolhapur district where it is known as Tilotama. It flows towards the west and flourishes the entire region near Kudase and meets the Arabian sea at the end. Exclusive biodiversity of Tilari region, number of endemic, endangered species, rich flora and fauna marks its uniqueness in Western Ghats. This paper discusses the unique natural setup of Tilari, its rich ecology and touches upon some aspects of settlements around the river.

Data is collected with the help of actual field visits, photographic documentation, primary, secondary data and random interviews conducted during visits. Research discourse mainly focuses upon overview of coexistence of man and nature in Tilari bioregion and transition through the shared landscape currently going through. Major deforestation for commercial reasons has destroyed ecological balance to a large extent. Human intervention in the migrating corridors of the native animals and destruction of local flora and fauna resulting in the conflicts between man and nature. Region is under major threat due to issues related to human interventions in terms of its ecological setup, geology, hydrology and at the extreme end mining what is hampering the area extensively. Study attempts to unveil the rich context of the Tilari region currently under threat due to several uncontrolled elements around the region and undesirable policies by the authorities. Research concludes with the brief about holistic approach towards sustainable landscape management plan considering the people's participation in natural conservation to retain its identity in rapid commercialization and urbanization in the region.

Keywords Bioregion; Ecology; Private forest; Deforestation; Shared landscape; Coexistence of man and nature

1. Introduction

As said by world-famous natural historian David Attenborough "Ever since we arrived on this planet as a species, we've cut them down, dug them up, burnt them and poisoned them. Today we're doing so on a greater scale than ever." (Attenborough, 2018) We are looking back to nature to learn from it. Many scholars, researchers have discussed a lot about our natural resources and their importance in today's fast-paced life. Term nature comprises the idea of ecology around us that includes flora, fauna, climate, and ecological setup around us. Whereas conflict mainly focuses upon friction between nature and human intervention.

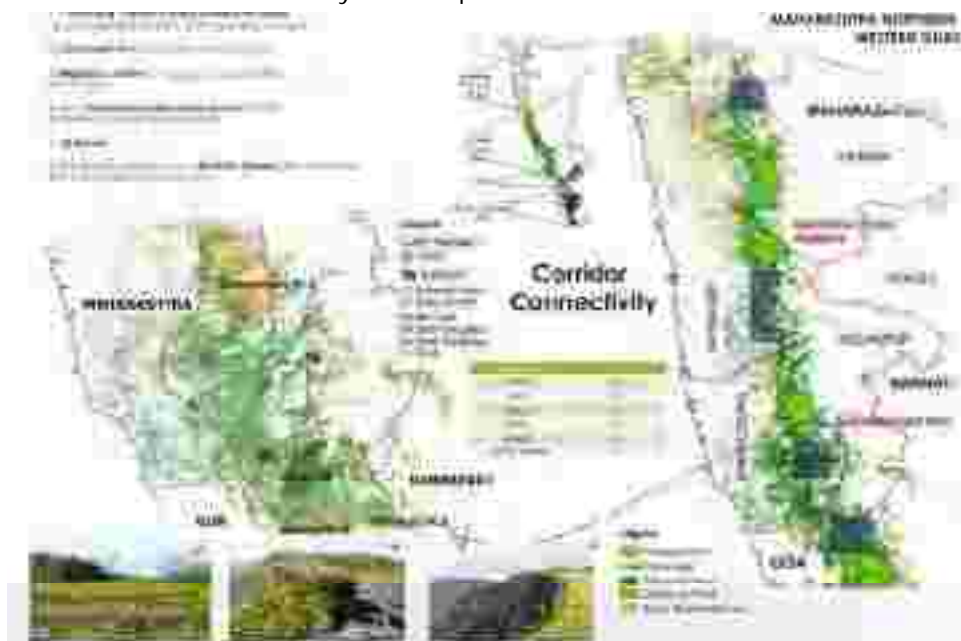


Figure 1: Maps and images establishing the context of the region Source: Images by Author and Mapping based upon existing geographic map Maharashtra Forest department

¹ Ghat in this case is a mountain pass region connecting Deccan plateau to the west coast in India.

2ND INTERNATIONAL DESIGN RESEARCH CONFERENCE **2021**

VOLUME 8 · ISSUE 2

JUNE 2021 · DECEMBER 2021

ISSN 2347-8403

 **SH DHADITYA**
Research Journal

MONADIC ARCHITECTURE

 **ADITYA**
RESEARCH JOURNAL
ISSN 2347-8403



CASE STUDY OF CREATIVE ARCHITECTURE IN MASS PRODUCTIONS THROUGH 3D PRINTING TECHNOLOGY

SUBTHEME: MITOSIS OF MODULES CONTRIBUTION TO TECHNOLOGY

Ar. Anurakti Yadav, Assistant Professor

SMEF's Brick Group of Institutes, Pune, India

Email: anuraktishrivastava@brick.edu.in, Contact no: 9028900299

ABSTRACT

Architects are becoming more adept at using new modular solutions in much creative ways and more interested in the rigid geometries of the past. Even globally contractors and engineers are now busy trying to find the right balance between bespoke design and volume production, and using the latest technology to boost their chances, such as 3D printing. As the world's population is continuously growing, we are facing with the need for faster development and rapid construction on a massive scale. Nowadays the main debate is how mass-produced elements can be made to work with the creative architecture. The overall aim of this paper is to prepare a reference base for the architects for analyzing 3D printing technology on the parameters of creativity, time of construction and low labour cost. This is done by synthesizing some cases studies where the same technology has been used for the rapid construction. The study found that we are facing with the need for faster development and rapid construction on a massive scale, and 3D printing not only contribute in rapid construction but also contribute in producing elements in an almost limitless number of shapes and sizes in mass production.

INTRODUCTION / BACKGROUND

Modular construction is a process in which a building is constructed off-site with under controlled plant conditions, using the same materials and designing to the same codes and standards as conventionally built facilities, but in about half the time. Buildings are produced in "modules" that when put together on site, reflect the identical design intent and specifications of the most sophisticated site-built facility without any compromise.

Mass customization is something if can be applied, you could probably rule the world. And this is more than just an aspiration.

Most important of all, a global shortage of traditional building skills is causing problems for developers and a market that is hungry for new methods of procurement.

The goal of mass production is low-cost manufacturing with speedy construction.

Contractors and engineers are now busy trying to find the right balance between bespoke design and volume production, and using the latest technology to boost their chances, such as 3D printing.

3D printing technology is enabling faster and more accurate production of flexible designs. Building Information Modelling is allowing manufacturers, designers and contractors to play with modular configurations in a way that would have been difficult just a decade ago, and architects are becoming more adept at using new modular solutions in much creative ways and more interested in the rigid geometries of the past.

AIM / PURPOSE

As the world's population is continuously growing, we are facing with the need for faster development and rapid construction on a massive scale.

Nowadays the main debate is how mass-produced elements can be made to work with the creative architecture.

The overall aim of this paper is to prepare a reference base for the architects for analyzing 3D printing technology on the parameters of creativity, time of construction and low labour cost.

At the Manufacturing Technology Centre in Coventry, Skanska, UK is helping to pioneer concrete printing, a process by which elements can be made in an almost limitless number of shapes and sizes by extruding specialized concrete through a robotic arm.

RESEARCH METHODOLOGY

In this paper literature review and synthesis of some cases studies are done, where the 3D printing technology has been used for the rapid construction.

CONTENTS

- | | | | | | |
|-----------|--|----|-----------|--|-----|
| 01 | INDIVIDUAL BAWA KE LA SOROKO COUNTRY
<i>Suman Shah</i> | 05 | 10 | CRUISE COLLAGE GARDEN PARK
<i>Vinod Mehta</i> | 14 |
| 02 | THE LOST BASH JACOBI
<i>Zoya Bhatia</i> | 10 | 11 | WADALA PINKISHA BIRAPPA
<i>Chiridha Nagotahar</i> | 20 |
| 03 | THE EPICUTANAL JAMINA
<i>Manjal Kulkarni</i> | 14 | 12 | THE COLLECTOR'S JOURNAL
<i>Juhi Prasad Singh</i> | 31 |
| 04 | THE SKROCKAT HORDOLINKA
<i>Dnyanesh Sharma</i> | 20 | 13 | EPilogue | 100 |
| 05 | AMBEDKA & RESIDENCE AT PRAKALTO GARDENS
<i>Vedih Ajay Ringer</i> | 26 | 14 | MEET THE AUTHORS | 104 |
| 06 | REFUGE IN CHENNAI
<i>Ashwarya Cori</i> | 32 | 15 | MEET THE JURORS | 106 |
| 07 | USE TO A CLIMAT NATURE PARK IN A CITY Celebrating 50
Mahatma's New Park
<i>Dnyanesh Deshmukh Gaurani</i> | 39 | 16 | BIBLIOGRAPHY | 108 |
| 08 | THE GARDEN - THE EDGE - THE PEOPLE Five Gardens Writings
<i>Shreyashree Bhatnagar</i> | 51 | 17 | THE OTHER LENSES | 110 |
| 09 | THE STORY OF A THOUSAND PARKS
<i>Shantosh Kulkarni</i> | 58 | | | |

THE GARDEN - THE EDGE - THE PEOPLE - FIVE GARDENS, MUMBAI

BHAGYASHREE NAYAN BANDEKAR

INTRODUCTION

Any urban space is a reflection of its people. One such example is located in the first planned neighbourhood of Mumbai. The Five Gardens (Marchoy Joshi gardens). Designed to house the Parsi community the spaces have transformed over time. The study aims to identify the narrative of The Past, The Present and a probable future based on various developmental parameters for The Five Gardens, Mumbai.

The gardens, designed to manage public and an interactive public space in the area, serves as a unique example of the Edge interacting with the people. The study thus aims to dig deeper in this narrative of the Garden, its Edge and its activities, which are an outcome of years of use.

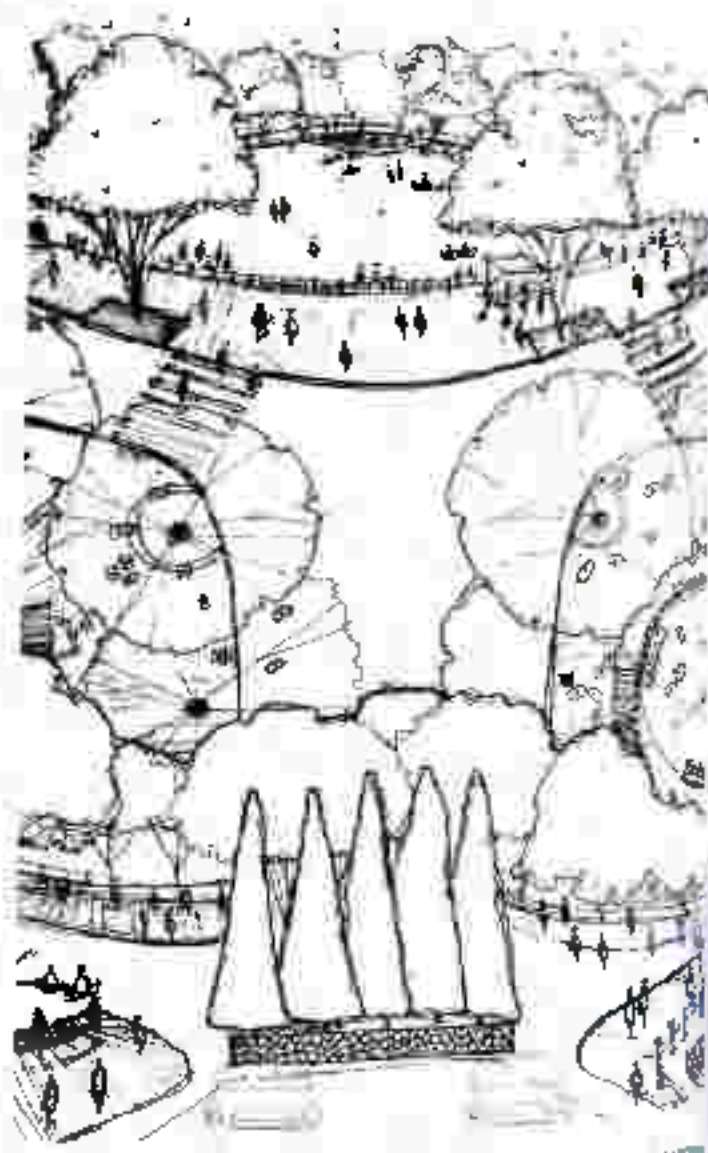
The gardens were perceived and built as an open space in the city for the community residing around, and is open to intergration. While the basic form of the space has not been altered, it has been appropriated and used by the community around. Thus the will of the designer to create an interactive space is viewed through The Garden - The Edge - The People.

INCEPTION OF GARDENS IN THE CITY PAST

With a growing population due to ports and extensive textile businesses in Bombay, BMC (Bombay Municipal Corporation) was set up in the 19th century in its first set of Planning and development rules in 1872, the island city was divided into two parts based on its density. Scheduled Areas and Non-Scheduled Areas. Open spaces were unplanned in the denser parts of the city with marginal spaces in between the buildings meant for manual scavenging. Few instances of the gardens developed during this era include Horniman Circle Gardens, designed to be a large open space with green buildings in the middle of the walled city, and Hanging Gardens (1881) developed over the water source for the city to protect it from pollution.

With the first major epidemic in 1896, many people started to move away from their homes to the Maidans of the city. Maidans were the only larger open spaces during the time which provided adequate and well ventilated spaces within the city. This in turn made the city authorities realize the importance of open space in everyday life. In response to the crisis faced by the city, BMC set up BCIT (Bombay City Improvement Trust) in 1898, and gave immense powers to it. Along with the BMC, BCIT cleared out congested and unhygienic buildings, widened roads, and drained the low lying areas of the city. It also undertook planning and development of 33 new parts within the city. Some of the largest schemes were the Dadar-Matunga Estate, and the Matunga-Sion Estate, which were to accommodate 60,000 people each. As these were away from the city centre various transportation schemes were also implemented. These included an extensive connection with electric tramways, created in 1905, and subsequently BEST (Bombay Electric Supply & Tramways Company Limited) systems, which were added in 1925. This resulted in the creation of various educational institutes within the Dadar-Matunga area. The government also started leasing out these lands for 999 years and were allocated to different communities present in Mumbai. This resulted in the development of Parsi and Hindu colonies by the 1920s, which developed as one of the first planned neighbourhoods of the city.

The newly created neighbourhoods catered to a variety of users, ranging from the affluent Parsi community, to the migratory population from various parts of the country, who moved to the city as a result of the developments. Within these schemes new norms laid out by the BCIT were implemented, resulting in larger plot sizes and ample open space. One such



MENTAL IMAGE OF THE GARDEN

Investigating the role of social dimensions in the design of a affordable housing: Case

Pune city

A.r. Manali Deshmukh¹, A.r. Sudhir Deshpande², Dr. R. Shanthipriya³

¹Professor, Research Scholar, School of Architecture and Interior Design, SRMIST- dc5584@srmist.edu.in,

Professor SMEF's Brick School of Architecture, Pune, Maharashtra, India

²Associate Professor, SMEF's Brick School of Architecture, Pune, Maharashtra, India

³Professor, Research Supervisor, School of Architecture and Interior Design, SRMIST- shanthir1@srmist.edu.in

Abstract

Due to rapid urbanization and development, Indian cities are struggling to retain their social character in terms of their identity. The metro Politian city like Pune also faces similar challenges. After 1995, the sudden economic growth brought an imbalance between the supply and demand of housing for all. The city needed policies and opportunities to provide mass-scale affordable housing. The central and state government implemented various schemes and strategies. However, the qualitative factors in housing design were swept over by developer- friendly designs. The technical parameters like FSI, maximizing salable areas, compressed circulation spaces took away the opportunity of providing social dimensions in housing designs. This added to the development of the monotonous character of the city without having any regional connection with visual and spatial characteristics. This leading to the occupants unable to find their habitable space for secondary activities or relate themselves to the visual and spatial character of the building.

This research aims to investigate the role of social dimensions with probable implementation strategies in the design of affordable housing. This study is based on formative research and includes a qualitative literature review. It is supported by observational analysis of elements that depicts city character and associations of the user with a space. The scope of city character is limited to physical and visual elements of façade. Based on inferences and observations, this study proposes implementation strategies like façade development, communication space planning, etc. to establish the social dimensions in the design of affordable housing. The findings of this study establish a correlation between social dimensions and affordability. It further recommends preserving the social identity of the city by looking comprehensively at a habitat than on individual unit development.

Keywords: Social; Affordability; Space; Character; Connect; User

1. Introduction & Significance

When designing affordable housing, social considerations need to be taken into account. Social aspects are not limited to location, but also have a relationship with the socio-physical environment and economics of the project. Home is a space that needs to be experienced and integrated with the physical environment around it. It has a direct and immediate impact on other aspects such as health, education, economy, environment, political life, society of any development (Sinha, 1978). Therefore, social dimensions play a vital role in the long-term affordability of the project. Holistic sustainability means supporting residents socially, economically, and environmentally (Ibem et. Al, 2015). Many green policies are being implemented, even more, innovative methods are being tested using cost-effective technologies, but the idea of social dimensions is ignored and leads to the disappearance of the regional characteristic. It is not possible to maintain affordable housing on a larger scale without considering social dimensions in general. Soen (1979) discussed the concept of "livable" housing concerning tenant needs and housing satisfaction and stressed the fact that housing quality is influenced by several factors, namely technical, social, behavioral, and other factors, as well as housing quality. Housing is not static, as it changes depending on the circumstances, sustainability is also related to the social aspects of society and its behavior. Sidi (2005) states that the model requires analysis of different parameters or perspectives, especially those related to individual and family needs, physical, physiological, economic, accessibility, social needs of society, culture, housing unit or requirements for space, environment, neighborhood, location and even user psychology. Sidwi (2008) stresses the need to generate specific knowledge about people's lifestyles and incorporate it into affordable housing design.

Housing is an expression of indigenous culture and architecture. People relate their homes to the regional context; reflecting the identity of the house changes the perception of its inhabitants. It creates a subjective perception of the area. The regional connection establishes the link between the habitat and the environment. This can be reflected through the characteristics of the building, i.e. style, shape, façade elements, color combination, and spatial quality in regional architecture.

तंत्रशिक्षण विभागीय कार्यालय, पुणे व भारतीय कला प्रसारिणी सभेचे वास्तुविद्या
महाविद्यालय, पुणे आयोजित.

राज्यस्तरीय वास्तुकला मराठी परिषद, २०२२'

कार्यक्रमाची रूपरेषा

२७/२/२०२२

सकाळी	९:३०	दिपप्रज्वलन, सरस्वती वंदना व उद्घाटन.
सकाळी	९:४५	स्वागत डॉ. अभिजीत नातू प्र. प्राचार्य, भा. क. प्र. स. चे वास्तुविद्या महाविद्यालय, पुणे
सकाळी	१०:००	मार्गदर्शनपर भाषण मा. डॉ. दत्तात्रेय जाधव सहसंचालक, तंत्रशिक्षण विभागीय कार्यालय, पुणे
सकाळी	१०:१५	मार्गदर्शनपर भाषण मा. श्री. पुष्कराज आलचंद्र पाठक सचिव, भा. क. प्र. सभा, पुणे
सकाळी	१०:३०	विशेष अतिथी परिचय
सकाळी	१०:३५	बीजभाषण मा. डॉ. उज्वला चक्रदेव मा. कुलगुरु, एस. एन. डी. टी. महिला विद्यापीठ, मुंबई
सकाळी	१०:५० ते ११:००	चहापान
सकाळी	११:०० ते दु. १२:३०	शोधनिबंध सादरीकरण (समांतर सत्रे)
दुपारी	१२:३० ते १:००	मध्यंतर
दुपारी	१:०० ते २:३०	शोधनिबंध सादरीकरण (समांतर सत्रे)
दुपारी	२:३० ते २:४५	चहापान
दुपारी	२:४५ ते ४:१५	शोधनिबंध सादरीकरण (समांतर सत्रे)
दुपारी	४:१५ ते ४:३०	समारोप पसायदान

अनुक्रमणिका

क्र.	लेखक / लेखिका	शोधनिबंध	पृष्ठ क्रमांक
१	पोर्णिमा बुद्धिवंत	वास्तुकला व्यवसायातील आव्हाने	१
२	गीतांजली ऐवळे	वास्तुकलेचा इतिहास	५
३	शिरीष नाचणे	वास्तुकला व्यवसायातील आव्हाने	१२
४	धनश्री मिरजकर	जल संस्कृतीचे संवर्धन आणि अवलंब: शाश्वत शहरी नियोजनाचे सुसूत्र	१६
५	मानस मराठे	मंचरची बारव: एका सहाशे वर्षे प्राचीन स्थापत्य नमुन्याचे विश्लेषण	२२
६	आर्की. लीना प्रसाद आफळे प्रा. डॉ राजाराम म. दमगीर डॉ उमा जाधव	शहरी पातळीवर इमारतीच्या आरोग्यावर विविध घटकांचा होणारा परिणाम	३०
७	शौनक कुलकर्णी	नगर नियोजनातील नवीन आव्हाने: 'शहरायन'	३६
८	सुधीर रमेश देशपांडे	परवडणाऱ्या घरांसाठी व्यवहार्य आणि लवचिक रचनेचे निकष	४१
९	पुनव आदम आठवले	शहरातील गावखुणा	४९
१०	पल्लवी रोहित पुरंदरे	अंतर्गत रचनेवर प्रकाशाचा प्रभाव	५२
११	पल्लवी रोहित पुरंदरे	अंतर्गत सजावटीमध्ये रंगाचा प्रभाव	५६
१२	अजित जानेश्वर शिंदे	अंतर्गत सजावटीत झाडांचे महत्व	६२
१३	अजित जानेश्वर शिंदे	अंतर्गत सजावटीत सॉफ्ट फर्निशिंग चे महत्व	६४
१४	सौरभ मराठे	वास्तु ग्रंथांचा आढावा	६९
१५	चैत्राली कुलकर्णी-देशपांडे	स्वातंत्र्योत्तर वास्तुकला	७४
१६	अश्विनी चंद्रात्रे	वास्तुकलेचा इतिहास	७९
१७	डॉ. अभिजीत नातू	वास्तुभाषा	८४
१८	रक्षा बन्हाटे ईशा चिपळूणकर	रस्त्यावरील स्ट्रीटस्केपचे व क्रियाकलापांचे तुलनात्मक विश्लेषण : प्रकरण – जळगाव.	८६
१९	डॉ. सीमंतिनी चाफळकर	सोलापूरच्या वासाहतिक इतिहासातील सोनेरी पान- टागोर कुटुंबीय	९६
२०	आर्कि. माधुरी प्रशांत पाटील आर्कि. अमित पिसोळकर	कोरोना साथीनंतरची वास्तुकलेतील स्थित्यंतरे	१०४
२१	शिल्पा इंगवले वैशाली प्रसाद लाटकर	भक्ती संप्रदाय व समाधी वास्तुकलेचा ऐतिहासिक वारसा.	११०
२२	निकिता पद्माकर पवार	बहुविध नियोजन प्राधिकरणामुळे निर्माण झालेल्या फफरकांवर मात करण्यासाठी एकीकरणाचा दृष्टीकोन	११४
२३	सुहास जयंत पाठक	पर्जन्य जलसंचन योजना २००५ (रेन वॉटर हार्वेस्टिंग)	११८
२४	वैशाली मंगेश अनगळ	पर्यावरणपूरक घरे बांधण्याचे पर्यायी तंत्रज्ञान आणि शहरात बांधकाम करण्यातील आव्हाने	१२२
२५	शुभश्री उपासनी	वास्तुकलेचा इतिहास' विषयाचे वास्तुविद्या शिक्षणातील महत्व: संदर्भ -सावित्रीबाई फुले पुणे विद्यापीठ आर्किटेक्चर अभ्यासक्रम	१३३
२६	क्षितिजा प्रमोद उगले	अंतर्गत सजावट	१४६
२७	चिन्मयी माळी अर्चना गायकवाड	वाढर्यक्यात निवासी इमारतींमध्ये शारीरिक हालचालींमुळे होणाऱ्या समस्यांचा अभ्यास	१५०

२८	केतकी रणदिवे	लहान मुलांचे निसर्गाशी नाते: मुलांच्या विकासासाठी आणि पृथ्वीच्या भविष्यासाठी त्याचे महत्त्व	१५६
२९	प्राजक्ता भांगानगरे प्रा. प्रजा पतकी	अहमदनगर मधील निवासस्थानांच्या स्वरूपातील बदल.	१६६
३०	शोभन सधन केळकर अजिंक्य प्रदीप निफाडकर अक्षय अनिल वायाळ	महाराष्ट्रातील पश्चिम घाट: भूस्खलन आपती व्यवस्थापनासाठी कारणे, परिणाम ओळखण्याची गरज आणि प्रभावी संरक्षणात्मक उपाय	१७४
३१	डॉ. पराग नारखेडे शर्वरी देशपांडे	आतिथ्य वास्तुविद्येच्या माध्यमातून ऐतिहासिक संवर्धन (महाराष्ट्रातील गड-किल्ल्यांसाठीचे धोरण)	१८६
३२	विजय पवार	वास्तुकला व्यवसायातील आव्हाने	२००
३३	विजय पवार	स्वातंत्र्योत्तर वास्तुकला	२०६
३४	तन्वी टिपणीस	नगर नियोजनातील नवीन आव्हाने	२१२
३५	अनुजा किशोर जोगदेव	त्रावणकोर संस्थानकालीन वास्तुकला - पद्मानाभपुरम राजवाडा	२१५
३६	डॉ. पराग नारखेडे प्रियांका चापेकर	जैन वास्तुकलेतील कोरीवकामाचा एक अभ्यास	२२७
३७	प्रेमराज प्रशांत रणवरे प्रा. स्नेहा शर्मा	फलटण ऐतिहासिक वास्तुकलेचा वारसा	२३१
३८	अनुजा विश्वनाथ शिंदे डॉ. शिल्पा नागापूरकर	मगरपट्टा सिटी, पुणे: एक सर्वसमावेशक टाउनशिप	२४६
३९	प्रणव आनंद साळुंके	इमारत बांधकामात वापारात येणारे टाकाऊ प्लास्टिक	२५३
४०	उज्वला पळसुले	मंदिर स्थापत्य - भारतीय दृष्टिकोन	२५६
४१	पियुष अगरवाल	अंतर्गत सजावटीमध्ये रंगसंगतीची भूमिका	२६३

परवडणाऱ्या घरांसाठी व्यवहार्य आणि लवचिक रचनेचे निकष

सुधीर देशपांडे

असोसिएट प्रोफेसर,

ब्रिक स्कूल ऑफ आर्किटेक्चर, पुणे

Email- sudhirdeshpande@brick.edu.in

गोषवारा:

गृहनिर्माणातील 'परवडणारी क्षमता' हा शब्द रचनेचा खर्च, बांधकाम खर्च, जमिनीचा खर्च, विकास खर्च आणि इतर अनेक खर्चाचा समावेश करतो. बऱ्याच वेळा चर्चा आणि कृती परवडणाऱ्या बांधकाम खर्चाच्या व्यवस्थापनावर चालतात. गृहनिर्माण परवडणाऱ्या घरांच्या स्थापनेत हा घटक महत्वाचा असला तरी, रहिवासी व्यक्तीचे टिकाव किंवा राहणीमानही परवडणारे असले पाहिजे. या शोधनिबंधामध्ये हे खर्चाचे वर्तुळ पूर्ण करण्यासाठी आणि बदलत्या गतिमान भौतिक वातावरणात परवडणाऱ्या जीवनाचा विचार करून परवडणाऱ्या घरांची व्यवहार्य, लवचिक रचना देण्यासाठी काही मापदंड सुचवले आहेत.

संशोधकाने प्रस्तावित केलेले व्यवहार्य निकष विशिष्ट प्रकल्पाच्या स्थानाचे विश्लेषण करून त्याच्या व्यवहार्यतेबद्दल मूलभूत कल्पना देतील. लक्षित अंतिम वापरकर्ता गट, संक्रमण मार्ग, संबंधित सुविधा, सभोवतालची पर्यावरणीय परिस्थिती आणि प्रस्तावित प्रदेशाची भविष्यातील वाढ, हे सर्व घटक खऱ्या अर्थाने परवडणारे घरांची गरज आणि उत्पादन वाढवू शकतात. सभोवतालच्या सामाजिक परिस्थितीचे निरीक्षण करून लवचिकतेची संज्ञा 'अनुकूलता' म्हणून परिभाषित केली जाऊ शकते. लवचिक नसणाऱ्या परवडणाऱ्या घरांच्या रचनेची समस्या ही जमिनीच्या तीव्र टंचाईशी संलग्न आहे. म्हणून लोकांना अप्रत्यक्षपणे उपलब्ध निवारा पर्याय निवडण्यास भाग पाडले जाते जे त्यांच्या आवश्यकतांनुसार डिझाइन केलेले नाहीत. सदर शोधनिबंधात बहु-कार्यात्मक लिव्हिंग रूम स्पेस, बहुमजली अपार्टमेंटसह मॉड्युलर युनिट, तसेच मध्यम आणि कमी उंचीच्या नवकल्पनांवर चर्चा केलेली आहे. हा शोधनिबंध रहिवाशांच्या चांगल्या दर्जाच्या जीवनासाठी जागांच्या सामाजिक सांस्कृतिक वैशिष्ट्यांवर देखील प्रकाश टाकेल. आवश्यकतेनुसार प्रभावी जागेचे नियोजन परवडणाऱ्या गृहनिर्माण क्षेत्रात गुणात्मक फरक घडवेल.

प्रमुख शब्द: व्यवहार्यता, अनुकूलता, जागेचे नियोजन, बहुकार्यात्मक, लवचिकता, शाश्वत

१. परिचय:

परवडणारी घरे हा विषय अत्यंत महत्वाचा आणि भारतासह सर्व जगाचा निकराचा विषय झाला आहे. लोकसंख्या वाढीचे संकट आणि त्या नुसार सोयी सुविधांचे निर्माण आणि नियोजन हे दिवसेंदिवस जिकिरीचे होत चाललेले आहे. अनेक देशांची सरकारे, संस्था, वास्तुविशारद, अभियंते या विषयाशी निगडित काम करतात. प्रधानमंत्री आवास योजने अंतर्गत प्रत्येक गरजू व्यक्तीला परवडणारी घरे मिळावीत असा भारत सरकारचा २०२२ पर्यंतचा संकल्प आहे (सूर्यवंशी, २०१६). हे सगळे प्रयत्न होत

Content

Foreword

Dr. Radhavallabh Tripathi

i

Preface

Professor Hina Zia

ii

Editorial

Dr. S.M Akhtar

iii

Outline of Thought Connecting the Profession of Architecture to Villages

Anand Khatri

ix

ARCHITECTURE IN VILLAGES

Earthen Construction in Countryside: Materials, Techniques, and Stereotypes

Mohd Hasan Sohaib, Aniruddh Tomar & Hiba Khan

3

Loss of Vernacular Architecture in Kusmhi Village

Md Shahroz Alam

9

Diminution of Vernacular Architecture: For and Against

Umme Habiba Beg, Madiha Shahid & Mohd Hasan Sohaib

19

Development of Green Infrastructure for Rural Areas

Poonam Upadhyay

31

Extinction of Vernacular Architecture with Modernization- In Terms of Generating Ethics of Local Architecture

Aftab Alam, Sara Tamkeen & Mahrosh Fatma

39

Earthquake resistant Vernacular Architecture of Kashmir

Aashna Arora & Jyoti Arora

47

Reviving Vernacular by Implementing the Modern Technologies and Green Building Strategies

Dania Irshad, Ilma Nafees, Sameena Parveen

51

Sustainable Development in Indian Villages through Revival of Vernacular Architecture

Ayesha Mathur, Niti Negi

57

Transformation of Building Material and Architectural Layout in Rural Indian Settlement

Case: Raunahi Village

Priyanka Pahuja, Mohd. Afzal Khan

64

“Not A Suppress Village 2030”: Mitathal Tehsil (Bhiwani, Haryana)

Bushra Ali

71

Loss of Vernacular Architecture: Case Study of Nagaland Region

Ruchi, Kusum Choudhary

81

Some Thoughts on the Holistic Development of Villages in India

Dr. Nisar Khan

91

Containing Villages Aabadi Area for Protecting Agriculture

Zoya Kidwai

102

Sustainability in Villages: Interconnectedness of Underlying Processes, Materials and Assets Leading to Inclusive Life – A Case of Pisawa	108
<i>Shreya Teotia, Poorva Singh</i>	
Dynamics of Urban Villages: Mapping the Transformation of Shahberi Village Greater Noida	112
<i>Kamini Singh, Anant Pratap Singh</i>	
Decay of Vernacular Architecture in Rural India	118
<i>Hiba Gul, Aditi Arora</i>	
Understanding the Role of Architects to Meet the Challenges for the Villages of India	123
<i>Amit Kumar Baronia</i>	
ENVIRONMENT IN VILLAGES	
Flood Resilient Architecture for the Disaster Affected Communities of Assam	129
<i>Tanveer Singh Channa, Anshuman Dubey</i>	
Material Mountains; Tracing Transformation Through Extractive Episodes of Himalayan Foothills	140
<i>Ashim Kumar Manna</i>	
The State of Quality of Life in Urban Villages – A Study of Naharpur	146
<i>Chetna Garg, Rekha Bhaskaran</i>	
Built Environment of Indian Villages: A Case Study of Coastal Village of Maharashtra	154
<i>Shraddha Mahore Manjrekar, Prof. (Dr.) Pallavi Sharma, Dr. Poorva Keskar</i>	
Environment & Development Issues Leading to the Extinction and Changes in the Traditionally Built form Typologies of the Aabadi Area of Dujana Village	160
<i>Akshita Nagar, Kaveri Rai</i>	
Rural Tourism and Wetland Conservation	164
<i>Prakriti Goswami</i>	
A Case-Study of Waste Management Project in Villages of Bhojpur, Bihar	168
<i>Samiya Mahwish</i>	
Building Material and Geographies: Mapping the Shrinking ‘Vernacular’ of Rural Bengal	173
<i>Iqtedar Alam</i>	
Regional Cultural Landscapes: Understanding the Villages of Braj	185
<i>Yogesh Yadav</i>	
Impact of Greenfield Development in the Rural Areas of Uttarakhand State	195
<i>Shraddha Bahukhandi</i>	
Solid Waste Management in Dhauni Village, Tarapur Block, Munger	201
<i>Shagufta Khan, Wasiullah</i>	
Rural Expansion and Loss of Rural Imagery a Case of Rural Settlement in Mysore Region	208
<i>Anuradha H R</i>	
Water Stress in Rural Areas of Narmada Middle Sub-Basin due to Mega Industrial Led Infrastructure Projects	214
<i>Yogesh Bhardwaj</i>	

PLANNING AND LEGISLATION IN VILLAGES

The Impact of Rural Planning on Urbanization and Economic Growth; Case Study: Banadkook-Dize village in Taft County (Yazd, Iran) <i>Mobin Asgharnejadtehrani</i>	223
Energy-Efficient Techniques Used in Indian Vernacular Architecture: A Case Study of Jalali, Uttar Pradesh, India <i>Tahura Fatima, Mohammad Osaïd Farooq, Madiha Shahid</i>	237
An Integrated Development of the Village of Nuh, Mewat through Rural Tourism <i>Mohd. Tanveer Khan, Ayla Khan</i>	243
Rural Tourism <i>Anjora Khatri, Akshita Nagar, Manya Jindal</i>	249
Design Based Planning: An Approach to Policy for the Organization of Built-Dujana <i>Anand Khatri, Anjora Khatri</i>	254
Rural Landscapes in Central National Capital Region, India: Transformations in Land Use and Spatial Organization <i>Sadaf Faridi, Faraz Farooq</i>	262
Disaster Resilient Amphibious Community Houses <i>Shuja Rehman, Aftab Alam</i>	270
Transition and Transformation in Traditional Settlement of Kathmandu Valley & Its Impact <i>Anita Tamrakar</i>	281
Transformation and Transition Pattern in Villages of Upper Beas Region <i>Arshi Warsi, Aditi Sandhu</i>	286
Regional Architecture of Kerala - Evolution, Loss, and Mutations Studies of the Sacred and the Mundane <i>Sindhushree R Prasad, Ashfaq K Aliar</i>	299
Urban in Rural: A Critical Appreciation of Rurban Mission <i>Mariya Zama</i>	304
The Impact of Rurban Mission Implementation and Withdrawal: Case of Mohana Village <i>Bushra Saba</i>	307
Co-designing a Framework for Sustainable Rural Development <i>Nitesh Dogne, Prajakta Sonar, Sakshi Godara</i>	313
SOCIO ECONOMICS OF VILLAGES	
Transformation of a Weavers Settlement: A Case Study of Mangalagiri <i>Maneesha Keerthi Kavuri</i>	321
Investigating Urban Livelihood in Fishing Villages of India: Case of Versova Koliwada, Mumbai <i>Shreya Khurana</i>	332
Impact of COVID-19 on Migrant Villagers <i>Vinita Yadav, Deeptanshu Singh</i>	340

Social Capital and Micro Enterprise Development towards Occupational Diversification in Rural Context	344
<i>Jogeswar Mahato, Dr. Manish Kumar Jha</i>	
Mothers of Mewat	348
<i>Abhishek Bhardwaj</i>	
Social Impacts of Transport Infrastructure Projects: Insight of Local Residents	352
<i>Sadia Khanam</i>	
Transportation and Sustainability for Villages & Rural Sector	356
<i>Prof. Alok Ranjan, Priyanka Kumawat</i>	
Conservation of Chorten (Stupa) by community initiative at Gya Village, Ladakh	362
<i>Sheikh Intekhab Alam</i>	
Regulating Migration towards Urban Cities through Rural Development Planning	368
<i>Ameed Inam, Bushra Fatima</i>	
Revisiting Gandhiji's Village Swaraj – A Study of Social, Economic and Environmental Aspects of the NCR	373
<i>Aila Azeem, Himani Chahal, Taha Masoodi</i>	
Street and Built in Pinna Village – A Definition of Agrorban	379
<i>Prof Anand Khatri, Ritika Gupta</i>	
Folk Music and the Spaces in the Settlements: Village and Music Study of Culture through the Planes of River Ganga	385
<i>Pourvi Mishra</i>	
URBAN VILLAGE CHARITABLE TRUST CHARTER	
<i>Introduction</i>	
<i>UVCT Charter</i>	
<i>UVCT Oath</i>	

Built Environment of Indian Villages: A Case Study of Coastal Village of Maharashtra

Shraddha Mahore Manjrekar

Brick School of Architecture, Pune, iitrshraddha@gmail.com

Prof. (Dr.) Pallavi Sharma

Amity School of Architecture and Planning, Gurgaon

Dr. Poorva Keskar

S.M.E.F.'s Brick School of Architecture, Pune

Abstract

The built environment of the villages is characterized by the buildings, streets and the spaces within the buildings. The culture, occupation and life of the villagers remains within these spaces. Organic or human intervention, these spaces represent village life. The traditions, culture of the villages correspond to sustainability principles, and responsiveness towards the environment in a number of aspects. The village housing evolves around the traditional occupations and culture. The occupational activities are integral parts of the overall built environment. There are learnings from rural way of living, and these lessons are worth preserving for sustainability of the resources, culture and people. These characteristics of built environment, culture and traditions must be taken as base for formalizing any plan or policy for rural development. This paper is about a study done in a historical coastal village in Maharashtra. This village is one of the most scenic and ecologically important parts of the Indian Western coast. The built environment is subject to change with the tourism activities happening here because of beaches and ecology and historical character. The threats of ecological degradation and loss of architectural character are realized looking at the developments happening in the other coastal villages. With this concern it has been realized that the base of development can be prepared with the understanding of the original character of the area. This paper documents the learning from this village in terms of environment consciousness, sustainable architecture and lifestyle of people. Author has tried to create a base on which the developments and planning can be done for such kinds of villages.

Keywords: Built environment, Harihareshwar, Indian villages, Rural character, West coast

INTRODUCTION

The 720 km long coast-line of Maharashtra State, commonly known as 'Konkan' has a number of places of historical, cultural and ecological importance. The ecology of this stretch is identified by rich biodiversity (S., 2015) and attraction for researchers and nature lovers. There are landmark examples of island and hill forts and temples in these places that attract tourists. Alibag, Murud – Janjira, Harihareshwar, Srivardhan, Dapoli, Amboli, Sawantwadi, Vengurla, Malvan, Sindhudurg, Vijaydurg, Sindhudurg and Ratnagiri and Raigad districts are the places of pilgrimage, leisure, and heritage and are major attraction of tourist activities in Maharashtra State. At present the whole stretch is rural and has strong character throughout the area.

The mention of the development for this area is evident in the 20 years perspective plan of sustainable tourism in Maharashtra, prepared by Ministry of Tourism & Culture, Market Research Division, Department of Tourism of India (Dalal Mott MacDonald, 2003), the Sahyadri-Konkan corridor project (Anon., 2021), and plans of Maharashtra State Road Development Corporation (MSRDC).

The major differences between this area from the other rural parts of India are its history rich biodiversity, culture and the unique architectural character and independent attitude of the people. The farmers in Konkan live with self-esteem, and generally lead a balanced life. In the period of 2013-18 15,000 farmers have committed suicide in Vidarbha, and Marathwada regions of Maharashtra, but none of these numbers were from Konkan (Upadhyay, 2019).

This paper is based on a study about understanding the relationship between culture and environment, and their impact on the present built environment area and to create an inventory of how future development can be done in harmony with the original character of the area.

CULTURE, OCCUPATION AND BUILT ENVIRONMENT

The culture and built environment elements are interdependent by function. The natural character of the area and site conditions are major factors in generating the design of the built environment. In the case of traditional settlements, they organically evolve within nature. The dependency on nature for their livelihood, and affection of the place seem to be very related to the culture, where people regard and worship nature. The built environment can be considered as an outcome of culture. Once built, it becomes a major factor to shape future generations, as it serves as an active and functional medium for the transmission of norms, customs, and values (Thompson, 1980).

Amos Rapaport in his book "Culture, Architecture, and Design" discusses the relationship between culture, the built environment, and design (Rapaport, 2005). The context of this text seems very relevant in the study area. The primary occupation of the area seems to be a major factor in impacting the built form and built environment of the settlements in Konkan. The author has observed four types of villages in Konkan. One is on the relatively flat terrain where farmers communities live, have large front and back yards in their houses, e.g., Dive Agar and Shrivardhan. The second type is fishermen villages, where the organically developed settlements are seen, these are generally very near to the coast, e.g., Adgaon. The third type is the communities of Hindu priests, who

Tiny Housing: A Future to Better Living Spaces in Pune

Roshni Shethia AQ- 33

Email ID: rosh.shethia20@gmail.com

Faculty Coordinators and Guide Dr. Vaidehi Lavand, Ar. Ramiya Gopal, Ar Girija Indulkar

SMEF's BRICK School of Architecture, Pune, Maharashtra

25th February, 2020

Abstract

Tiny housing is a fairly new concept in India that is yet to get recognized to its full potential. Tiny housing is residential buildings with footprints around 400 square feet containing all spaces but is more compact without any excess space. In the past few years, there has been a considerable shift in population from rural to urban due to growing job opportunities in the cities. Due to the increase in population and urbanization, there have been concerns about the resulting volume of consumption. The paper aimed to address the problem of overconsumption by considering the benefits of initially downsizing to smaller houses that still provide a good quality of life in an urban context. Pune was chosen as an urban city to understand the criteria for the tiny housing committee. Pune is known as the 'Oxford of East' and 'Home for retirees' is home for people of diverse age groups which broadens its horizons for tiny housing. Nevertheless, due to the growing IT Firms, the city promises new job opportunities which come with more accommodation problems, which can be solved with the help of tiny housing. The paper helped me understand how the same amount of space could accommodate the daily lifestyles of all economic groups. The research was conducted through the means of case studies on existing tiny house communities and their locations, conducting surveys online and offline regarding people's view on tiny housing, interviewing experts who are currently involved with tiny housing construction, activity mapping. The paper helped to understand the different age groups that preferred going tiny and changing people's perspectives about going tiny, not just as a forced economic solution but as an informed choice. It helped to understand the authorities that would look after the welfare of such communities and the ideal location for the same. It nevertheless supported the growing urban city to accommodate more people without compromising on health, lifestyle, and standard of living.

Keywords: Tiny house communities, Urban cities, Down-sizing, Economics of tiny housing, User-Friendly, Adaptive Use

Analysis of Open Spaces in High-Rise Buildings in Pune

Akshay Bafna P-05

Email ID: akshaybafna100@gmail.com

Faculty Coordinators and Guide

Ar. Anuradha Wanaskar, Dr. Vaidehi Lavand, Ar. Ramiya Gopalkrishnan

SMEF's BRICK School of Architecture, Pune, Maharashtra

01th May, 2021

Abstract :

Due to rapid urbanization, people tend to migrate towards cities, because of the opportunities and potential it holds. This puts tremendous pressures on cities, to provide for housing to the people within it. High-rise buildings are the most effective solution, for any developing city that faces land shortages. Increasing population, shrinking space and a desire to remain close to the core city, have led to the idea of high-rise building complexes. These high-rise building complexes have helped to provide a home to many on a single piece of land. A challenging problem which arises in this domain is that these building complexes lack to provide livability for the residents due to lack of open spaces. Due to the hectic lifestyle, People are not being able to interact with each other. The issue of social interaction can be addressed with open and community spaces within the structure. This study will be done for different parts of Pune with different cultural, geographical and functional contexts to identify and analyse the open spaces of high-rise residential building complexes. It will mainly focus on comparing the relationship between the housing layouts and spatial openness of some high-rise residential building complex in Pune. Perceptions of the residents on the use of open spaces would be analysed through surveys that will give quantified terms for analysis. This paper aims to identify the relationship between high-rise housing layouts and spatial openness through the collection of data from literary sources and the live case studies. This research paper would help in understanding different approaches, needs and perspectives of residents while designing open spaces for high-rise building complexes.

Keywords:- High-rise buildings, urban open spaces, spatial openness in high-rise.

Container Housing: Study of the economic feasibility of container housing in Pune.

Riddhi Gupta AQ-17

Email ID: riddhig31@gmail.com

Faculty Coordinators and Guide Dr Vaidehi Lavand, Ar. Ramiya Gopalakrishnan

Guide - Ar Ramiya Gopalakrishnan

SMEF's BRICK School of Architecture, Pune, Maharashtra

25th February 2020

Abstract:

The prospect of container housing remains unexplored in India. In countries like Russia, container housing has provided homes to thousands of people. This research paper aims to determine if any kind of container housing scheme would be feasible in an urban context of Pune with a vast palette of user groups. The methodology adopted is surveying the urban population and case studies of the existing container housing to analyze how and if they are viable. This research will prove beneficial in expanding knowledge about the various housing schemes and might be a useful tool in the transition from traditional low-cost housing to container Housing.

Keywords – Container Housing, Affordable, Mass housing, Feasibility, Vast user palette, Container housing schemes.

INTRODUCTION

A shipping container is a reusable transport and storage unit made primarily out of corten steel. It carries several materials like chemicals and fuel across locations and countries by road, rail, and sea. These containers are used in industries like construction, mining, logging, farming, etc. "There are more than 20 million containers around the world, and the world container fleet is growing by 3.9% every year" [1]. This means that almost 65,000 shipping containers are produced in the world every month. "Of those 17 million containers, however, only six million are being used for transport or any other practical usage. That means approximately 11 million shipping containers are unused and are just sitting stagnant all over the place." [2] "A large number of cargo containers are discarded in ports across the globe because of one-way shipments. Reusing a single 40' container up-cycles about 3500kg of steel and saves about 8000 kWh." [3]. The cost of transporting these containers back to the port exceeds the manufacturing cost due to which these containers are abandoned and auctioned off. As shipping containers are built to withstand heavy loads, their cheap and easy acquirement makes them a desirable alternative to traditional construction material. Shipping containers usually come in two sizes - 20x8 ft and 40x8 ft. Even with the size restrictions, several container housing technologies have come up, opening this field to innovation and discoveries.

In India, the lack of awareness about container housing keeps us from exploring a probable solution to the majority of affordable housing problems. In an urban context like that of Pune, finding a decent and affordable residence might be difficult. Various factors lead to the development of slums; one of which is the increasing cost of real estate in Pune. Even with the upcoming affordable housing schemes, for a section of our society, it is unreachable. "Shipping containers in India typically range from Rs 60,000 to Rs 1,00,000 depending on their size. They are built to take on heavy loads and withstand harsh climatic conditions as well. There is already the perfect shape to be repurposed into homes, so a home built out of them is a minimum of 30% cheaper than a same-sized home built in brick and mortar. The structural

Institutional Landscape Design : Impact assessment of tangible and intangible aspects of designed open spaces in Architecture Institute

Rujuta Killedar AQ-25

Email ID: rjutakilledar@gmail.com

Faculty Coordinators and Guide Dr. Vaidehi Lavand, Ar. Ramiya Gopal, Ar. Shraddha Manjrekar

SMEF's BRICK School of Architecture, Pune, Maharashtra

25th February, 2020

Abstract

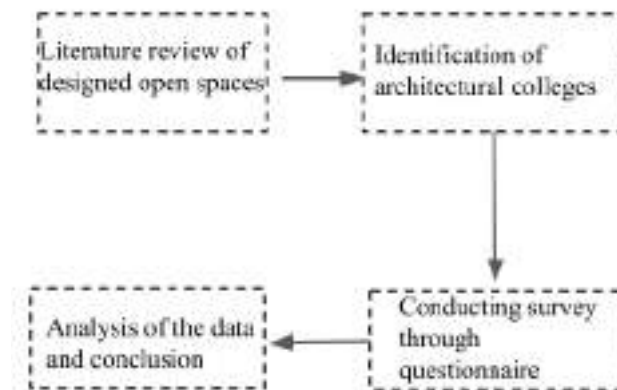
Landscaped areas and designed open spaces play an important role in connecting places on campus. Campuses designed for architectural education need to have open areas as they are the mediums to connect nature and offer an interactive atmosphere for learning. "Technology, online courses, lifelong learning, industry partnerships, and a shift towards problem-based curricula have blurred the lines between city and campus. Campuses are more decentralized than ever before." Jon B. The interactive spaces and courtyards around classrooms play a significant role in stimulating outdoor activities and informal gatherings. Open spaces vary from courtyards, amphitheaters to Kund and parking. The [American College Health Association](#), reported that anxiety (27.8%), depression (20%), sleep difficulties (22.4%), and stress (34.2%) among the students has affected their academic performance. The open spaces not only boost the student's creativity but also help in mental well-being by helping them with stress, restlessness, etc. Students need comfortable, appealing places to soak up the fun, study, gather, have coffee, and catch up with friends and faculty. Having such interactive designed spaces will keep them away from constantly using gadgets and appreciate the natural environment. This research paper focuses on the tangible and intangible aspects of landscape design in architectural campuses. This study is based on a questionnaire survey that was circulated among the students and faculty of architecture, where they were asked about their preferred open area for various functions. This study gives an overview in understanding the preferences and psychological impact of landscape on students and faculty. The existing designed open spaces have been reviewed based on the user activities and satisfaction. This will help architects to design the open spaces in campuses adjacent to classrooms and common areas. Such designed open spaces will enhance peer-to-peer interaction and create a vibrant and cheerful campus life for the students.

Key Words - Designed landscape areas, tangible elements, intangible elements, open spaces, user satisfaction, architectural college

1. Introduction

The landscape plays a key role in connecting people to open spaces and one another. The aesthetic character and spatial design of the campus are the most important factors for young aspirants to choose the university. The open spaces are not only visually important but have a functional role and psychologically connect as well. The three important factors influencing the preferences of the users

SMEF'S Brick School of Architecture Pune



4. Data Collection and Data Analysis

Three colleges in Pune, SMEF's Brick School of Architecture, Aayojan School of Architecture and Design, S.B Patil College of Architecture and Design were studied. S.B Patil is located in Ravet, SMEF's Brick School of Architecture is located in Undri and Aayojan School of Architecture and Design is located in Warvadi(outskirts of Pune). Two user groups- faculties and the students, were identified and interviewed on their preference of designed open spaces.. This research is based on a questionnaire that was circulated among the students and faculty members of all three colleges. In the questionnaire, they were asked about their preferred open space for various functions. The questions cover data related to the elements of open spaces and materials used for designed open spaces in their respective colleges, opinions of students and faculty on various spaces that can be used for both formal and informal activities that take place in an architectural college. Data analysis discusses the identification of the designed open spaces related to their use. This paper does not rank any institute but focuses on designed open spaces.

60 interviews had been taken. According to the questionnaire, 82% prefer semi-open spaces and 14% prefer completely open spaces and 4% prefer completely covered spaces for various activities like playing, discussions, and working. Even though most of the discussions and the assignments to be completed happen in the studio, semi-covered and open spaces are preferred as they open up and refresh the minds and give scope for creativity and enhance the learning capabilities. SMEF's Brick school of Architecture and S.B. Patil College of Architecture and Design have about 20-40% open areas as compared to the enclosed spaces, whereas Aayojan School of Architecture and Design has about 40-60% of open space. A few common design elements in the three colleges are courtyards, amphitheaters, both covered and partially covered seating areas. Some other designed open spaces are kund(stepped courtyard), lawn spaces, water bodies, paved walkways, and semi-covered areas. Various materials like bamboo, timber, permeable paving, stone, brick, steel, and vegetation cover are used in the different designed open spaces. The following figures show the preferences of the elements of the open spaces used by both the user groups for various activities.

Cases Of Eco Resorts In India

Neev Rathod AQ-32

Email ID: neevrathod99@gmail.com

Faculty Coordinators and Guide Dr. Vaidehi Lavand, Ar. Ramiya Gopal

SMEF's BRICK School of Architecture, Pune, Maharashtra

25th February, 2020

Abstract

The travel and tourism industries are one of the largest in India. It is an important tool for economic development as well as creating jobs. While there are many positive aspects, Tourism also puts enormous stress on local land use, increases pollution, there is a loss of natural habitat, and more pressure is put on endangered species. These effects can gradually destroy the environmental resources on which tourism itself depends. Thus careful development of these areas is crucial to preserving environmental quality. Eco resorts, a newly emerging concept can be the solution to this. Eco-resorts can help in reducing the carbon footprint by employing the principles of Environmentally Sustainable Design and help in fighting climate change. Eco Resorts help to minimize the harmful impact that resorts have on the environment. This research paper intends to show the emerging concept of eco-resorts through case studies of Wilderrest Nature Resort, located on the Goa-Karnataka border, and Khem Villas, located near Ranthambore, Rajasthan. This research will further help form guidelines for architects to design and plan sustainable eco-resorts in the future.

Key Words - Eco resort, Design principles, Environment, Sustainability, Ecotourism, Conservation.

1. Introduction

Ecotourism is responsible travel to natural areas that conserves the environment, sustains the wellbeing of the local people, and involves educating the staff as well as the guests (TIES, 2015). Eco-tourism activities are community-based and rural-based and provide an opportunity for the tourist to know about the environmental assets of the rural communities, local traditions, art forms, and ethnic cuisine. Conscious efforts have to be made to preserve the natural beauty and environment while creating infrastructure and facilities for tourists that fit in with the natural surroundings. Eco resorts, a newly emerging concept can be the solution to this. Eco Resort is a destination with accommodation, dining, and entertainment facilities where the central focus is the preservation of Earth's environment. They are designed to have minimal impact on the environment and to be as sustainable as possible in their usage of resources without compromising on guest's comfort and safety and provide them with a nature-based experience (Bromberek, 2009). They also aim to improve the welfare of the local population by supporting local suppliers and workers. Eco Resorts help to minimize the harmful impact that resorts have on the environment. There is a general trend towards a focus on the environment and the amount of customers craving an eco-friendly option is expected to increase in the near future as everyone wants to

Artificial Intelligence in Architecture : Changing patterns in Architectural Practices.

Tungar Manas

Email ID: tungarmanas@gmail.com

Faculty Coordinators and Guide Dr. Vaidehi Lavand, Ar. Ramiya Gopal, Divya Mallavarapu

SMEF's BRICK School of Architecture, Pune, Maharashtra

6th February, 2021

Abstract

Considering the design philosophies and ideas of today's Architects it is important to develop tools that aid and help these designs to see the light of day. To cope up with the digital world knowledge engineering has constantly been helping architecture through multiple platforms like Digital drawing tools, 3-d visualizers, render tools, structural modulators, etc. This has reduced a lot of workload as it has provided us with virtual spaces to shape an architect's imagination and test it to its limits.

This research paper does a comparative study of 3 firms and how they have been affected over the period of time. The main parameters to study were the change in manpower, workload, visualization, firm structure, job profiles and design satisfaction. This paper also includes how Artificial Intelligence has influenced the firms in terms of time spent over design of one project today and how it has changed from the pre-software era. The interviews of 3 firms were conducted in order to understand, analyse and conclude on the same.

This paper helped us understand the need of Artificial Intelligence in architecture as well as its limitations. Not only the existing one's, but also the one's which need to be implemented in order to survive this Machine controlled world.

Keywords - Artificial Intelligence, Machine Learning, Digital Drawing Tools, Modern Design Philosophies, Architect's Existence.

Investigative Study on Quality of Ambient light in Temples: Case Study of Temples in Pune district

Aniket Tayade, Ar. Sudhir Deshpande

SMEF's Brick School of Architecture, Pune, Maharashtra

Email ID: tayadeaniket392@gmail.com

Abstract: The temple architecture includes the design of spaces that compliments to the journey of devotee's self-realization from outer world to the inner soul. Lighting creates a visual drama of patterns, forms, mysterious shadows through different elements. Therefore, the objective of this study is to analyze the quality of ambient light in the temples. It also identifies ambient lighting strategies in the temple design through case studies of Changavateshwara and Sangameshwar Temples. The data is collected through on site observational survey, photographic documentation and informal discussions with visitors. This study is also supported by analytical sketches, technical plans and sections of the temple. The data is analyzed through parameters like types of lights, orientation, intensity of light and incident surfaces. The findings decode the existence and quality of ambient light in the temple.

Keywords: *Devotee, Connect, Ambience, Space, Activity, Soul*

INTRODUCTION

The monumental buildings and sculptures describe their existence in varied aspects. Light is one of such aspects that brings 'Life' in these monumental heritage buildings. Those include, The Pyramids in Egypt, Early Christian and Byzantine Churches, the medieval cathedrals, Islamic Mosques and many more. India is the country known for its religious and cultural beliefs. It is well known for the ancient Hindu '*Hemadpanthi*' architectural style temples.

Lighting plays an important role in temple architecture, because these temples had daylight as the only source of light at that time. The temple is strategically designed as a holy place (Choudhary, 2017). The orientation, volume, space configuration, scale of structure and the proportions of openings, hierarchy of spaces and our psychological transition are the factors that are present in every '*Hemadpanthi*' style of temple. Two types of lighting plays a role in ambience of the temple viz. (i) Natural light during daytime (ii) Artificial lighting by means of '*Mashals*', '*Diyas/oil lamps*, artificial lamps' used after sunset. The natural light brings liveliness into the temple space in a very sub tonal manner whereas the light scheme in the night time creates a spiritual environment inside the temple spaces. The ambience of this light helps in mood creation of the devotee. The passive architectural strategies used in temple help in

creating drama of light such as: *Jali* wall/window patterns, clerestory windows, skylights, double/triple height '*mandapa*' spaces. During the evenings/night time, the oil lamps are placed on the edges of the compound wall / plinth of the temple. During the special occasions / festivals the '*deepstambh*' is completely filled with oil lamps. A single '*diya/oil lamp*' placed next to the deity reflects the holiness of the deity. The incident light on various architectural elements creates an interplay of lighting patterns of light, shades and shadows. There are various techniques through which the light is penetrated inside the temple.

LITERATURE REVIEW

The lights reflected from the walls that create mysterious shadows, controlled light entering through smaller niches/openings, light used as focal point, etc. The natural light is called as significant part of religious symbolism. (Dokras, 2020)

The temple architecture includes the design of spaces that compliments to the journey of devotee's self-realization from outer world to the inner soul. (Mukharji, 2001).

Giedion who was the Swiss art historian pointed out that light induces the sensation in the space in which the space is destroyed by darkness but the space with light is protected. (Mollela, 2002). Lighting also brings aesthetics to the temple in day time and in a night time also. "*More and more, so it seems to me, light is the beautifier of the building.*" -Frank Lloyd Wright

The holy environment of temple makes a positive impact on devotee's mind and body. The psychological and spiritual journey of the devotee begins when it progresses through the spaces of the temple, till it reaches the innermost shrine (womb). It is the innermost sanctum where there is complete darkness. This darkness changes the state of mind of the devotee. The eyes of the devotee become familiar with the darkness and there is no more connect to the worldly thoughts. The connect with the deity ensures a self-realization and personal divinity to the devotee (Mukharji, 2001).

The ambient light in temple assists the devotee in detachment with external physical world and in attachment towards the supreme power i.e. diety.

Politics of Water and Development: Case of Pune

Sharduli Joshi*

Assistant Professor, Brick School Of Architecture, Pune
shardulisp@gmail.com

Abstract

Since early civilizations, rivers and streams are modified by human activities. These rivers and streams nurtured the civilizations to become urban areas. But these urban areas have turned their backs to the urban streams and rivers. It is crucial to better understand and integrate its functioning to urbanization dynamics.

If we narrow down, mismanagement of water resources which has given rise to the 21st century slogan that "Nothing is holy, sacred, or off limits when everything is for sale." This mentality leads us to mercilessly pollute the Earth, discharging industrial waste and sewage water into rivers and lakes.

A 2006 United Nations report stated that "There is enough water for everyone", but that access to it is hampered by mismanagement and corruption (UNWATER, 2006).

Today the struggle for scarce water resources in many places is unavoidable. Many river basins are unable to fulfill the demands of water even for their rivers to reach the sea. Further extraction of water for human use is not possible because limits have been reached and in many cases breached. Greater competition raises questions between states, countries as well as regions over allocation of water, which is benefited, between those upstream and those downstream.

As Politics (the process of decision-making of groups of people, involving the authoritative allocation of e.g. resources), the actors, their interests and interactions determine whether progress is made or hindered, it is important to understand the politics of water and how it impacts on development is the key to improve water and development scenarios.

The paper analyzes the case of politics of water in the city of Pune and the surroundings. It discusses the issues of environmental flow, channelization and several other factors related to development. It concludes with suggesting policy recommendations for afforestation, recycling of waste water, rainwater harvesting, etc. to resolve the issue of water shortage for environmental purposes.

Need and proposal of strategies for retaining a city character: Pune Core city

Ar. Manali Deshmukh¹, Ar. Swati Vaidya²Ar. Sudhir Deshpande³

¹Professor, SMEF's Brick school of Architecture, Pune

²Professor, SMEF's Brick School of Architecture, Pune

³Associate Professor, SMEF's Brick School of Architecture, Pune

Abstract: Infrastructure is an important tool in the hands of the government to generate or capitalize on various development opportunities and also to channelize the growth of its cities.

The societal requirements, infrastructural facilities are in a transitional mode where quantitative aspects are in focus. Indian cities, with their ever growing population demand for such interventions in order to tackle the severe problems of pollution, traffic jams and the deteriorating quality of life within them. The city like Pune is also facing rapid urbanisation after 1995 due to establishment of IT, automobile sector. To mitigate this issue the authorities have designed the smart city strategies to provide a better living to cope up with the situations. The smart city concept also includes heritage conservation but these strategies need to be thought in relation with character of the core city. The criteria like FSI, norms for real estate development should be formulated for the core city separately. The streets in the city and the street side buildings create an impact/character on the observer's mind. These facades remind and reflect the history and lifestyle of that particular native society and the city. This paper strongly states that the concept of 'smart' needs to be thought comprehensively and to be sensitively implemented specially in the core city. This paper aims to focus on the future development of street facades by maintaining the respective regional and architectural characters. The authors suggest some strategies like designing specific norms, design of street scape elements, cultural, heritage preservation methods, application of newer material by keeping old character intact in a city like Pune. This paper discusses the cases of smart cities where designers have implemented smart policies by keeping their regional and cultural value in tact specially in facades. The scope of the study is limited to smart culturally responsive facades for Pune city. This study strongly recommends that the future of the city should be developed with due consideration given to cultural roots. The architecture has to socially sustainable to inspire the next generation as they always learn from past.

1Introduction

Architecture is an expression of culture. The facades give an identity to the buildings & it characterises a city-scape. It tells stories and influences observer's psychology towards relating the same with lifestyle, values and specific disciplines of the society. The impact of the buildings in the city and surrounding built character, facade and open spaces contribute in giving an identity to the city specially the core city. 'Culture' not only relates with the traditional and historical aspects but also grows through knowledge and experience (Kenney, 1994). Culture, therefore, should be analysed comprehensively not only with the values and needs of a group of people but also with the entire "way of life" of that society.

Architecture of the city plays an important role in creating the bridges between human sociology, psychology, anthropology, appearance, visual expression etc (Shayan, 2011). Therefore, it is important to understand the correlation of behavioural, functional and cultural aspects of the people in the city.

Identity is an aspect which is important in all areas including architecture. The generations of current and future ask the questions like " where do we belong? Who

are we? Where are we going?". The answers should be there in a physical environment which includes spaces, buildings, roads and many more. This information is necessary for these generations to develop further with a right and beneficial approach towards the city they live in.

As areas of our towns and cities become increasingly similar, with chain shops and identikit architecture prominent on many urban streets, there is growing recognition that places which retain character and local identity are developing a competitive advantage. The cities be recognised and identified due to these characters. The local authority should be sensitive enough in creating policies, strategies for retaining the city character. There are various cities worldwide like New York, London, Paris which have already implemented these kind of norms and regulations for preserving identity of the city. Otherwise there is a possibility of monotonous architectural development in the city which cannot be suitable to the native lifestyle and habits of the society.

* Corresponding author: k.labadi@ecam-epmi.com

PERMANENCE IN ARCHITECTURE: CONTEXT AND TIME

AGARWAL ADITI*; GUJAR KETAKI#

* M. Arch (CEPT University), Assistant professor, Brick School of Architecture, Pune

M.I.A.D. (CEPT University), Assistant professor, Brick School of Architecture, Pune

Abstract

An expression of art or craft diminishes with changing philosophy over time, but an architectural expression tends to remain. The built form eventually becomes one of the very few representations of previous civilizations that have stood the test of time. Centuries old buildings have lasted, although they were not specifically designed for timelessness. The act of building is not a temporal one, each one is a representation of its time. The quality of remaining unchanged indefinitely or permanence in architecture can be achieved with the use of enduring construction material and sympathetic regard for the surroundings. Buildings outlive generations and as such need to be resourcefully designed to continue to be effective. A conscious use of the local materials, the local technical skills has allowed these buildings to harmonize with the context. Born of the earth, each of these speaks the language of the people and of the place. On the contrary, in Indian urban centers, a large quantum of the architectural expression today is ignorant of its place and time. There is a diminishing reverence to what the place demands and more attention to what we demand of it. This paper explores the connections between a building's context and time to its longevity. It argues that concentrated efforts made towards rootedness to a place and relevance to its time, will lead to significantly bolstering a building's perseverance. It also enquires into longevity through examples spanning different contexts and times. Significant examples of historic buildings of a place are discussed in comparison with contemporary examples of similar locations. Such a comparison will lead to an understanding of ways of adapting traditional knowledge to current needs and their appropriation to the time. The paper seeks to emphasize the importance of contextuality and close connect to time, in extending the life of a building.

Keywords: Context, Indian architecture, longevity, time, traditional, local materials

1. Introduction

India is a country of diversity with vast variation of terrain that affects the culture. Five thousand-year-old epics *Mahabharata* and *Ramayana*, ancient scriptures like the *veda* form a part of the culture. The text of *Vastushastra* explained in the *Atharva-veda* elucidates the design of buildings with respect to the wind direction and sun path, which are the primary concerns of design today. Indus valley was home to one of the oldest civilisations with a mature architectural expression.

Indian architecture has been affected by different religions, settling down of many dynasties of varying origins and migration of different races into the subcontinent. The architecture of each of these is unique. For example, the Buddhists carved out meditation spaces into the mountains for solitude while Hindu temples catered to communal gathering by building *mandapas*, gathering halls, in front of the *garbhagriha*, sanctum. Although each culture had its own strong expression, use of local material, craftsmen and workmanship led to a development of a different style than its origin. As explicitly seen in the case of Indo-saracenic architecture; Persian influenced Mughal buildings in India incorporated indigenous styles which led to a whole new style of architecture, seen across the breadth of the Mughal empire. All dominant civilizations, dynasties wanted to leave behind their mark of power through an awe-inspiring built form. In doing so, they intuitively presumed that their buildings will last forever, would be timeless, leaving an indelible mark on the history of that land. This is not unique for India but has also proliferated in other parts of the world. These historical landmarks have helped us trace back the development over centuries, forming "the great book of the human race. Man's chief means of expressing the various stages of his development whether physical or mental", as stated by Victor Hugo.

An enduring architectural legacy has been created by various influential civilizations in different parts of the world. One such example is that of the Pantheon in Rome, built in 150 AD. The cylindrical form is not only stable but is also representative of the significant advances in building technology at that time. Pozzolana concrete, an innovative Roman building material, made the large scale of the dome possible. Other prominent examples include the Bibliothèque Sainte-Geneviève, Paris built in 1842 AD by Henri Labrouste, uses cast iron columns and arches to support the structure of the building; relieving the massiveness of its exterior aesthetics. The

Dimensions of water scarcity: A tussle between supply and demand

Ar. Sharduli T Joshi

Abstract— Fifty years ago, the population of the world was almost half than today. Fewer calories were consumed, less meat consumption, and thus less water was required to produce food. There was limited pressure imposed on the environment and hence water consumption was also in control.

Today the struggle for scarce water resources in many places is unavoidable. Many river basins are unable to fulfill all the demands of water even for their rivers to reach the sea. Further extraction of water for human use is not possible because limits have been reached and in many cases breached. Basins are effectively “closed,” with no possibility of using more water. The lack of water is thus a cause of worry to produce food for hundreds of millions of people.

When any region suffers from water crowding and have increasing water demands, its first and common most reaction is to tap more water from surface as well as ground by building new hydraulic projects or increase capacity of existing ones.

And so the tussle between supply and demand begins. The objective of the paper is to shed light on driving forces of water scarcity, avoidable and unavoidable aspects, and immediate responses like developing water resources, reallocation between different sectors, conserving water resources, short and long term consequences of the same with respect to developing country like India. The paper will conclude with analysis of demand and supply of water with respect to Indian context and propose strategies for sustainable management of water resources.

Index Terms—Water supply, water demand, water crowding, reallocation, sustainable management

I. INTRODUCTION

The struggle for scarce water resources in many countries today including India is inevitable. Many river basins around the world are unable to fulfill all the demands of water even for their own rivers to reach the sea. Further extraction of water for human use is not possible because limits have been reached and in many cases breached. Several river basins are effectively “closed,” with no possibility of using more water. The shortage of water is thus a cause of concern for production of food for hundreds of millions of people. Greater competition raises questions between states, countries as well as regions over allocation of water, which is benefited, between those upstream and those downstream.

Also, human beings are not the only ones who are using available water for themselves. The aquatic and terrestrial ecosystems are also dependent on fresh water for living. Ecosystem services are fragile and are vanishing due to the way in which we grow food. The climate is changing, affecting every aspect of neighborhoods, economies and ecological

systems. The trend lines shout out that we are not doing the right things. Inequity in the benefits of water use will increase between haves and have-nots to the loss of food production. The pollution and depletion of rivers and groundwater will continue. Also, abundant food grown at the aggregate global level does not mean there is enough food for everyone.

(Molden D., 2007) defined ‘physical water scarcity’ in regions lacking adequate water to fulfil its demands, specified by circumstances as the amount of water used compared to the available water resource ratio surpasses 70%.

(Molden D., 2007) defines two types of water stresses which are as follows:

“Demand-driven water stress: when there is a high usage compared to the availability of water”. (Molden D., 2007). In this situation open basins can accommodate more structures to tap utilizable flows to address increasing demand but after a certain point, a time comes when no more utilizable flow is left in the river basin i.e when the basin is set to be closed. In spite of this, in many cases of closed river basins over allocation, exploitation continues and the water depletion exceeds the utilizable flow which leads to a potentially unsustainable situation

“Population-driven water shortage: when there are many people dependent on the availability of water”. (Molden D., 2007) The rise in population directly affects the consumption of water. This is because even if the demand is increasing the amount of water available naturally does not change but infact goes on reducing day by day. Also, the amount of rainfall received fairly remains the same each year thereby delpeting the water resources with increased consumption. One of the main cause of population explosion is pollution of rivers and lakes which also leads to water scarcity.

The management of river basins is going to be more difficult as these basins are moving towards higher form of water crowding. Well defined water policies, water rights, management and governance are required to deal with these closed or closing basins.

II. DRIVING FORCES

According to Figure 1, the driving forces of water scarcity (being the “imbalance between water supply and water demand”) comprises of mainly population growth, migration, land use changes, climate change, and changes in economic activities leading to changes in societal needs. These are significant drivers, which exert direct stress by altering water

Learning and Practice as Pedagogy for Architecture

Shraddha Mahore Manjrekar, Manali Deshmukh
Associate Professors, Brick School of Architecture, Pune, India

International Journal of Research in Civil Engineering, Architecture & Design
Volume 5, Issue 1, January-March, 2017, pp. 58-67
ISSN Online: 2347-2855, Print: 2347-8284, DOA: 17022017
© IASTER 2017, www.iaster.com



ABSTRACT

India has witnessed rich tradition of Architecture and Planning since the time of Indus Valley civilization. Architecture as a profession has been sustained since then in the nation, and there is much scope for future generations too. The training of architecture as professional education had also undergone varied phases of informal and formal type of education systems. Authors have studied scenario of development of architecture and architectural education in India. They observed the changes happening in the society and architectural response as a solution and symbolic evidence of the time. This paper highlights on the theories and processes of training that are applicable for architectural education. It also highlights the experimented and possible options of adopting these theories in present day scenario.

Keywords: Architectural Education, Architectural Practices, Pedagogy Contemporary Issues, Teaching Methodology.

1. INTRODUCTION

Theory and practice of teaching the professional courses has been perceived in different ways from time to time. History of India and even the present India has evidences that the skill based professions had been transferred from the previous generations to the next generations by hands on experience, practice and training. Regarding Architecture and Planning, in India history of architecture sets the best examples of architectural landmarks and town planning. These developments had happened even without formal schools of Architecture and Planning. India has rich history of culture and civilization. However the formal education of architecture and planning profession had started only since last century. Country witnessed varied conditions of changing economies, and urbanization. In each of the decades there was a distinct demand from same profession, which in turn reflected in the education system. This paper identifies the trends of education and knowledge of architecture and planning for last four decades.

2. BACKGROUND

The tradition of documenting 'History' had started in India in the second half of eighteenth century. Though the nation has rich history of Art, architecture and planning, the written reference material had come into existence when country had rule of Britishers. Sir William Jones (1746-1794) who was a British Orientalist and jurist had put foundation of education system in India[1]. He founded the Asiatic Society of Bengal to encourage oriental studies in 1784 .

Education in India was further influenced by "English Education Act 1835"². This act was designed by a legislative Act of the Council of India in 1835 giving effect to a decision in 1835 by Lord William Bentinck, the Governor-General of British India, to reallocate funds of East India Company on promotion and education and literature in India.

Study of Sustainability Practices Ingrained in Indian Culture

Shraddha Mahore Manjrekar

Abstract—Culture has been an integral part of the civilizations in the world. Architecture is artistic expression of culture and civilization in material form of buildings and urban landscape. Author has observed and thought about the relation of Indian traditional cultural beliefs and their relation to the sustainable environment. There are some unwritten norms regarding the use of resources and environment in Indian continent, that have been commonly accepted by the people for building houses and settlements since the Vedic period. The research has been done on the chanting and prayers done in a number of houses and temples in Madhya Pradesh and Maharashtra. After doing some research, it was also found that resource assessment had also been done for entire country, and idea of conservation of these resources was imbibed in the common people by means of some traditions, customs and beliefs. The sensitization and gratefulness about natural resources has been observed in the major beliefs and customs. This paper describes about few of such beliefs and customs that are directly linked with the built environment and landscape.

Keywords—Indian culture, sacred groves, sustainability in built environment, sustainability practices

I. INTRODUCTION

Traditional Indian built environment has its deep association with culture. The cities and villages have some public spaces which are culturally important parts of lifestyle. On one side these spaces are occupied during certain calendar time and on other side these spaces follow some codes that have not been mentioned in a single code book, but are part of a number of beliefs and customs and also day to day livelihood requirements. Examples of these spaces are river ghats, holy forests, sacred groves, mountains, spaces around some distinguished trees, step wells water-bodies, temple tanks etc. These spaces are not just spaces, but are derived from deeply grounded research, done on climate, natural resources, and their sustainability in long run.

II. GLIMPSES OF NATURAL RESOURCE ASSESSMENT DONE IN ANCIENT INDIA

India is a rich country for natural resources. Indian national song ‘Vande Mataram’[1] has mention of the resourcefulness of the country through phrase “Sujalam Suphalam, Malayaja Sheetalam” . Word to word translation of this phrase is given

Author is an architect and planner by qualification, and has been working for sustainable built environment. She has knowledge of the various rating systems that are practiced Globally, and hands on experience of facilitation for rating and implementation of sustainability norms in construction projects. At present she is teaching in Brick School of Architecture and Brick School of Interior Designing, in Pune as an Associate Professor. In this paper she has given a thought on some Shlokas that are chanted in the morning and their relevance with sustainability and architecture.

here- **Sujalam** means Ample of potable water, **Sufalam** means Fertile Land, and **Malayaj Sheetalam** means hilly, picturesque with fresh and oxygen rich air quality.”

Security and sustainability becomes prime concern after realizing value of resources. It was well understood by the people of Ancient India that if the life of settlement is dependent on some natural resource, the next generations will also need it in the same form and quality. Perhaps this would have been the reason that the natural resources and ecosystem have been regarded in many forms and terminologies.

Example of Shiva, fits suitable for this topic. Shiva is the prime deity of all the Indians, and is also known as “Pashupatinath”[2]. Fragmentation of the three words in this name lies in three words, i.e., Pashu(Animals), Pati (Plants), and Nath (Owner, protector or God), hence Pashupatinath has been regarded as the Protector of whole ecosystem including organisms and plants.

Kailasa, a part of Himalaya has been considered as the abode of Lord Shiva. Mansarovar lake (water body) is also of religious importance. Mythological belief is to give importance to the land, water, plants, and animals.

There are many instances where the importance of nature, resources, ecology have been associated with some customs, traditions, culture or beliefs. The further research on these instances indicates that this association is directly or indirectly linked with the health and sustainability of the ecosystem too. Any rich natural resource which was understood as valuable resource and considered to be preserved for consecutive next generations with the same quality, had been considered as holy and auspicious or connected with something on which common people have deep trust.

The early morning prayer of Hindus is called Pratah Smaran and part of it states

“Samudrasane devi, Parvata Stanya Mandite, Vishnupatnim Namastubhyam Padasparsham Khshamasvame”[3]

Sanskrit script of this Shloka is given in figure 1.

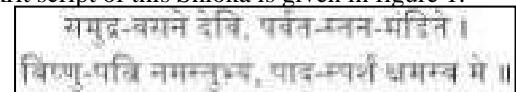


Fig. 1 Sanskrit script of morning prayer for motherland

This means “Oh Motherland Bharatmata, you are wearing the cloths of Samudra, i.e, ocean, you feed us by pure and mineral rich water flowing in auspicious rivers. These waters that originate from the mountains (Sahyadri and Vindhya) which are like your breasts. Oh wife of Vishu (Laxmi- goddess of wealth), please accept my regards, and forgive me, because even after knowing that you are holy, I start my day by keeping my feet on you”. Figure 2 represents an image of Bharatmata. It

Public Architecture and Role of Local Contractors in Late Nineteenth Century Case of Poona

Dr. Vaidehi Lavand

Associate professor in Dr. D.Y. Patil College of Architecture Akurdi Pune India, PhD from the Department of Architecture from dell'Universita degli Study di Palermo, Italy

Abstract: *Role of local engineers is largely neglected in the context of late nineteenth century due to lack of archival resources and primary sources. Though the Royal engineers were key persons worked in several parts of India they implemented their western ideas in collaboration with local engineers and masons at grass root level in the process of establishing British rule in India. Diverse projects from basic architectural interventions, railway, bridges, basic infrastructure, and services they coordinated in India. They worked on European models in local context with successful and unsuccessful efforts. [1] Till early nineteenth century simple and function based structures were built for residential and religious purposes. Engineers were experimenting and modifying European models considering local climatic conditions. From mid nineteenth century building construction activity received more attention as vocabulary of Raj. Which kept on changing adapting local climate, material and incorporation of local traditional art forms in architecture. Vasudev Bapuji Kanitkar worked with Charles Mant, Chishom [2], Trubshaw [3] and Walter Ducat in towns like Baroda, Bombay, and Poona as Indian local contractor. He was nominated as Rao Bahadur by British government for his important role in construction activity in Deccan. [4] Laxmi vilas Palace in Baroda, Secretariat Building, High court in Bombay and Reay or Phule market Poona are some of his major contributions in architectural development under Bombay Presidency as an Indian local contractor. His self executed projects in Poona left his mark as significant designer and engineer in late nineteenth century. Educational, official, Public, and domestic buildings show his advancement from local contractor to designer with his intricacy of work. His influences originated from the earlier work experiences of varied projects amalgamated with local traditional workmanship lead into the development of style could be named as local Indo-Saracenic architecture or in few cases local Indo-Neo Gothic architecture. This could be perceived in his own designs executed in Poona such as Fergusson College, Anandashram [5], Sangamashram [6] and Pune Nagar Vachan Mandir or Poona Native Library [7] and so on. His contribution as a local contractor and designer working in collaboration with Royal Engineers and local social reformists like Bhandarkar [8] and Apaté [9] is underlined in the further discourse. Main focus is on his role in the development of architectural vocabulary in late nineteenth century Poona which is quite neglected in the pages of architectural history of Poona.*

Keywords: Local contractors, Nineteenth Century Architecture, Royal Engineers, Vasudev Kanitkar, Anandashram, Sangamashram, Reay Market

1. Introduction

It is important to know what was the background of engineering and architectural education in Indian context. How the western knowledge perpetuated in Indian soil and reached to royal engineers and local contractors. The image and vision of British officers had in their mind tried to manifest in a real sense could be termed as "Indian colonial Public landscapes". There are several evaluations about the works shaped by royal engineers during British reign in India. Perhaps the criticism was quite negative from the point of view of architects and artists like J.L. Kipling during late nineteenth century. Indeed these royal engineers right from establishment of East India Company have helped to build British India. They were the key persons to handle local engineers, labor and several local communities in the process of building British sovereign. Sandes call these royal engineers, as "Excellent products of Addiscombe" [10] though this sounds a superfluous glorification of the ruling agent to some extent probably was quite a datum from ruler's point of view. Right from presidency towns, important trading towns, princely states, harbors to smaller towns the traces of their works could be seen at various levels in numerous types of tangibles in 19th century. Their intervention could be observed at various levels such as roads, bridges and railways to connecting towns for vigorous transportation and command on regions, services such as drainage, water supply, and government structures such as offices, hospitals, GPOs, mint, Railway stations, markets around us as a important architectural layer in 19th century.

Western and eastern scholars while writing about this specific period consider it as early modern period in Indian context. Many western concepts reached Indian subcontinent via these agents.

Standardization in the colonial educational patterns tried to inculcate in various ways in local engineers. They followed western patterns in larger context in all parts of India supported colonial construction activities. Numerous articles published in *Professional Papers on Indian Engineering* by Indian local contractors such as Teekaram who worked majorly in Lucknow, Babu Shumbhoo Dass works could be seen in Bahawalpur Pakistan, Rai Bahadur Kunhya Lal's and Sir Ganga Ram's [11] legendary projects in Lahore Pakistan, Muncherjee Beyzunjee at Hyderabad under Nizam reign are great resources indicating their contribution in architectural vocabulary in this period. Researchers such as Preeti Chopra states extraordinary works of Murzbaan in Mumbai in her book. On the other hand local engineers such as Narso Ramchandra, Vasudev Kanitkar from Poona and some other towns in Deccan were never got recognized and documented extensively for their contributions in the development of architectural character. These are important unexplored figures in the context of Poona. Their names and associations transiently appear in the history of Poona. This paper seeks to review account of who built Poona in colonial context on ground. Further discourse tries to detail out development of Vasudev Bapuji Kanitkar as an engineer and designer. Perhaps lack of resources and primary sources related to his own opinions for his projects he executed may

Volume 6 Issue 11, November 2017

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

TITLE
**PUBLIC ARCHITECTURE AND ROLE OF LOCAL CONTRACTORS IN
LATE NINETEENTH CENTURY CASE OF POONA**

Author

Ar. Vaidehi Lavand

Associate professor in Minerva College of Architecture Talegaon Pune India, Pursuing PhD
from the Department of Architecture from dell'Universita degli Study di Palermo, Italy
Email address: vaidehi.lavand@gmail.com

Abstract

Role of local engineers is largely neglected in the context of late nineteenth century due to lack of archival resources and primary sources. Though the Royal engineers were key persons worked in several parts of India they implemented their western ideas in collaboration with local engineers and masons at grass root level in the process of establishing British rule in India. Diverse projects from basic architectural interventions, railway, bridges, basic infrastructure, and services they coordinated in India. They worked on European models in local context with successful and unsuccessful efforts.¹ Till early nineteenth century simple and function based structures were built for residential and religious purposes. Engineers were experimenting and modifying European models considering local climatic conditions. From mid nineteenth century building construction activity received more attention as vocabulary of *Raj*. Which kept on changing adapting local climate, material and incorporation of local traditional art forms in architecture. Vasudev Bapuji Kanitkar worked with Charles Mant, Chishom², Trubshaw³ and Walter Ducat in towns like Baroda, Bombay, and Poona as Indian local contractor. He was nominated as *Rao Bahadur* by British government for his important role in construction activity in Deccan.⁴ Laxmi vilas Palace in Baroda, Secretariat Building, High court in Bombay and Reay or Phule market Poona are some of his major contributions in architectural development under Bombay Presidency as an Indian local contractor. His self executed projects in Poona left his mark as significant designer and engineer in late nineteenth century. Educational, official, Public, and domestic buildings show his advancement from local contractor to designer with his intricacy of work. His influences originated from the earlier work experiences of varied projects amalgamated with local traditional workmanship lead into the development of style could be named as local Indo-Saracenic architecture or in few cases local Indo-Neo Gothic architecture. This could be perceived in his own designs executed in Poona such as Fergusson College, Anandashram⁵, Sangamashram⁶ and *Pune Nagar Vachan Mandir* or Poona Native Library⁷ and so on. His contribution as a local contractor and designer working in collaboration with Royal Engineers and local social reformists like Bhandarkar⁸ and Apaté⁹ is underlined in the further discourse. Main focus is on his role in the development of architectural vocabulary in late nineteenth century Poona which is quite neglected in the pages of architectural history of Poona.

Panel construction systems in Prefabricated structures: A smart way for Affordable Housing

Dr. Alka Kote¹, Ar. Sudhir Deshpande²

¹Professor in Civil Engineering, Dr. D.Y. Patil Institute of Technology, Pimpri, Pune

²Associate Professor, SMEF's Brick School of Architecture, Pune

Abstract. There is a need of a new adoption for a measurable change in the affordable housing. *Prefabrication* mechanism can be a real gear in especially for mass housing sector in developing countries like India. The study aims to introduce and gain more knowledge about prefabricated structures. The research discusses the useful qualities of prefabricated structures for affordable housing. The scope of the research is limited to various panel construction technologies in *prefabricated structures*. It explains the mechanisms & materials with merits of respective panel prefabrication technology. This research further analyses and compares *prefabricated structures* with conventional buildings on the basis of some defined parameters from qualitative literature. This study supports & recommends prefabricated panel technologies in the affordable mass housing to earn basic right of living *i.e.* affordable shelter for deprived part of the society in a smart way.

Keywords : *Prefabrication, panel, smart, affordable, housing*

1 Introduction

1.1 The concept of Prefabricated Structures

Prefabricated structures are pre-engineered buildings. A prefabricated structure encompasses several different types of structures such as industrial, commercial, institutional & now residential also. Technically, any home that has sections of the structure built in a factory and then assembled on site can fall under the 'prefab' designation. (Paudel et.al, 2016). The adoption of prefabricated system depends upon type and function of a space. Prefabrication system involves fabrication, assembling, transportation and erection processes. Generally, masonry wall is replaced with framed light gauge panels and deck slabs as floors. The structural composite combinations can be worked out on site as per requirement. Prefabricated components require firm foundation of civil work on site. Therefore, these components can be fabricated in parallel with on site civil work. It results in overall time and cost saving of the project. Prefabricated structures involve 3 major components as floor, wall and column. These can be assembled by bolted connections which could be effective in earthquake situations. Flexible connections offer the scope for alterations inside the structure.

1.2 Need and Significance of the study

The world economy is developing at a fast pace. In deprived countries like Africa, the authorities have already started the construction practice with prefabricated buildings. In this competitive world, no countries want to be backward and less developed than any other. The countries which possess a great population are facing the challenge of providing shelter

to all. Government of India also declared various schemes under Housing for all 2022. Therefore, it is important to have future growth with sustainable practices & technologies.

Considering the above scenario Prefabrication technology can be a great tool for having shelters at a rapid rate. India needs more than 50 million houses by the year 2022 and also there are more than 90 smart cities being planned. To achieve such a large scale in a short time, industry experts point out that offsite construction and pre-fabricated structures, will play an important role. A prefab structure reduces construction cost, manpower cost, material cost, water consumption and labour cost significantly (Karthikeyan et.al, 2018). The prefabricated structural components can be standardized and customized. It includes a definite stages and methods in construction schedule. There are current projects in India which are built 20 floors high using paneling prefabrication techniques.

Although such offsite prefabrication technologies are at a nascent stage in the Indian market, the demand for them is gaining momentum. This technology was developed in European countries at the time of industrial revolution. But when the world faced the housing shortage then these technologies implemented for housing sector majorly. The experts suggested this technology as an alternative to conventional construction. Stefan et al (1990) stated that the production of prefabricated housing under controlled conditions using mass production technology and employing a generally semi-skilled workforce would result in a product less expensive to that of conventional construction. The rates of material in conventional construction have risen from the last several years. Jain (2012) explained that how the construction cost in India is increasing at around 50 per cent over the average

* Corresponding author: k.labadi@ecam-epmi.com

Study of the concept of ‘Green Buildings’: Practices from the past and its applicability today

Pradnya Patki¹, Anjali Rasane², Sudhir Deshpande^{3,*}

¹Sinhgad College of Architecture, Pune, India

²Sinhgad College of Architecture, Pune, India

³Brick School of Architecture, Pune, India

*Corresponding author: pradnyanesarikar.scoa@sinhgad.edu

Abstract: The paper aims at understanding green building and its interpretation over the years. The objectives are to study green building, to find similarities and differences between different terminologies. The methods used are to summarize understanding from literature review and case examples; to study the similarities between old cultural practices related to climate and new concepts; to understand way of living in the past, needs and today’s fast pace changing lifestyle.

Keywords: *Climate, Green, interpretation, lifestyle, practices.*

1. Introduction

In today’s world, there is a trend of putting old things in a new shoe. Currently in architecture and civil industry, experts and philosophers are talking about green architecture very frequently. Remaining close to nature is an old concept. It is also traditionally bound in various countries with their respective lifestyles.

Today’s Architecture faces a dilemma; adopting a modern lifestyle, urbanization and absorbing westernized concepts or appreciating traditional values and leading a more sustainable and green or zero waste lifestyle. With the global warming looming as a constant threat we need to achieve a golden mean between the two.

Building industry plays a vital role in the economics of a nation, but on the other hand has a significant impact on the environment. Due to its large scale, building industry, is a major user of energy, materials, resources such as water and a great polluter too. Thus a few people thinking differently than the ongoing trend set an example for many to follow.

The aim of paper is to understand the meaning of concepts that are close to green building and its interpretation over the years. The objectives are to study the definition of green through literature review; to find similarities and differences between different terminologies close to green—do they lead to the same thing and how.

2. Literature review

For the past few years, the word ‘Green’ is increasingly in the limelight in the building industry. Many organizations have defined ‘Green buildings’ as sustainable, climate responsive, vernacular, net zero, smart, renewable, low embodied energy, low carbon,

etc. The concepts that are expressed already exist in the Indian lifestyle for several centuries. The Intergovernmental Panel on Climate Change (IPCC) has identified Building sector as one of the largest energy consuming and carbon emitting sector, thus having the larger opportunity or potential to tap the energy conservation and reduce on the carbon emission leading to substantial economic benefits (IPCC, 2007).

2.1 Existing mechanisms or tools functioning presently in India

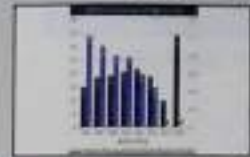
There are measurement tools such as rating certifications which define the greenness of a building. The present rating systems in India are National building Code (NBC), GRIHA, Indian green building Council (IGBC), Energy Conservation Building Code (ECBC/BEE). These rating systems definitely provide a guideline to achieve the greenness goal, but certain aspects of lifestyle inclusion, innovation are considered in a very superficial manner. The teachings which are already with us from traditions are being reframed in different words (in a packaged/ glamorized way) today. But we must admit that this reframing has provided us with measurable parameters.

Contents

JIA IS REFEREED JOURNAL
ISSN-0019-4913

REGISTERED UNDER SOCIETIES REGISTRATION ACT, XXI OF 1860
JOURNAL OF THE INDIAN INSTITUTE OF ARCHITECTS
VOL-84 ISSUE 01 - JANUARY 2019

- 4 Editorial - Ar Anand Palaye
- 5 President's Message - Ar Divya Kush
- 6 Logo Competition Launch - UNESCO-UIA World Capital of Architecture
- 8 UIA International Forum on Tourism in Historic Cities at BAKU
- 9 UIA-IIA Architects Mahakumbh Lucknow
- 16 Proposed Curriculum for Architectural Design
- Ar. M. Pratap Rao
- 20 Defects and Maintenance in Residential Apartment Buildings
- Dr. Anurag Kashyap & Ar. Rahul Chutake
- 25 JIA Subscription Form
- 26 Impact of Transition in Culture & Change in Behavioral Expression
- Ar. Vijay B. Sambrekar & Dr. Suresh V. Ranade
- 31 Socio-Ecological Urban Systems: Planning for Resilience
- Ar. Aloknananda Banerjee Mukherje & Ar. Suchandra Bardhan
- 37 IIA Student Membership Form
- 38 Bringing flexibility in design of affordable house prototypes
- Prof Dr Alka Sunil Kote & Ar. Sudhir Ramesh Deshpande
- 43 29th JK AYA Entry Form
- 44 Re-Imagining the Development of Inner city: A case study of Aurangabad
- Ar. Karansingh A Thakur
- 52 A Paradigm of Modern Living
- Ar. Jagdish B. Karamchandani



ALL RIGHTS RESERVED 2006. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, photocopying, recording or any information storage or retrieval system without permission in writing from THE INDIAN INSTITUTE OF ARCHITECTS.

Only materials accompanied by stamped and self-addressed envelopes can be returned. No responsibility is taken for damage or safe return by the Editor of JIA. The Editor of the THE INDIAN INSTITUTE OF ARCHITECTS takes no responsibility for author's opinion expressed in the signed articles.

Printed & Published by Ar Anand Palaye on behalf of The Indian Institute of Architects and printed by Arihant Digiprint, Unit Nos. 1-2, Bussa Industrial Estate, Hanuman Lane, Near to Peninsula Corporate Park, Lower Parel, Mumbai - 400 013 and Published at The Indian Institute of Architects, Prospect Chambers Annex, 5th Floor, Dr D N Road, Fort, Mumbai - 400 001.

Tel: +91 22 22046972/22838491/22884805 Fax: +91 22 22832516

Email: iiapublication@gmail.com / iiaho1214@gmail.com

Website: www.indianinstituteofarchitects.com

Editor: Ar Divya Kush R.N.I. No.9469/57

Email: divyakush@yahoo.co.in

Printer's Email: arihantdigiprint.offhet@gmail.com

IIA OFFICE BEARERS 2015-2017

Ar Divya Kush	- President
Ar Prakash Deshmukh	- Imm Past President
Ar Vilas V Avachat	- Vice President
Ar Amogh Kumar Gupta	- Jr Vice President
Ar Sunil R. Degwekar	- Hon Treasurer
Ar C. R. Roju	- JI Hon Secretary
Ar Lalichan Zacharias	- JI Hon Secretary
Ar Anand Palaye	- Chairman - Publication Board & Executive Editor, JIA

Bringing flexibility in design of affordable house prototypes for Pune city

Prof Dr Alka Sunil Kote



Dr Alka Sunil Kote is a Professor in Civil Engineering at Dr D Y Patil Institute of Technology, Pimpri, Pune. She has 27 years experience in teaching and 1 year industrial experience. She completed PhD from Indian Institute of Technology Bombay, Masters in Water Resources Engineering from Wajchand College of Engineering, Sangli, Maharashtra and Bachelors in Civil Engineering from Goa College of Engineering, Farmagudi, Goa.

She is associated with six professional bodies viz. Indian Society for Technical Education (ISTE), New Delhi, Institution of Engineers IEI (India), Kolkata, Indian Society for Hydraulics (ISH), Pune, Indian Water Resources Society (IWRS), Raichur, Indian Water Works Association (IWWA), Mumbai and Indian Society of Geomatics (ISG), Ahmedabad.

She has 51 Publications in National & International Journals & Conferences. She has guided 25 undergraduate, 13 postgraduate students and 6 are pursuing PhD under her guidance in Research Centres at DIT, Pimpri and BNCA College of Architecture affiliated to Savitribai Phule Pune University (SPPU). She is a reviewer of Journal of Hydrologic Engineering, The American Society of Civil Engineers, United States of America.

She is awarded Department of Irrigation Prize, Ministry of Water Resource, Government of India in 25th Indian Engineering Congress at Cochin in 2010. She was a member Board of Studies in Civil Engineering, SPPU. She received 13 TA-Jodha grants under Research Projects, AICTE-MODROBS schemes and for attending International Conference in Malaysia. She is involved in testing & consultancy work in Civil Engineering. She is a review expert for Maharashtra Public Service Commission Examination. She has been a resource person in various short term training programs at Indian Institute of Technology Bombay, Government College of Engineering, Aurangabad, and D Y Patil College of Engineering, Akurdi, Pune.

alkakote26@gmail.com

Ar. Sudhir Ramesh Deshpande



Ar. Sudhir R. Deshpande, is an architect and academician. He has more than 30 years of professional experience & 7 years of teaching experience. Previously he has worked in reputed firms like Vascon Engineers, Dar Al Handash Group with capacity of senior architect. Presently he is associated as a senior architect with K&G architects, Pune.

He did Masters in Construction Management & Bachelor of Architecture from D.Y. Patil college of Architecture, University of Pune. He is presently working as an associate professor at SMEP's Brick School of Architecture, Pune. He was previously associated with Sinhgad college of Architecture, Pune & Vidya Pratishthan's School of Architecture, Baramati. He is PhD scholar, at Dr. Bhanuben Nanavati College of Architecture - BNCA, PhD Center affiliated to Savitribai Phule Pune University- SPPU.

ard.sukhrup@gmail.com

ABSTRACT

The capability to adapt, to change or accommodate change is a basic and fundamental requisite for the future of city. The traditional design practice for housing is challenging in an uncertain changing context. Currently, Pune is growing city and demanding flexible affordable housing. It is due to rapid rise in population and migration of people from varied and distinct cultural backgrounds. In this paper the concept of flexibility is discussed and examined from the theoretical as well as practical point of view. This study also identifies the addressees of flexible design viz. architectural layout, structural systems, service spaces and flexible interior furnishing. This research suggests strategies like addition-deletion, neutralization and joining-segregation that ensure both the adaptability of the space in response to changing usage and affordability.

Key Words: Flexibility, affordability, space, neutralization, usage.

1. Introduction

The capability to adapt, to change or accommodate change is a basic and fundamental requisite for the future of city. The traditional design practice for housing is challenging in an uncertain changing context. A process of area optimization is critical in a rigid design. Therefore, flexibility

concept is introduced all over the world. It is very important to introduce innovative concepts in design to create flexible physical environment (Blackman, 2003). Flexibility is the ability of a system to convert or modify built or open elements as per need of the user (Celluci, 2015). It provides an effective alternative to psychological perceptions of the user. (Klaufus, 2000). The study of sociological pattern helps

Built And Un-built Interface

Ar. Anjali Rasane
Sinhgad College of Architecture
SPPU
Pune, India
anjalirasane@sinhgad.edu

Ar. Pradnya Patki
Sinhgad College of Architecture
SPPU
Pune, India
pradnyanesarikar.scoa@sinhgad.edu

Ar. Sudhir Deshpande
SMEF's Brick School of Architecture
SPPU
Pune, India
srd.sukhrup@gmail.com

Abstract— Connecting with Nature is the basic instinctive need of any human; but at the same time shelter too is a human necessity. First is a psychological need where as the other being more of a physical nature. A house or an enclosure of any nature for that matter has to cater to both the needs. One should be able to enjoy open spaces and the natural environment, without any compromise with a protective shelter with modern amenities. The connection with outdoor provides a continual changing scene which intrigues the user. A cutoff with the outdoors i.e. Nature, stalls the development of an individual creating a very dull and lifeless atmosphere. The ever rising heights of today's structures makes necessary to cater to this need and consider "the outdoor" from the concept stage itself. Outdoors is not always physically out of the structure; it can be a connect to the outside from indoors. The aim is to explore the various built and un-built interfaces in a building. The objectives are to define the edge of space, to establish various ways/ parameters of connections between indoors and outdoors, to understand the impact of various elements on the quality of space, to study the functional connect, visual connect, transition from indoor to outdoor, complementary spaces in building that connect indoor to outdoor. Hypothesis- Connection between the outdoor natural environment and indoor spaces enhances the experiential quality of indoor space. Method- Book case studies, observation, pictorial documentation. Proposed outcome is to provide a ready reckoner on means to enhance a connection between indoors and outdoors.

Keywords—indoors, outdoors, connection, space, experiential quality, natural environment

I. INTRODUCTION

Space refers to the atmosphere, distance, or expansion that can extend vertically, horizontally and in- depth. Space need not be defined by an enclosure of walls and roof, but it can be outlined by the presence of any element that provides a sense of enclosure; e.g. area beneath a tree also provides a sense of enclosure though tree being a single element. Space need not be measurable every time. Space quality can be experienced. Space can be modified/ designed for a desired experience and rest of the elements/ *tatvas* have its own properties. All other *tatvas* can be felt in some sense of touch, smell etc.

Humans spend most of its time indoors either in their houses, workplaces or educational buildings. A pleasant environment in proximity to nature can enhance the living or working conditions in a positive way. Habitable Spaces can be indoors and outdoors,

but there is a very fine line/ edge that define those. A mean balance between both entities is to be sought. Though we can physically define indoor and outdoor spaces separately, they have a considerable effect on each other and cannot be treated as individual entities.

A. Significance of topic

There are many specialized consultants for interiors, landscape, façade design, etc., which increases the architect's responsibility even more to coordinate and seamlessly bind the design. This topic tries to bring in awareness in architects to initiate this process.

II. LITERATURE REVIEW

Getting close to nature is an underlying agenda while designing contemporary spaces. A meaningful architecture creates a bridge between internal & external environment directly or indirectly. The literature selected supports the need of the connection between indoor & outdoor. It also, takes into consideration the mental health of users simultaneously.

Saifi (2013) defined open spaces as 'that can be considered a body or material, while the social relations, or well-being, are the soul'- both of them reinforce each other. It is very important to have a strong connection, i.e. physical as well as visual with functional built mass. We do not just 'exist' within a physical environment but we interact with it and derive important meaning from it (Altman 1993). User psychology gets positively influenced when the edge element between inner & outer environment gets designed effectively.

Saraswat (2015) stated that the usage of un-built spaces may be planned, incidental, or ancillary. They also act as climatic aids by regulating the micro-climate through differential heating and cooling, as well as transitional spaces between two built forms. Un-built space is an extension of open space which aids the function of built spaces. Comprehensively, it helps to connect internal environment with external.

UNDERSTANDING HERITAGE POTENTIAL OF SASWAD, “A HISTORIC MEDIEVAL TOWN OF DECCAN”

Dr. Vaidehi Lavand

Associate professor and Vice Principal in Dr. D.Y. Patil College of Architecture Akurdi Pune, India

Vaidehi.lavand@gmail.com

Abstract :

Further discourse attempts to identify heritage potential of town, along with that it investigates how this character could be protected in the context of changing time. First part of the research paper will cover the origin and development of a historic town of Saswad. In second part methodology developed to rediscover the Cultural Significance of Saswad in terms of its built heritage. Further discourse, unfolds various historical factors involved in the development processes and understand the town as a cultural resource. Concluding part will examine issues concerning heritage at risk in Town and brief guidelines to formulate a comprehensive Conservation Policy for Saswad. Study is carried out with observation and visual analysis methods instantaneously mapping, drawings, and inventories supported the arguments developed in the process of analysis. Interview of historians, architects and local people helped in understanding the forms and meanings of various historic elements and a town as a whole.

Keywords : Medieval town, Historic Town, Heritage, Cultural heritage, Conservation policy, Historic settlement, Cultural significance

I. Introduction

Historic town of Saswad well known medieval town in Deccan¹ flourished in later Maratha period under local philanthropist Sardar² Purandare marks its presence in various ways. Numerous tangible and intangible historic elements define distinctive character of Saswad. Its unique character in terms of its setting in the landscape, the shape of the settlement and the nature of its edifices emerged over the period of time, are the assets and qualities that are most valued by its inhabitants and visitors. Its scenic location at the confluence of two rivers Chambali and Karha relates association of settlement, with the important natural element “water” manifested in the built form of Sangameshwar Temple located right at the convergence. Apart from this, Saswad is important base town to Purandar fort geographically important in the historic events. Saswad is

located north side of river Karha and 40 KM away from Pune city on its southeast side. The Sangameshwar temple is adorned with exclusive Yadav era sculptures depicting various stories related to *Purankatha*³. Other important nearby places, such as Jejuri, Pandeshwar, Morgaon, Bhuleshwar, and the forts of Vajragad, Rajgad and Torana establishes the socio-historic and cultural context of Saswad.

Historic town of Saswad is well known for its special architectural character. Various architectural typologies such as Residential, Religious, commercial, and mixed use are still unharmed to a larger extent which needs extra protection from conservation point of view.

Meandering road pattern segregating several communities such as *Shimpi Ali*, *Borate Ali*, *Jagtap Ali*, *Brahmin Ali* and so on according to their professions and years they established developed in town. Alignment and locations of these houses their character tells the story of town and fits eudal setup of characteristically developed in medieval period. Main axis of town connects both the important parts of town those are open market space at one end whereas riverside on the other. Royal mansion of town Purandare Wada Grade II structure in the context located on this axis articulates story of the period and its importance in Deccan region. This mansion was the model used to build Shaniwar Wada in Pune under Bajirao Peshwa. ⁴ Maratha town planning system emerged was outcome of political will of

³ *Purankatha* are glorifying stories from ancient scriptures related to various deities

⁴ Sowani Avinash, Maratha Town and City planning with reference to the systems of Village development during 17th and 18th centuries, (Unpublished thesis work submitted to Tilak Maharashtra Vidyapeeth, Poona 2011), 48. Original contribution in the Maratha town planning systems in Deccan region explained with several examples of administrative and economic systems developed over the period of time. This includes sketch maps of Towns such as Baramati, Kolhapur, Poona and other small towns around Poona.

¹ Deccan plateau is the largest region located in southern part of India situated between western and Eastern Ghats or mountains

² Word *Sardar* denotes nobleman or commander from Maratha army

Colonial public landscapes of POONA, India “Western notions in Indian Rocks”



Image 1 Reay Market Source: *Kimaya Pune*

Vaidehi Lavand

Colonial urban edifices of Pune make political statement and demarcate commencement of early modern age in the setting of “native” Maratha architectural character. Those were key elements helped in building image of the city in late 19th century. Rather those religious structures, educational buildings and offices built, were the first of its kind emerged as colonial public architectural landmarks in Pune context utterly following western notions. The concept and its manifestation in architectural form both could be called as out of context in a typical Maratha-Peshwa town in various ways. There were several oppositions from local reformists and communities for constructing structures such as covered market at the heart of indigenous town. Which was eventually constructed under supervision of local contractor Vasudeo Kanitkar under the guidelines of royal engineer, Walter Ducat. Paper tries to emphasis on architectural models followed as a powerful symbol during the reign of British, in Pune especially in case of public architectural edifices eventually intervened strongly as colonial public landscapes.

Colonial rule had influenced 19th century monumental Architecture as a form of imperial expression in India. European concepts of architecture reached the Asian subcontinent through visuals, literature, paintings and pattern books. Various examples from this neoclassical and neo gothic phase, also referred as Anglo-Indian, Indo-Saracenic, Indo Gothic, Mughal Gothic, Neogothic, Hindoo or Hindu Gothic architectural style that could be experiential at various levels and scales. This new vocabulary tried to reach not only to the major cities under colonial rule but it also reached to the smaller towns and countryside instantaneously.¹ Calcutta, Madras, Bombay procured their identity during the late eighteenth and nineteenth century beginning with neoclassical era. These three presidency towns developed with monumental, out of the context indications of the colonial rule. This was an effort of collaborative works amongst locals and British officials. Comparatively smaller towns like Poona² tried to nurture its space as a part of this wave in its own way. Notably these emerging urban patterns gave rise to new public realm and social spaces.

Royal engineers were the key persons worked in collaboration with local engineers and masons at grass root level in the process of establishing British rule in

India. Many of them came from middle and lower class families but reached at greater heights by their performance. Diverse projects from basic architectural interventions, railway, bridges, basic infrastructure, and services were coordinated in India by them. They worked on European models in local context with successful and unsuccessful efforts.³ To explain this further, till early nineteenth century simple and function based structures built for residential and religious purposes. Engineers were experimenting and modifying European models considering local climatic conditions. From mid nineteenth century building construction activity received more attention as vocabulary of Raj⁴. Which kept on changing adapting local climate, material and incorporation of local traditional art forms in architecture.

This argument extends with the cases of changed town level or urban level planning too. Typical medieval town comprising meandering roads for warfare strategies with fortress at a central location of main axis of town, those were extended with grid Iron pattern. This could be grasped prominently in case of various historic towns where cantonments were developed under colonial rule like Ahmadnagar, Sholapur now Solapur, Kolhapur,⁵ and Poona in Deccan context under Bombay presidency. Multiethnic, cosmopolitan

¹ Morris Jan, Simon Winchester, Introduction to *Stones of Empire: The buildings of the Raj*, (Oxford University Press, 1983); Das Pradip Kumar, Henry Irwin and the Indo Saracenic Movement reconsidered, (Partridge Publishing, 2014),5.

² Poona is pronounced as ‘Pune’ in colloquial language. For research writing purpose it is used as Poona as the name used earlier in 19th century.

³ Sandes E. W. C. Lieut. Colonel, Preface *The Military Engineer in India, Vol II*, (Chatham: Institution of Royal Engineers, 1933), 35.

⁴ Word *Raj* indicates British hegemony in India.

⁵ Ahmadnagar, Sholapur, Kolhapur are few of important historic towns of western Maharashtra developed under Bombay presidency in 19th century

Colonial Public Markets of Poona: Hegemony of British Raj

Dr. Vaidehi Lavand

Associate professor in Dr. D.Y. Patil College of Architecture Akurdi Pune India, PhD from the Department of Architecture from dell'Universita degli Study di Palermo, Italy

Email address: vaidehi.lavand@gmail.com

Abstract

Colonial urban edifices of Poona mark political statements and demarcate commencement of the early modern age in the setting of "native" Maratha architectural character. Those were key components helped in constructing the image of the city in late nineteenth century. Rather those religious structures, educational buildings, and offices built, which were the first of its kind, emerged as colonial public architectural landmarks in the Pune context utterly following western notions. The concept and its manifestation in architectural form both could be out of context in a typical Maratha-Peshwa town in various ways. There were several oppositions from local reformists and communities for constructing structures such as covered markets at the heart of indigenous towns. Which was eventually constructed under supervision of local contractor Vasudeo Kanitkar under the guidelines of royal engineer, Walter Ducat. The paper emphasizes the architectural models followed as a powerful symbol during the reign of the British, in Pune especially in the case of public architectural edifices eventually intervened strongly as colonial public landscapes. These religious, educational structures ultimately helped British "Raj" to build an image as ruler and to control on existing economic, social, and cultural system. These colonial landmarks are neglected from their significance as vital cultural resources and seen as alienated structures from the locals' point of view. With the help of qualitative research methods and archival resources, this paper examines the importance of these erections as a manifestation of power by sovereign imposed on numerous classes, castes of Pune.

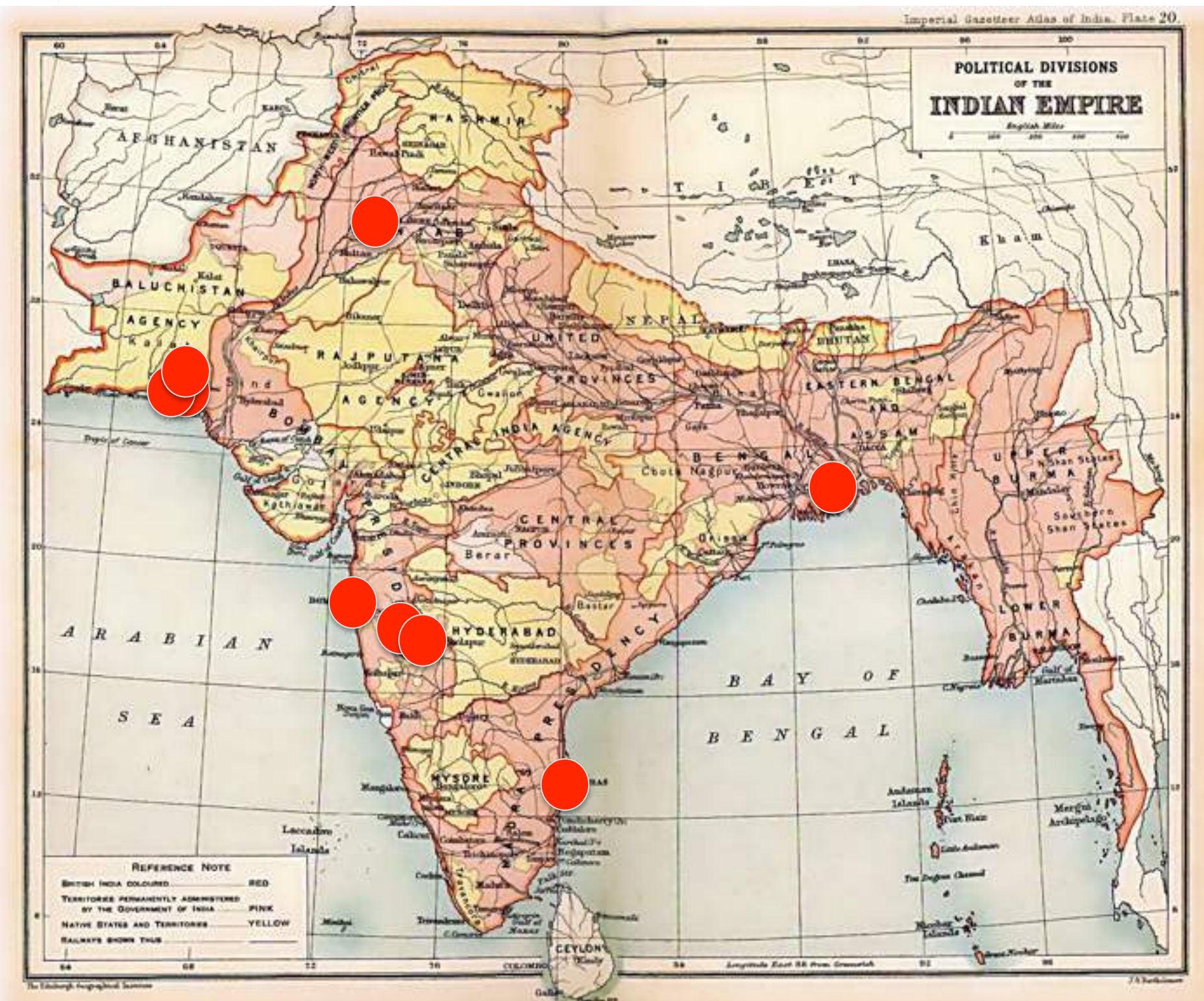


Figure 1, Map showing locations of 9 covered market built during 19th century in India before partition.



Figure 2, Open market opposite to fortress tin early 19th century, Ref: Pune Queen of Deccan, Diddi J., Gupata S.

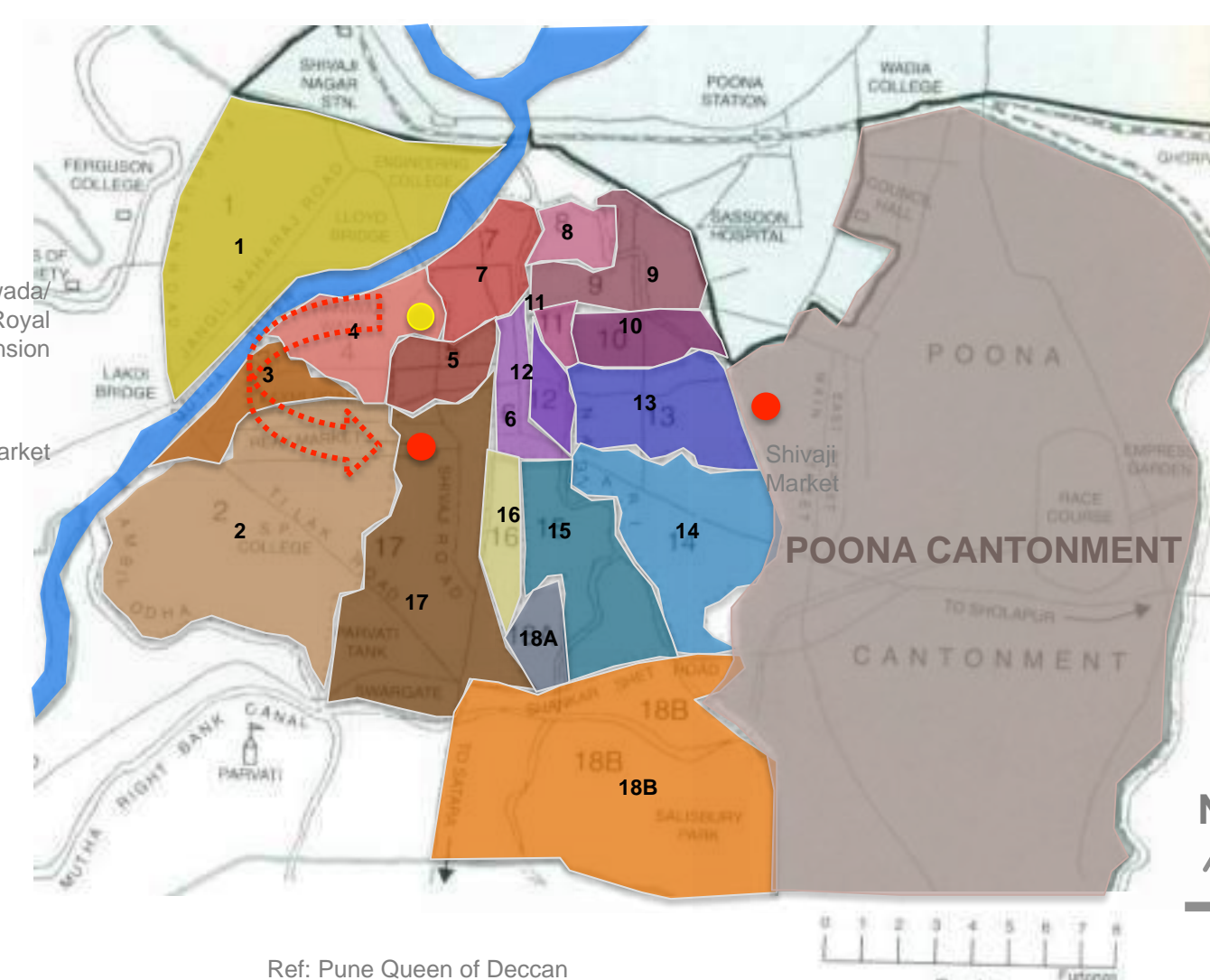


Figure 3, Covered Markets of Poona- Reay Market context

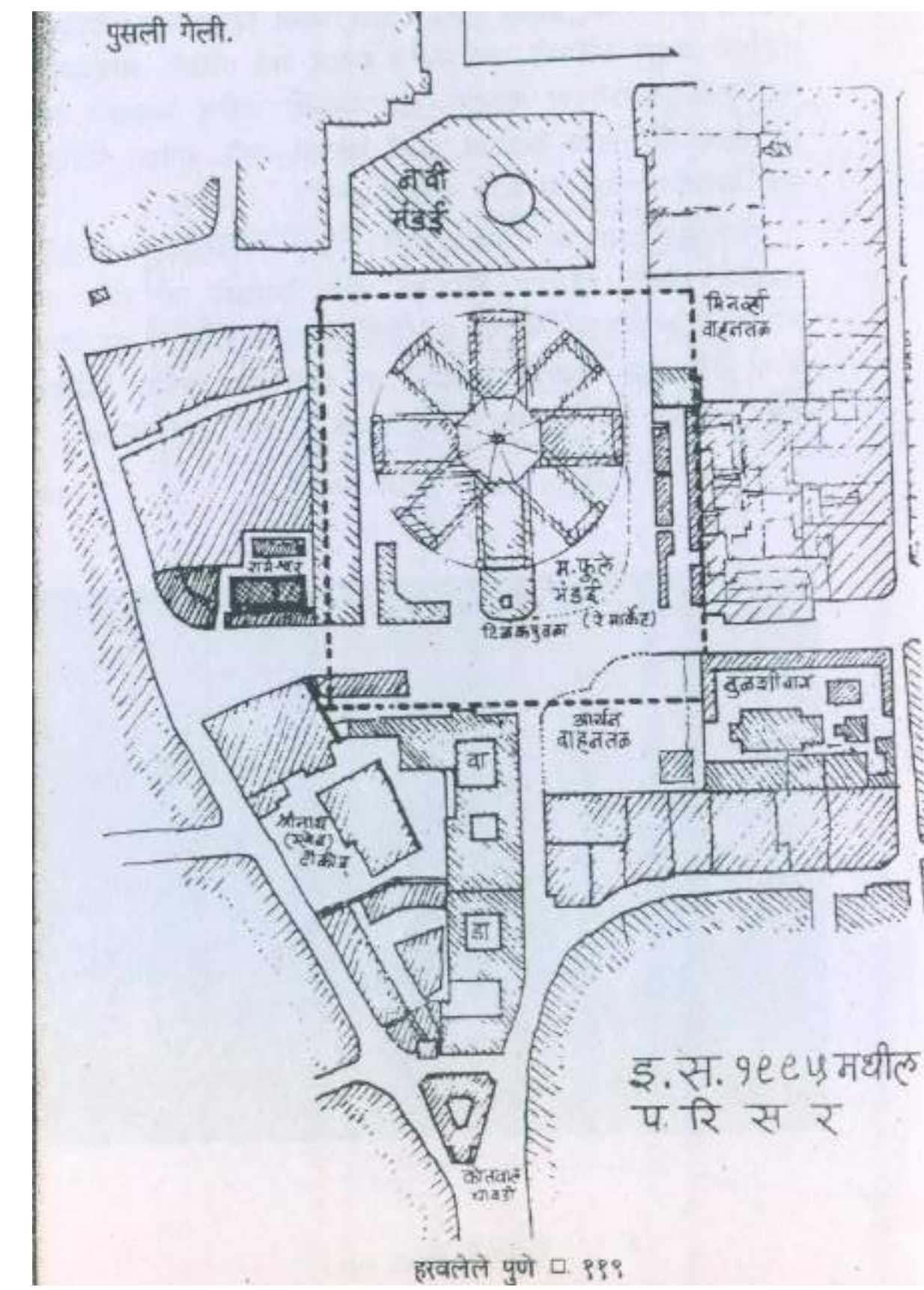


Figure 4, Conjectural map showing Open Space in Shukrawar Peth/Ward with Reay Market, Ref: Sowani, Haravlele Pune, 1995 map

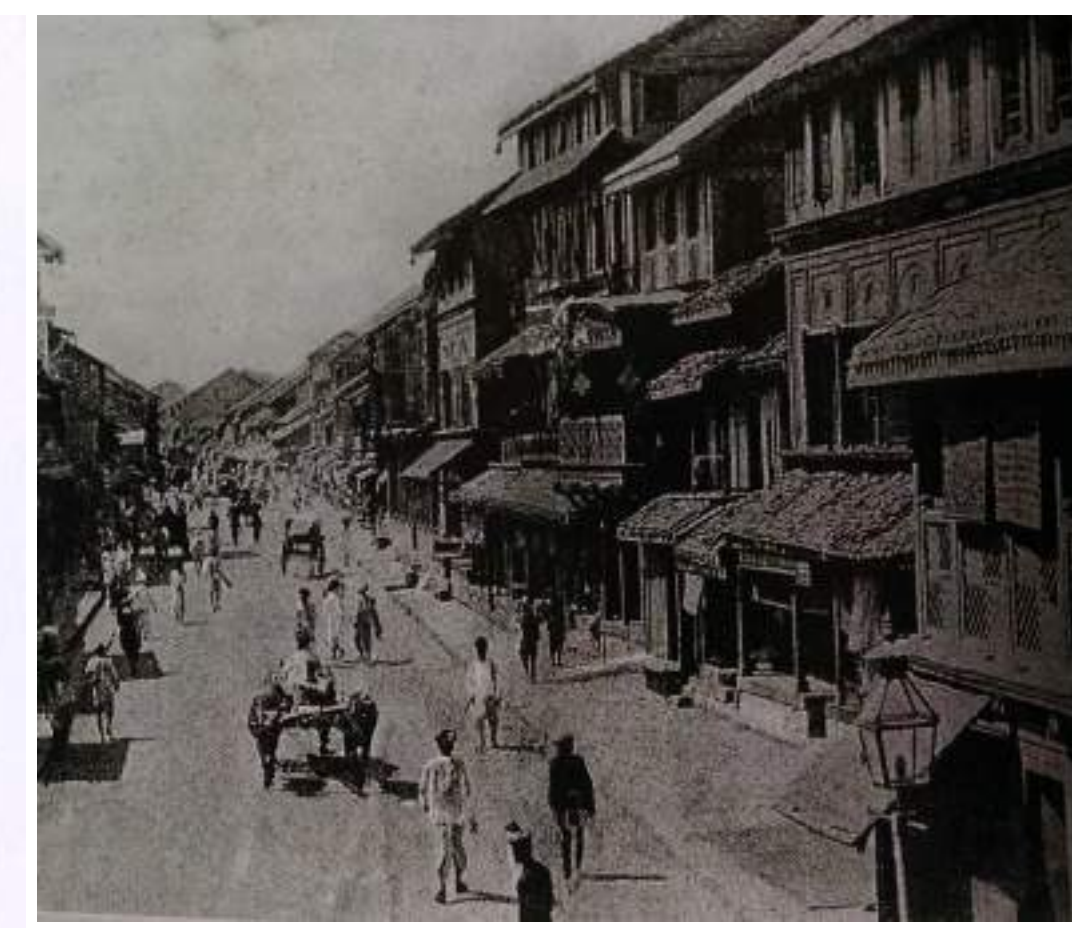


Figure 5, Mixed Use street markets in early 19th century Ref: Pune Queen of Deccan, Diddi J., Gupata S.



Figure 6, Areal view of Reay Market courtesy to Kimaya architects, Pune



Figure 7, 8, 9 Classical Façade treatment, central watch tower and wrought Iron ornamental bracket and columns supporting roof



Figure 10, Plaque above and its text on right, at Reay Market on its inaugural day

THE REAY MARKET
OPENED BY HIS ROYAL HIGHNESS
THE DUKE OF CONNAUGHT AND
STRATHERN K.G.
ON THE 5TH OF OCTOBER 1886.
NAMED AFTER HIS EXCELLENCY THE
RIGHT HONOURABLE LORD REAY LLD.
C I E GOVERNOR OF BOMBAY
PROJECTED BY THE MUNICIPALITY OF
POONA IN 1882
J.G. MOORE ESQ. BEING PRESIDENT
COMPLETED IN 1886. KHAN BAHADUR
DORABJEE PUDUMJEE BEING PRESIDENT
DESIGNED BY COLONEL W M DUCAT
R.E. AND CARRIED OUT BY RAO
BAHADUR WASUDEV BAPUJI KANITKAR
C.E.
RAO SAHEB NARASO RAMCHANDRA
GODBOLE SECRETARY P.M.



Figure 11 Areal view of Connaught/ Shivaji Market



Figure 12 Vasudev Kanitkar

Local contractor

Conclusion

19th century covered markets in west and east shares similarity. Such as selection of public squares. Reay Market with Octagonal form with 80 feet tall tower at centre, this very unique form symbolises colonial control over old administrative and economic systems. Distance between ruler and the subject was though maintained by the scale and architectural vocabulary but at the same time creation of such public civic culture was very symbolic to notify commencement of democratic space breaking earlier feudal setup of Poona. Likewise this represents modern economic system implemented through government agents and local philanthropists in Indian towns. Reay Market as an important cultural heritage proposed and built by R.E. Walter Ducat and Local contractor Vasudev Kanitkat though neglected, as colonial past of town should be emphasized as an important colonial urban landscape of town. Connaught and Reay markets originated by R.E. Walter Ducat and executed by local contractors are significant examples from colonial architectural history in Indian context as vibrant public space.

References:

- Morris Jan, Simon Winchester 1983. *Introduction to Stones of Empire: The buildings of the Raj*, Oxford University Press.
- Das Pradip Kumar, 2014. *Henry Irwin and the Indo Saracenic Movement reconsidered*, Partridge Publishing.
- Sandes E. W. C. Lieut. Colonel, 1933. *The Military Engineer in India, Vol II*, Chatham: Institution of Royal Engineers.
- Deddee Jaymala and Samita Gupta, 2000. *Pune Queen of the Deccan*, Pune, Elephant Design Pvt. Ltd.
- Preeti Chopra, 2011. *A Joint Enterprise: Indian Elites and the Making of British Bombay*, University of Minnesota Press.
- Walter Mardon Ducat (1837-1902) (Mss Eur F425) British Library: India office records and private papers, *The catalogue of papers*, London : British Library UK.
- London Christopher, 2002. *Bombay Gothic*, Mumbai: India Book House Pvt. Ltd.
- Bhagwat H.R., 1868. *Pune Shaharache Varnan*, Mumbai: Oriental press.
- Helen Tangires, 2008. *Public Markets*, New York: W.W. Norton & company.
- D'Ayala Diana, Enrico Fodde Edith., 2008. *Structural Analysis of Historic Construction Preserving safety and Significance Vol I*, NewYork: CRC Press Taylor & Francis Group.
- Letter from Executive engineer to the secretary of cantonment committee Poona, 1893. Mumbai, PWD archives, 17th Oct.
- Editorial, 1886. "The Opening of Reay Market at Poona", *The Times of India Archives Mumbai*, Oct 7.



The Constructed Environment

Journal of Research Papers Presented In
National Conference on
Building With Time
NCBWT - 2019

ISBN : 978 - 81 - 908418 - 6 - 3

Eco - Design | **Intelligent** Buildings

Inherent Architecture | **Habitat**

24 - 25 **February** 2019

at

D Y Patil School of Architecture

Ambi, Pune, India

— Support —



Savitribai Phule Pune University

Lessons From Traditional Indian Housing

Shraddha Mahore Manjerkar

Associate Professor, Brick School of Architecture, Pune

ABSTRACT

Planning and Housing design in India date back to Indus Valley Civilization of 3000 B.C. Settlements had evolved in various parts of country since then with different characteristics everywhere. Housing had been an integral part of these settlements. Author has visited and studied the traditional housing in various parts of country. These traditional Housing designs or evolved forms are not mere group of buildings, but in integration they have various forms and typologies. They are success stories of chemistry of built and un-built spaces, human interaction, and spatial experiences. They have much scope of personalization and adaptation and have sustained since long time. This paper gives light on several such traditional housing forms and the specific points that can be learning for timeless and sustainable design of housing.

Keywords: Housing Form, Personalization, Socio-cultural characteristics, Spatial Experience, Traditional Housing

1. Introduction

The distinctive character of housing can be seen in India. Ar. Yatin Pandya¹¹ says that Indian architecture is all about Resilience, Caring and Sharing, Pluralism of existence, vitality and response to climate. Every part of India has such character of architecture in housing. The rural and urban both types of areas have such characteristics. The architecture of Wadas of Maharashtra, and Mandya Pradesh, Mohallas of Madhya Pradesh and Uttarpradesh, Havelis of Rajasthan and Gujarat, Kothis of all north Indian states, Pols of Gujarat, Chetiar houses of Chettinad or in Portuguese and Brahmin colonies of Goa are some examples to observe all these qualities. These typologies have been studied as background for this paper and the learning has been listed down.

2. Observations in traditional housing forms

This portion of this paper throws light on the differences that present day housing and the above mentioned housing types in general. The studied typologies have been called as traditional housing form and present day housing refers to high density, medium rise apartment housing coming in fringe areas of growing Indian cities in this paper. Following are the distinct characteristics that are gradually disappearing from present day housing. The different characteristics have been observed under following headings.

2.1. Sense of security

Right from the Prehistoric time, man has understood his social nature, and his sense of security was strengthened by society. The housing was in the form of inward looking Ephemeral of Transient dwellings (Schoenauer, 2000). They had built it and later abandoned however with inward layout people had sense of belonging with each other. The Harappan civilization also had inward planning (Singh, 2006) where the dwellings surrounded a courtyard and acted as common part between single and multiple family units.

¹¹ Notes taken from Ar. Yatin Pandya's workshop during 3-days workshop on Housing at Brick School of Architecture, June 2018

Light Weight Concrete

Anurakti Yadav

Assistant Professor, Department of Architecture, BSOA, Pune, India

Abstract: This paper presents an overview on light weight concrete.

Keywords: light weight concrete

1. Introduction

One of the disadvantages of conventional concrete is the high self-weight of concrete. Density of the normal concrete is in the order of 2200 to 2600 kg/m³. This heavy self-weight will make it to some extent an uneconomical structural material. To reduce the self-weight of concrete to increase its efficiency as structural member, attempts have been made in the past. A concrete whose density varies from 300 to 1850 kg/m³ is called as light-weight concrete.

A. Advantages of light-weight concrete

1. It helps in reduction of dead load.
2. Increases the progress of building.
3. Lowers haulage and handling costs.
4. Reduces weight of building on foundation-in the case of weak soil and tall structures the weight of the building on foundation is an important function in design. If the floors and walls are made up of light weight concrete it will result in considerable economy.
5. Having low thermal conductivity which will be of considerable advantage from the point of view of thermal comforts and power consumption in extreme climatic condition.
6. Gives an outlet for industrial wastes like clinker, fly ash, etc.

B. Methods of making light weight concrete

1. By replacing the usual mineral aggregate by cellular porous or light weight aggregate.
2. By introducing gas or air bubbles in mortar. This is known as aerated concrete.
3. By omitting sand fraction from the aggregate. This is called no fines concrete.

There are mainly three main groups of light weight concrete, no fines concrete, light weight aggregate concrete, and aerated concrete. The detail of groups is given in table 1. Out of these groups, the light weight aggregate concrete and aerated concrete are more often used than the no fines concrete. Light weight concrete can also be classified on the purpose for which it is used, such as structural light weight concrete, non-load bearing concrete and insulating concrete. The aerated concrete

which was mainly used for insulating purposes is now being used for structural purposes in conjunction with steel reinforcement.

C. Light weight aggregates

Light weight aggregates can be classified into two categories namely natural light weight and artificial light weight concrete.

Natural light weight aggregate	Artificial light weight aggregate
Pumice	Artificial cinders
Diatomite	Coke breeze
Scoria	Foamed slag
Volcanic cinders	Bloated clay
Sawdust	Expanded shales
Rice husk	Sintered fly ash
	Exfoliated vermiculite
	Expanded perlite thermocole beads.

Table 1
Groups of light weight concrete

No fines concrete	Light weight aggregate concrete	Aerated concrete	
		Chemical aerating	Foaming mixture
Gravel	Clinker	Aluminum powder method	Preformed foam
Crushed stone	Foamed slag	Hydrogen peroxide and bleaching powder method	Air-entrained foam.
Coarse clinker	Expanded clay		
Sintered pulverized fuel ash	Expanded shale		
Expanded clay	Expanded slate		
Expanded slate	Sintered pulverized fuel ash		
	Exfoliated vermiculite		
Foamed slag	Expanded perlite		
	Pumice		
	Organic aggregate		

2. Light weight aggregate concrete

Very often light concrete is made by the use of light weight aggregates. Different light weight aggregates have different densities. Naturally when these aggregates are used, concrete of different densities are obtained. Table 2, gives the typical

GREEN COVER AS A SOCIAL CATALYST FOR A CITY – CASE STUDY: PUNE

DIVYA MALLAVARAPU

Assistant Professor, SMEF's Brick School of Architecture
E-mail: div.mallav@gmail.com/divyamallavarapu@brick.edu.in

Abstract - A city's social status is defined by how its resources and its conditions, make it comfortable for its inhabitants to thrive. A social condition in a city is mostly governed by its physical features, the availability of resources, climate, etc. Climate being one of the major influential factors for a thriving social life in the city. However, the green cover would define the micro climate and the social pattern in the city. The social well-being would indirectly be influenced by the percentage of green cover in the city moderated by the trees. Trees are a vital part of any city's landscape and green cover. They help in pulling down pollution levels, reduce sound levels, bring down temperatures and invite rain. The green cover in Pune, a suburban city in west India is fast depleting, due to the urban sprawl and fast paced development. Earlier, trees could be found shading the roads in public spaces, sidewalks, by the windows in residential complexes etc. But as one drives along the city - it's a dry landscape; a concrete jungle, glass facades, tall buildings, un-shaded pathways, concrete and tar roads, hoardings, traffic!! . The lack of green cover in the city has caused the ambient temperatures to go up. The city has seen an average minimum temperature rise up to four degrees in the past decade. Additionally, it has been observed that city dwellers prefer to stay in areas with more green cover, walk on shaded footpaths and drive on shaded roads. There seems to be a constant competition between the BUILT and the GREENS in the city for land. Left to it, the BUILT will win its way. In effort to save the GREENS, the National (Indian) Forest Policy was conceived in 2016, to maintain 33% of the country's geographical area under forest and green cover. This paper explores the acts/policies and citizens' participatory ACTIONS in Pune (Maharashtra, India) that focus their efforts towards maintaining the GREEN in the city. Through a case study approach we discuss the hurdles for implementation of these policies as well as highlight some successful initiatives that show a way forward.

Keywords - Climate, Green Cover, Social Well-Being, Trees.

I. INTRODUCTION

As early civilizations developed, they profoundly changed pre-existing natural environments. Indigenous cultures cleared forests, managed landscapes by setting fires, domesticating, and dislocating species, by hunting, thus driving many of the non-human species to extinction. Human contact left few landscapes undisturbed causing a catastrophic effect to them. Writers beginning with Aristotle put forth the term such as "second nature" to refer to elements of the natural world that had been influenced by interaction with humans. [1]

The balance of nature has been disturbed and the result affected climate - extreme natural calamities, unbearable rising temperatures, depletion of the ozone layer and the list is never ending. The mass awakening to conserve nature and to hence forth follow the path of responsiveness to the environment and living in harmony with nature - hence causing it lesser harm was in true sense sustainability, was called upon.

Why does a city need green areas?

The rapid spread of urban sprawl has caused the green cover in the city to be encroached upon. In the most recent decades, urban areas have been increasing in population and thus footprint. People migrate to the cities in search of a vast number of opportunities, which, in rural areas, are not so accessible, turning

cities into centers of concentration for infrastructures, recreation and markets, among other elements.

II. NEED FOR MORE GREEN COVER

Vegetation plays a vital role in urban environments. Aside from the aesthetic benefits, trees and other vegetation help mitigate the effects of an urban heat island (UHI) by increasing the latent heat flux through evapotranspiration, preventing the near surface air from heating up during the day and providing evaporative cooling during the night. Shadowing street canyons and buildings, trees prevent them from accumulating more heat, thus reducing the total energy surplus of an urban environment [2,3]. Vegetated roofs and facades can help to reduce the cooling demand in summer and also contribute to insulation in winter, leading to less heat loss into the atmosphere and savings in energy consumption for the immediate environment. [4]

Trees are amongst the most important and significant features in the landscape in the rural and urban areas. They play an important role in enhancing the environment and micro-climate. Trees intercept particulate matter and absorb gaseous pollutants such as ozone, sulphur dioxide and nitrogen dioxide, thus removing them from the atmosphere. Trees also emit various biogenic volatile organic compounds, such as isoprene and monoterpenes that can contribute to ozone formation in cities.

Role of Creative Exercises in Design Process: Documentation of first year design Studio

Vaibhavi Agrawal and Ketaki Gujar

SMEF'S Brick school of Architecture, Pune, vaibhavi@brick.edu.in, ketakiguajar@brick.edu.in

Abstract - Design is both the heart and the soul of architecture education. Design studio is a place where students learn the most important aspects of design that is composition and facilitation for aesthetics of forms and ease of function. However, How to teach design or introduce an appropriate method for the design process is the most challenging aspect in Architecture Design Studio. Students struggle to find appropriate Method to start and reach the desirable creative composition, form and spaces as final goal of design. This paper states that creative exercises based on elements and principles of design and creative technique for enhancing creativity can act as a stimulation and provides a starting point for every stage of design. Creative exercise plays a very important role in understanding the rules of composition and facilitation which eventually helps to increase the level of creative performance and confidence to design in the students. To explain this, the paper showcases the documentation of explorations done in two consecutive years at SMEF'S Brick school of architecture, Pune, India.

Key words: Creative exercise, Design Process, Design Studio

INTRODUCTION

Primary concern in the design studio is to produce a creative form and composing the space for human activities. The main aim of design studio teaching is to make learning basic of design possible and simplified for every student. The student should feel confident and curious towards design. The job of a teacher is to understand what and how to teach. As Edward De Bono in Lateral thinking puts in "nothing is taught unless it is learnt." The first step of teaching is to learn how to teach. The challenge lies in taking students to the logical creative world, opportunities to invent new ways of seeing and doing things. Teacher has responsibility to develop creative strategies in design studios. These strategies cover the length and breadth of the design process. Mostly creative activities are very casually conducted in the course, students never know why they are learning composition of line, shape or making color wheel. The fragmentation between creative exercise and space design creates confusion in a student's mind. It is also a belief that design cannot be taught, one has to be creative to design. To elevate this confusion creative activities should become the central process of design and design studio.

Virtually, Design is considered both the heart and the soul of architecture education. However the term design is commonly used by designer and design educators on limited connotation,

International Conference on Architecture Pedagogy-2019

focusing on aesthetics and theoretical design theories than cognitive nature of the process. The measure of learning is evaluated on product of design rather than the learning process or skill. With this sometimes it happens that students struggle in school and face the profession without the awareness and understanding their own cognitive process of design. To overcome this challenge, we at SMEF'S Brick School of Architecture propose the use of creative techniques and basic principle of design in the form of step by step creative exercises as strategies for design process.

The Main objective especially in the first year of architecture of introducing of these creative exercises was to establish the link between basics of design and Architecture design. Also to establish an understanding where students understand that for every stage of design there are some techniques which can help in taking the right decision for their design process.

It is an observation that introduction of process right from the first year not only enhances the understanding and awareness of design process but it also increases their ability to create novel solutions. Here creative exercises at every stage becomes the basis of powerful understanding of sequential process of design. All creative exercises are designed in a way that they always precede the actual design activity. Here it is a process which is more important than the solution; although the end result is never underemphasized. Students are always guided on the basis of what they already know to what is not so known to them. Actual design problem is introduced only when students have all required techniques to solve.

TOWARDS A DESIGN PROCESS

The process in the context of design is understood as systematic steps directed to some end. Architecture design is a process, where we develop skills to bring our conceptual or mental ideas on paper so that others can read and react. In other words it is also a product of creative mind brought out through skill and dexterity to suit the purpose. So it is a question that if we can set a method or a process where by using that even an average student can be successful, if not remarkable. Can it also be stepping stone for becoming average to extraordinary geniuses? In design studio it is teacher's task to develop a method or process which liberate the mind from set patterns the method should be stimulating, enjoyable and simple. At the end the student should be surprised by his/ her own creativity. We in our studio found that introduction of

Exploring societal participation in making cities smart

Shraddha Mahore Manjrekar^{1,} and Manali Deshmukh^{2,*}*

1 Brick School of Architecture, Pune (India)

2 Brick School of Architecture, Pune (India)

Abstract. The word 'Future' has been synonymous to 'Development' for most of the people. Architects of the Nation strive for a well-developed state, where it reaches towards enhanced living conditions than the present. In this regard of development, structure of Indian government is well defined. The policies designed at central level envision the total development. These policies make the local bodies function on the same lines. They make an impression in common people's life that there are some positive changes in the cities. These policies also mark an identity, e.g., after implementation of city Development Plans under JNNURM (Jawaharlal Nehru, National Urban Renewal Mission), the buses bought for BRT (Bus Rapid Transport) had become identity of this policy. The meaning of Smart Cities in India also has been interpreted by people in many ways. For cities to become smarter it needs a holistic approach in developing a sustainable urban eco system and thus the roles of various stakeholders become very important in executing this mission. Not only the investors, financial organizations, planners, architects and people in construction industry but the citizens too have role in making cities smart. People of all age, gender, ability and disability are responsible in making a city smart. Education and awareness is the key for making them aware of their participation in the process of development. This paper also mentions the role of educational institutes to make people understand the essence of development.

Key words: *Smart, Futuristic, Sustainable, Public participation, Education*

1. Introduction

The objective of the Smart Cities Mission is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions. The local governance and various stakeholders are involved in this process. In line with the objectives of the mission, the project typology too has a common pattern in these cities. The categories of the works are, riverfront development projects, open spaces development, housing, App based projects for systemization of the administration, infrastructure and transportation etc. Dashboard of official website of the smart cities mission states that there are 100 winning proposal from various cities and estimation of 99,630,069 people getting affected by this mission [1]. The impact is also much visible in these respective cities. For example Coimbatore city is working on desilting, bund

strengthening, removal of weeds, turfing and lining, drains development, inter-linkages boating and water sports facilities, other amusement and recreational facilities, theme parks, medicinal gardens etc. Kochi city is working on upgradation of infrastructure in housing through credit linked schemes under the same mission. Pune city is working on intelligent government service for Bus System Intelligent Traffic Management System (ITMS), where the Smart Public is going to be equipped with Real time tracking of buses using GPS, maintenance using vehicle health monitoring system, Passenger Information System (PIS) with LED screens in buses and bus-stops and Mobile app to track -bus location and ETS real time, Ride quality monitoring using smart sensors, in -bus wifi and entertainment systems, etc. Digital India has reached till the limit where even a small vendor does digital transactions. Technologies have made the tasks easier. However it cannot be said that the urban life has become easier with technologies. The complications, difficulties and the side

*Corresponding author: iitrshraddha@gmail.com

“SASWAD” A HISTORIC MEDIEVAL TOWN OF DECCAN”

Dr. Vaidehi Lavand

Associate professor and Vice Principal in Dr. D.Y. Patil College of Architecture Akurdi Pune, India

Email: vaidehi.lavand@gmail.com

Abstract :

Saswad well known for its significant location on Wari route and exclusive architectural vocabulary developed over the period of time since Satvahana period. It has population of 1,31,821 covering administrative area of 2256 hectares/ 22.56 Sq km/ 5574 acres. It's located on state highway no. 36 on Pune-Saswad-Neera road¹ Major population is dependent on agriculture and urbanization leading to change in occupational trends such as industry-based economy. Development plan report studied in the year 2008 explains shift in population and occupational trends in Saswad. Expansion trends on Western Side of town towards Pune due to natural barriers on north & south side of town. On north side high terrain & no agricultural land are found. On south side Karha River is located. (No space for spread of town). Industrial development – Kirloskar Pneumatics Pvt. Ltd. Plant is coming on north west side which is pulling major crowd for secondary & tertiary source of Income. Many industries are arriving in the region. Dependence on Primary sector is reducing tremendously. (Migrating crowd could be shifted in old core.)

Further discourse attempts to identify heritage potential of town, along with that it investigates how this character could be protected in the context of changing time. First part of the research paper will cover the origin and development of a historic town of Saswad. In second part methodology developed to rediscover the Cultural Significance of Saswad in terms of its built heritage. Further discourse, unfolds various historical factors involved in the development processes and understand the town as a cultural resource. Concluding part will examine issues concerning heritage at risk in Town and brief guidelines to formulate a comprehensive Conservation Policy for Saswad. Study is carried out with observation and visual analysis methods instantaneously mapping, drawings, and inventories supported the arguments developed in the process of analysis. Interview of historians, architects and local people helped in understanding the forms and meanings of various historic elements and a town as a whole.

Keywords : Historic Town, Heritage, Cultural heritage, Conservation policy, Historic settlement

¹ <http://saswadnagarparishad.org/>