

## Research in Architecture in India

**Madhavi Desai**

Tekton

Volume 5, Issue 2, September 2018

pp. 70 - 79



**Madhavi Desai** is an architect, researcher, writer and a teacher. She is an adjunct faculty at CEPT University since 1986. She has had Research Fellowships from ICSSR, the Aga Khan Program for Islamic Architecture, Sarai and the Getty Foundation. She is one of the founder members of Women Architects Forum. She is the co-author of *Architecture and Independence* (1997) and *The Bungalow in Twentieth Century India* (2012). She was the editor of *Gender and the Built Environment in India* (2007) and the author of *Traditional Architecture* (2007).

Her most recent book, *Women Architects and Modernism in India: Narratives and Contemporary Practices* (Routledge, 2017) chronicles her research on participation of women in post-independence Indian architecture. She is at present working on an edited book, tentatively titled, *Gender and the Indian City: Re-visioning Design and Planning*. She is a member of the nominating committee of the Berkeley-Rupp Professorship and Prize at the University of California, Berkeley, USA since 2012.

In this Practice essay, Prof. Desai draws from her vast experience to dwell on the issue of research in India. She creates a comprehensive scenario as it exists of relationship of research with academia and practice, which is far from ideal. She comments on this while speculating on possible directions for research that can fill the gap in knowledge generation in the discipline.

✉ [mmdesai2@gmail.com](mailto:mmdesai2@gmail.com)

## Knowledge Generation in a Discipline

*“The building industry, the architectural profession, the school of architecture – none is structured in a way that facilitates or promotes systematic inquiry for knowledge building.”*

-(Snyder, 1984).

In any discipline, research is considered the core of knowledge production and theory generation. In architecture and design, in the perception of the society and within the profession, the practice and the practitioners have been at the forefront of the disciplines connected with the built environment. Despite of there being three wings of a discipline – practice, academics and research – the crucial component of research is relatively marginalized due to a lack of long standing and respected tradition in institutions of higher learning and in the architectural profession as well.

The development of scholarship in the field during the postcolonial times has been rather meagre, to say the least. Marginalization of knowledge creation deeply affects theory and application. As a result, there is a lacuna in well researched and documented publications or analytical studies on the Indian design sensibilities that are historical, regional or critical in nature. This limitation is acutely felt in teaching where a heavy reliance on western publications still exists, especially in courses on theory, history and technology. On the other hand, practitioners have traditionally relied largely on intuition, design principles and precedents in their design process. Most of them continue to do so because research and theory are not

viewed as productive tools in actual practice. In addition, the architectural critic, who can play a role especially in improving the quality of public architecture and urban design is rather invisible in India. This

**Practitioners have traditionally relied largely on intuition, design principles and precedents in their design process. Most of them continue to do so because research and theory are not viewed as productive tools in actual practice.**

essay attempts to take a broad look at the interconnectedness between research, practice and academics in India while stressing the urgency and importance of knowledge generation.

## Background

The modern discipline of architecture is relatively young dating back to the colonial era. In the medieval period, edifices were constructed by craftspeople based on regional manuals that were derived from the principles of ancient building science treatises. Much change occurred when the profession of architecture got established and architects began designing from mid-nineteen century onwards. From British and other European architects who came from abroad, to European firms established in India who took on Indian architects as partners, to finally firms run by Indians, a great transformation occurred in the nature of the profession as well as the production of architecture.

So far as architectural research is concerned, a good beginning was made by the British in India. Theoretical and documentary aspects of Indian architecture got developed resulting in a laudable repository of knowledge and scholarship. Documentation in the form of drawings became much enriched by surveying and photography, which afforded a high degree of accuracy and authenticity to the work produced. James Ferguson, a businessman who became an architectural historian, advocated the understanding of the principles of Indian traditional architecture. His book *History of Indian and Eastern Architecture* published in 1887 was an important work. Jeypore Portfolio of Architectural Details in 1890 by Swinton Jacob was not just a plain architectural or academic work but was a manual of elements and details from bygone eras to be used in the 'modern' architecture of the Raj. Later, in 1934, architect and educator Claude Batley produced an excellent publication titled, *The Design Development of Indian Architecture*, based on measured drawings and photo documentation. Though the bias of art historian based on a fundamentally European aesthetic and intellectual tradition dominated over the architectural sphere, the field of architecture began to get specific attention (Desai, 2003).

The institution at the forefront of these efforts was the Archaeological Survey of India (ASI) founded in 1862. ASI began an excellent process of survey, documentation, protection and preservation of important architectural edifices of the past. It was a challenging task, considering the vastness of the country, its long history, and the enormity of historic resources in various categories and at different stages of preservation. They were only able

to cover the most important monuments (or classical examples) at the national and regional levels. After Independence, the ASI has continued the work in more or less the same line with many constraints. ASI's goals are archaeological research and protection as well

**So far as architectural research is concerned, a good beginning was made by the British in India. Theoretical and documentary aspects of Indian architecture got developed resulting in a laudable repository of knowledge and scholarship.**

as maintenance/preservation of heritage.<sup>1</sup> Their canvas has remained rather narrow because in terms of architectural research, their efforts have been restricted mainly to being descriptive/documentary and cover only a small segment of the typological variety.

Architectural research and its concepts, methodologies and processes have changed with the passing of time. One of the hallmarks of the 20th century had been the breaking of barriers between different disciplines. Architecture, which is an inclusive field and not an exclusive one, is connected to human behaviour at one end and to technology at another. It presents a broad scope for research with cross influences of both science and the arts. It draws on the theories of several disciplines – technological as well as social sciences – such as engineering, anthropology, sociology, human geography, art and psychology. Its research methods range from intuition, observations and personal experience to quantitative and other rigorous scientific approaches.

Post 1947, the discipline of architecture has unfortunately not paid much attention to developing a rigorous research attitude or efforts at theory generation. There is not enough awareness or support from either the Council of Architecture, the Indian Institute of architects or the building industry. We have also failed to prepare trained architectural historians, critics and journalists to contribute to the Indian architectural scene. A few private architectural foundations<sup>2</sup> are involved in multiple activities (but not many are singularly dedicated to research) going beyond the practice but they are few in numbers for a country of this size with such a heterogeneity of the built environment. Thus, there is an acute absence of quality publications or

**One of the hallmarks of the 20th century had been the breaking of barriers between different disciplines. Architecture, which is an inclusive field and not an exclusive one, is connected to human behaviour at one end and to technology at another.**

reference materials which are historical, regional or critical in nature, especially for the period covering the past 100 years or as recent as the contemporary decade.

### Research and Academia

“Research is essentially a creative endeavour requiring a subtle blend of personal skill and impersonal order” (Zeisel, 1981). Research process can provide deeper insight into a topic, give better understanding of a problem and define concepts more clearly. The relationship between education, research and practice in any discipline is complex. In an ever-changing

world, it is also in a flux, bringing in multiple changes to the practice and structure of the education. Research then is the tool to bridge the two realms. While architectural colleges in India have grown phenomenally in the past two decades to around 500 in numbers, the

**Without research requirement for faculty promotion, the teachers lack the expertise to undertake rigorous academic inquiry or to guide the students. This is a major problem and a challenge for the educational institutions.**

general standard of architectural education poses a major challenge in India. There is a huge gap between the worlds of academics and practice, for example, between trained professionals and the market forces. In this case, the real estate dominance, the growing large-scale designs and the need for project management skills are areas that need to be addressed in terms of preparing the graduating students to successfully engage with practice.

Without research requirement for faculty promotion, the teachers lack the expertise to undertake rigorous academic inquiry or to guide the students. This is a major problem and a challenge for the educational institutions. On one hand, not many teachers have the motivation to do research and on the other, a few who attempt it, often end up producing substandard/unoriginal work. PhD requirements have been imposed for faculty growth in the past few years but it hardly has the rigorous academic training in a majority of the colleges, nor is there any stringent requirement of publication for faculty promotion as in the West. Thus, the limitations

towards research and theory creation are experienced by the students, faculty as well as the institutions.

The crowded curricula of four or five years of the undergraduate course does not place due emphasis on the theory of architecture which should be the backbone of education, with general absence of critically informed teaching of theory and history courses. I personally believe that students spend (or are made to spend) a disproportionate amount of time in

**Usually, research training is the function and responsibility of these Masters level courses. The level of efforts towards this task vary from college to college but most are not geared towards original knowledge generation or towards imparting training in research methods and structured writing.**

design studios. Most architectural colleges have a subject called 'dissertation' as a part of the undergraduate course but research theses or teaching of research methodologies are generally not included. In addition, there is no exposure to critical writing.

In last two decades or so, there has been a rise in post graduate programs in the country, moving towards professional specialization. Usually, research training is the function and responsibility of these Masters level courses. The level of efforts towards this task vary from college to college but most are not geared towards original knowledge generation or towards imparting training in research methods and structured writing. It leads to vicious cycle because critically untrained

teachers teach the next generation of students. Hardly any post graduate courses exist for educating architectural critics, historians and journalists or even for preparing qualified

**Much could be gained through greater collaboration and knowledge sharing so that the two realms complement each other if the role of research to inform practice is accepted.**

teachers for these large number of colleges. In addition, quite often the standard of reference and other books in the libraries is not always up to the mark.

### Research and Practice

Architectural research occupies the overlap between the realms of academia and practice even though both operate in slightly different ways. Much could be gained through greater collaboration and knowledge sharing so that the two realms complement each other if the role of research to inform practice is accepted. Throughout the history of the profession, there has been reciprocity between architectural practice and schools of architecture. Practitioners have been central, through teaching, mentoring and, most importantly, contributing through the body of their built work. In a field dominated by practice, academia is where pure and applied research gets undertaken which, by and large, is not the case in India.

The close and mutual relationship between research and practice is far from being ideal here. "Every time an architect creates a design it is based on some objectives and the specific patterns of built form to achieve them –

some body of theoretical knowledge of how architecture works.” (Lang, 1994) Thus, good practice depends on the correct understanding of theory but few designers seem willing to move to a conscious theory-based approach to design as they rely heavily on typological approaches. As far back as 1994, talking about the crisis of knowledge in architectural research in India, Prem Chandavarkar (of CnT Architects, Bengaluru) strongly opined in a national seminar<sup>3</sup> coordinated by me that architecture profession has never moved beyond individual visions to establish some common ground for theory which all practitioners can use as foundation.<sup>4</sup> Most research in practice seems to be project-focused as architects generally consider it to be an intrinsic part of the project work they undertake. Many carry out site and project specific inquiry and data collection while designing but rarely look at the larger picture.<sup>5</sup> The project related research encompasses a range of aspects from understanding client needs, and evaluating project contexts, to assessing the performance characteristics of building components. This tends to mean that this research is largely funded through marginal elements of project fees. It often includes analysis of precedents, and research into materials, products and construction techniques.<sup>6</sup>

Ideally the history and theory of architecture can be rigorously located in current architectural practice. Application of research findings can have a positive impact on improving the quality of the physical environment. The connection with practice is crucial for knowledge production. In fact, there is a school of thought that believes that “developing a research specialism can improve

the quality of your projects, help to define your brand and generate new channels of revenue with innovative services for clients.”<sup>7</sup> Fortunately, in India, many young practices are now beginning to include a serious component of research in the last decade or so. “The move towards more structured research is part of a growing trend within the architectural community away from ‘core’ practice (designing buildings) towards using architects’ skills in other ways (such as generic

**Publishing of academic books is very challenging in the disciplines connected with the built environment, to say the least. Thus, the relative absence of research on architecture is reflected in publications.**

design skills, communication, community engagement, project management, and some scientific skills).”<sup>8</sup> However, there are still several barriers to overcome in order to broaden the research base of the profession.

### Research and Publications

The image of an architect the world over shifts between being a fine artist or an applied scientist, sometimes a combination of both. However, most iconic architects are credited with having a strong fine arts orientation. In India, besides the predominance of coffee table books, much of the writing on architecture oscillates between two modes of enquiry: an attractive monographic account celebrating the achievements of a star architect conceived of as the sole creator of the entire conception of buildings; alternatively, a narrative of style as a form of artistic evolution, largely unconcerned with the everyday context of

the built environment. Both modes of writing obscure the reality of team work in firms that increasingly mark modern practices; further they overlook the complex dynamics of architectural production. Publishing of academic books is very challenging in the disciplines connected with the built environment, to say the least. Thus, the relative absence of research on architecture is reflected in publications, in turn affecting the educational scenario directly and professional practice perhaps indirectly. In addition, by and large, there is no encouragement through awards for academic publication in the public domain.<sup>9</sup>

An increasing number of magazines promote what is called 'life style' to the upper most

**There is also the question of financial support for serious inquiry being extremely limited in our country with hardly any private, government or institutional resources/funding being available.**

sections of the society, focusing on expensive hardware selection, lights, decorative items and chic spaces. There is also proliferation of industry supported magazines such as marketing and real estate publications. Most existing magazines use descriptive or at the most exploratory writing. Writers in general have a dominant visual attitude, therefore students are often bewildered by the corpus of visual ideas. There is a serious lack of critical analysis when it comes to featuring projects in magazines. It is a sad fact that there is a serious dearth of peer reviewed journals in a country of 1.3 billion, which remains a challenge.

Another important fact to be noted is that many academic institutions have in their libraries a wealth of data collection based on

**We are facing knowledge challenges with the information revolution and the growing globalisation, the changing nature of architectural practice as well as the emerging directions in contemporary design.**

measured drawing tours and research theses mostly by post graduate students. Efforts should be made to select and collate these under various subjects to be made available for educational and professional purposes. There is also the question of financial support for serious inquiry being extremely limited in our country with hardly any private, government or institutional resources/funding being available. Unfortunately, the Council of Architecture and the Indian Institute of Architects have created no space for architectural research even in the 21st century.<sup>10</sup> Finally, we lack the tradition of archiving the work by practices, again this is changing in recent times but we have lost a lot by now. Centre for Environment and Planning Technology (CEPT) University has taken a lead in establishing a centre for built environments' archives "dedicated to preserving India's history of architecture, planning and design by showcasing the documentation tradition being followed at CEPT for more than five decades."<sup>11</sup> We need more such centres across the country with an urgency to create a collection.

### **The Future of Research in Architecture**

As the forces of urbanization and globalization intensify, we are face greater challenges to the built environments in India. They often

seem to fail in terms of aesthetic, functional, social and economic performance. With the predominance of ‘exterior architecture’, it is fashionable to view a building as a surface, an envelope, while neglecting the body as a mere container of functions. Today’s avant-garde is rather detached from the social realities of the unspoken citizens. But most of all “there appears to be a growing dissatisfaction with the

**We also have to address the problem of sharing research results in a way that makes them useful input into the design process. It is for the academic community to maintain the intellectual thrust of the profession through meaningful research and its dissemination via appropriate means.**

visual environment of the past few decades, in contrast to the positive feelings evoked by its historical predecessors.” (Sanoff, 1991). Thus, there is a vast canvas of spatial challenges for research and applications.

In the past, knowledge could be internalized through vocational training and professional experience. But, in the 21st century, the pace of change is such that there is a continuous need to create new knowledge. The world of design and planning has also become rather complex. The absence of substantial research in architecture in the post-Independence period has resulted in lack of investigations of crucial facets of the built environment. For example, the inquiry into the trajectory of Indian modernism is yet to be understood properly. Or, in spite of the importance of visual imagery, not enough studies are done to

analyse the visual features of our cities. There is a total and distressing absence of academic research into the pedagogy of architecture. We have also largely ignored the immense and rich range of heritage of vernacular traditions in various regions of India. We have not looked into contextual sources and references to seek the essence of the Indian tradition to develop an appropriate design vocabulary, nor have we analysed with seriousness indigenous approach to sustainable architecture. We are facing knowledge challenges with the information revolution and the growing globalisation, the changing nature of architectural practice as well as the emerging directions in contemporary design. Most cities in India do not have guidelines for urban design development even though its main focus is on improving the aesthetic and experiential character of urban environments. This is just to name a few areas where the lacuna exists.

In context of the above, it can be perceived that the area of architectural research in India should emerge as an important field in the 21st century. The requirement is for a closer and more intensive integration of research and practice, especially as the complexities increase in project scale, building types, infrastructure and services. We also have to address the problem of sharing research results in a way that makes them useful input into the design process. It is for the academic community to maintain the intellectual thrust of the profession through meaningful research and its dissemination via appropriate means. The discipline urgently needs to foster a culture of critical and serious research as well as engender a culture of criticism conspicuously absent. We urgently need a Centre for Architectural

Research at least at the national level (later at the regional levels) that creates a data base for educational and other research undertaken, organizes workshops and symposia, improves communication among researchers and between them and practitioners. ■

### Notes:

<sup>1</sup> See <http://asi.nic.in/>

<sup>2</sup> There is much more research work going on at the urban level.

<sup>3</sup> This was the first and perhaps the only seminar at national level initiated by me and organized with the support of CEPT University and the Indian Institute of Architects in Ahmedabad on architectural research at India level in 1994. We had about 75 participants.

<sup>4</sup> Indian Institute of Architects Newsletter, February 1994, Mumbai.

<sup>5</sup> There are, of course, exceptions but they are very few in numbers.

<sup>6</sup> <https://www.architecture.com/-/media/gathercontent/how-architects-use-research/additional-documents/howarchitectsuserresearch2014pdf.pdf> accessed on January 26, 2018.

<sup>7</sup> <https://www.ribabookshops.com/item/demystifying-architectural-research-adding-value-to-your-practice/83983/>

<sup>8</sup> <https://www.architecture.com/-/edia/gathercontent/how-architects-use-research/additional-documents/howarchitectsuserresearch2014pdf.pdf>.

<sup>9</sup> I was happy to note that the awards instituted by J K Cement has added the category of 'Literary Architecture' for publications for the first time this year.

<sup>10</sup> By contrast, the American Institute of Architects (AIA) supports its members through research initiatives and grants as well as an online information portal called the 'Building Research Information Knowledgebase (BRIK). (See <https://www.aia.org/>). The Royal Institute of British Architects (RIBA) also supports research projects, give awards for best research and holds symposia on the subject. (See <https://www.architecture.com/>).

<sup>11</sup> <https://indianexpress.com/article/cities/ahmedabad/cept-to-flag-off-archives-on-indian-architecture-design/>

### References:

Desai, Miki (2003). Definition, Criteria and Categories for the Documentation of Modern Indian Architecture. Proceedings of mAAN, 3rd International Conference, Surabaya, Indonesia, August 2003.

Lang, Jon. (1994). The Goals of Design Research Methodology and Methods, an unpublished paper presented at the national seminar on Architectural Research, CEPT University.

Sanoff, Henry. (1991). *Visual Research Methods in Design*. University of Minnesota: Van Nostrand Reinhold.

Snyder, James. (Ed.). (1984). *Architectural Research*. New York: Van Nostrand Reinhold Co.

Zeisel, John. (1981). *Inquiry by Design: Tools for Environment-Behavior Research*. Cambridge: Cambridge University Press.

### Other sources referred to:

Dye, Anne and Samuel, Flora. (2015). *Demystifying Architectural Research: Adding value to your*

practice. <https://www.ribabookshops.com/item/demystifying-architectural-research-adding-value-to-your-practice/83983/>

Desai, Madhavi. (2008). *Traditional Architecture: House Form of the Islamic Community of the Bohras in Gujarat*. Pune: Council of Architecture.

Lang, Jon. (1990). Architectural Design Theory and Education, an unpublished key note address presented at the University of New South Wales.

RIBA. ( 2014). *How Architects Use Research*. <https://www.architecture.com/-/media/gathercontent/how-architects-use-research/additional-documents/howarchitectsuserresearch2014pdf.pdf>.