

Fusion of Ancient and Contemporary Design Principles in the Works of B.V. Doshi

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Abstract—Ancient Indian architecture have been so glorified in past and recognized all over world for design principles of temple architecture water conservation in the form of step well called baoli in region of Rajasthan and Ahemabad, principles of vastu purpush madala for building design ,various principles of design for vernacular architecture in various parts of India.

This glory of India has been finished after India has lost its political freedom in the hand of Muslim and British rulers. Muslim rulers were very conservative toward their own religion and demolished so many temples and were more interested in Islamic architecture while Britishers were promoting their own colonial architecture. These rules hardly bothered about the local Indian people and their main objective was to rule India and exploit natural resources of India. The local traditional principles of architecture have been lost because the people involved in these professions were either forced or adopt the principles of design of these rulers. Many of these skilled workers of Indian architecture have migrated to other profession or adopted the new method of construction technologies brought by these rulers. This could be termed as Dark Age for Indian Architecture.

After Independence of India in 1947, many architects have continued the principles of design based on colonial architecture or modern movement of western architecture but few young Indian architects have started looking back of the glory of ancient Indian architecture and these architects were B.V.Doshi, Charles Correa, Raj Rewal etc.All these architects have aspired from ancient design principles of Indian architecture and exhibited these principles in their work.

B.V.Doshi has worked with two great Master architect of the world, Le Corbusier and Louis I.Khan and he has taken aspiration of principles of modernism from these two architects. After returning back to India, He had explored the ancient Indian architecture and he has developed an interest to create fusion of ancient design principles with principles of modernism. This fusion could be seen in almost all his works. This paper will explore fusion of ancient and contemporary design principles in four projects namely Sangath, Amdavad Ni Gufa, IIM Bangalore and NIFT Delhi.

Keywords: Traditional, Ancient, modernism, fusion, Ahmedabad.

1. INTRODUCTION

The role of B.V. Doshi in defining the new identity of Indian Architecture is unparalleled; he has defined this new identity through his work. His role is not limited as professional architect but his other role as educator of architecture in CEPT University may be more important. He has not influenced

students but his influence could be seen on faculty and practicing architects of Ahmedabad.

His approach to architecture was slight different then his contemporary architects like Charles Correa, Kanvidey, Raj Rewal. His approach to architecture has been always very classical and ideal approach.

2. B.V.DOSHI'S AUTO -BIOGRPAHY:

B.V.Doshi describes his own life in interview conducted by Ms Apoorva Bose as given below:

“I was in high school when a friend of mine who was into painting asked me to join a drawing class with him. That was probably the first step towards what I was going to do. When I finished my matriculation from Fergusson College and was going to join a Science course, he suggested me to go to JJ School of Architecture since I was good in Maths and Science. At JJ I met another senior architect who was going to London to appear for the RIBA examination. On his invitation to stay with him and appear for the RIBA examination I went to London. I was lucky to see Mons. Le Corbusier there. Thereafter I joined his atelier and worked on the projects he was designing for Ahmedabad and Chandigarh. Hence I came to India to supervise his works.

There are so many links in life and if you are aware of these connections, then one gets a direction in life. I got these links because I was always open and I allowed chance to let play game with life; I call it 'chance' since I had never envisaged it. Even today I work on the same model - anytime you will find me free and never occupied. We are instruments and we have antennas which are always getting signals - it is up to us to choose them and link them. We need to forgo prejudices since they which block life.”

His short biography reveals that he work on projects without prejudices of past and he is ready to accept the built environment emerge out of context. This also shows spiritual qualities in his living and reflecting in his architecture too which will be discussed in this paper later.

3. B.V.DOSHI'S PHILOSOPHY :

Doshi's states "I think architecture is a matter of transformation. Transformation of all adverse situations into favourable conditions". He states again about his work "For me its search, only a search. Search for that unknown that I have not known, neither I know how it will manifest .That's actually essence of my work". The statement clearly indicates that he is searching something new always which is indication of creativity of an architect. While talking about the transformation, he is clear about his objective of project and transformation should take place to meet these objectives but he is flexible in his approach to reach to these objectives.

The main key aspect of his philosophy remains the openness of ideas and he himself quotes the Gandhi "open the windows but see that your roof is not blown out, make sure that the foundations are strong." Doshi understand the importance of foundation and that is nothing but looking back to traditional architecture of India and he is opening to new window which are adaption with new technology, new living style etc, He has said "A deep understanding of the past and a comfortable relationship with the present was the only way that India could invent a sustainable future for herself, was his belief."

Doshi has many influences on his architecture and it could be observed in his projects but he never copied any one, even not his Guru, Le Corbusier. He has said "Le Corbusier was like a guru to me. He taught me to observe and react to climate, to tradition, to function, to structure, to economy, and to the landscape."

Doshi's work reflects the interrelationship of indoor and outdoor spaces and he focus on openness through colonnades, pergola, porticos, skylights etc. He does not only focus on design but gives important to many other factors and in his own words "success of any project depends on effective construction, contracting, logistic planning and co-ordination".

He adopts various design principles in his work given below:

- **Flexible rather than rigid approach to the structure**
- Timelessness in his architecture.
- Mythical sense –moving beyond historical examples of his own region
- Transformation between the building and the people that transcends the functional use.
- The notation of flexibility and symbolism.
- The architectonic scale and massing (vaulting), the clear sense of space and an attraction towards materials remain thematically strong throughout his works.

Doshi made an intensive and sustained study of traditional Indian philosophy and ancient architectural texts, while maintaining a deep commitment to modernism.

4. SANGATH, AHMEDDABAD:

This is office of Doshi and recognized as one of the finest building designed after Independence of India. The building has completed in 1980 and being recognized as landmark for sustainable buildings in India. The site area of project is 2346 sqm and built up area is 585 sq.m. The main function of project include studios, multipurpose hall, printing, accounts, conference room, meeting room, workshop on the ground floor and pantry , guest room ,vastu shilp foundation research center on the first /second floor .

The name of complex is given "Sangath", means "move together through participation" and the purpose of complex is not create an conventional office but goes beyond it . This complex has unique research facility funded by Vastu Shipa foundation for experimentation in arts, crafts and various technologies of construction. He always advocates the architecture is not just built mass but it represent life so he wanted exploration of artistic, social and humanistic dimension along with core architecture in this complex.

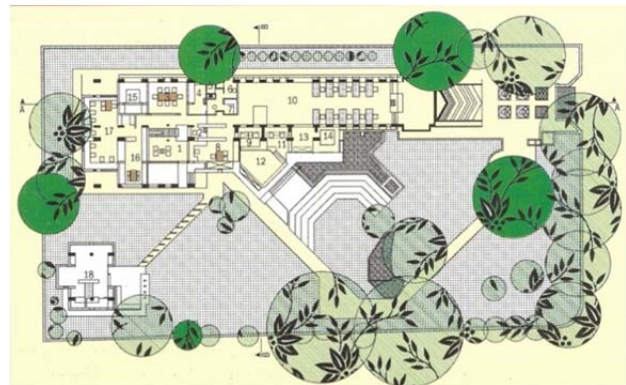


Fig. 1: Ground floor plan

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|--------------------|----------------------------|--------------------|-----------------|
| 1. Lounge | 5. Ladies Toilet | 9. Secretary | 13. Photocopier |
| 2. Reception | 6. Gents Toilet | 10. Studio | 14. Model room |
| 3. Conference room | 7. Painter | 11. Engineer | 15. Accounts |
| 4. Peon Room | 8. Architect's office | 12. Model workshop | |
| 16. Library | 17. Vastu shilp foundation | 18. Record room | |

The concept revolves around the vaults seems to be influence from Louis I Khan's Kimbell Museum in Fort Worth but Doshi has dealt this basic form of vault in very different manner. He has tried to represent Ancient Indian architecture especially village environment through manipulation of the stepped garden and different heights as well directions of vaults. Brisbane based designer Clare Elizabeth Kennedy shares her thought on Sangath and she stated " From his

earliest sketches Doshi thought of Sangath as both a traditional subterranean network of vaulted spaces (the studios) and a village climbing up a hill (the garden). It was never intended to just be an office but also a public square, an amphitheatre, a garden and a work of art.”

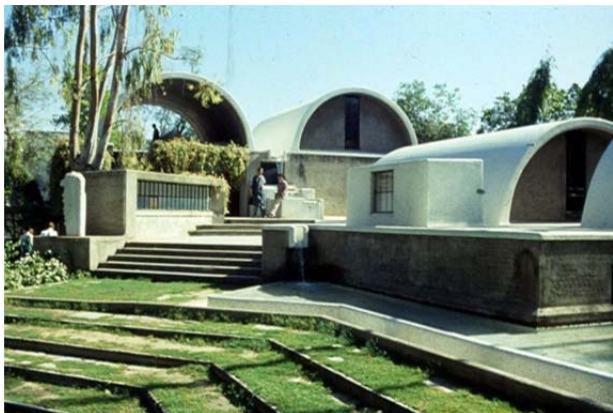


Fig. 2: Front Garden, Terrace, water body



Fig. 3: Natural Day Light in studio.

Doshi state that “In my opinion, supreme among architectural experiences are ones which occur in spaces which could be characterized as pause. These spaces activate the human psyche and induce it to sink towards the centre...the mythical world of man’s primordial being.” This philosophical idea has been applied on Entrance of building in such a manner visitor got pause and discover the entire building, landscape and Doshi himself put it, ‘The approach is never axial but diagonal, to make one discover and absorb the building before entering it.’ Doshi described as the essence of life in Indian villages, “sharing, because we must learn to respect the priorities of the other person are as important as their own.” For sharing and interaction, he has provided garden in form of steps and moving further from these steps, terrace of building is accessible. The staff of office used to take lunch in this garden and sometimes Doshi used to interact with visitors and staff on the terrace of building.

Concept of sustainability was not so important in India at this point of time but Doshi had design this building as a sustainable building which shows his far-sightedness for Indian Architecture. He has used many principles of sustainability in this complex as mention below:

1. He has used natural light in whole building through various means. He has used flat portion between vaults to allow the light in studio from north (diffused light), used

Skylights, small cutouts in roof slab.

2. Use of water in building through water channels in roof and water pond to create micro climate in hot semi arid region of Ahmedabad where temperature reaches to 45⁰ C.

3. The use of hollow clay tiles on the walls and mosaic broken tile (waste) on the roof to reduce the heat gain in building .This is traditional technique and this procedure have been experimented by Antoni Godi in his project “Parque Güell” at Barcelona.

Architectural Historian William Curtis quote “Sangath is a fragment of Doshi’s private dream: a microcosm of his intentions and obsessions. Inspired by the earth-hugging forms of the Indian vernacular, it also draws upon the vault suggestions of Le Corbusier. A warren of interiors derived from the traditional Indian city, it is also influenced by sources as diverse as [Louis I. Kahn], [Alvar Aalto] and [Antonio Gaudi]. A work of art stands on its own merits and Sangath possesses that indefinable quality of authenticity. Even local labourers and passing peasants like to come and sit next to it, enjoying the low mounds of the vaults or the water-jars overgrown with creepers.”

It can be concluded that “Sangath” is Master Piece work of B.V.Doshi. This is not recognized as one of the best building in India but is recognized all over world. This building draws aspiration from so many ancient buildings as well contemporary architecture but at the same time, it is so well integrating all elements together which make this building unique.

5. AMDAVAD NI GUF,AHMEDABAD:

This building is situated in CEPT Campus Ahmedabad and considered one of the best projects done by B.V.Doshi so far. The project is completed in between 1992 -1995.

The main function of building is exhibition gallery displaying the painting made by M.F.Hussain . These painting belong to Paleolithic art- Paleolithic art is the art of most recent ice age. This art form came during 1400 B.C – 13500 B.C.

The concept of this building is based on creating environment of cave and generates feeling of Paleolithic age inside when early man lives in cave and draw painting on wall. To create the feeling of cave, Doshi has sunken the whole building and only dome outside visible. This sunken also help in reducing heat gain of building in harsh climate hot semi arid region of

Ahmedbad. The dome are inspired by Buddhist stupa and made up of shell structure, the material used in this shell was concrete, layer of vermiculite followed by mosaic of pieces of broken china. The mosaic treatment resembles to dome of Jain Temples at Grinar, reflects the direct sunlight and creates less heat inside the building. The skylight has been given in this dome in such fashion to create dramatic effect of light inside the cave and also highlighting the art form. The skylights are also oriented to allow maximum sunlight and less heat gain. The domes are aligned in different direction with different heights and also skylights of various domes aligned in different direction to create artistic feeling of the project from outside. The column, walls etc have been molded in such fashion that fluidity become essence inside this Gufa, the fluidity is appropriate for exhibition of painter.

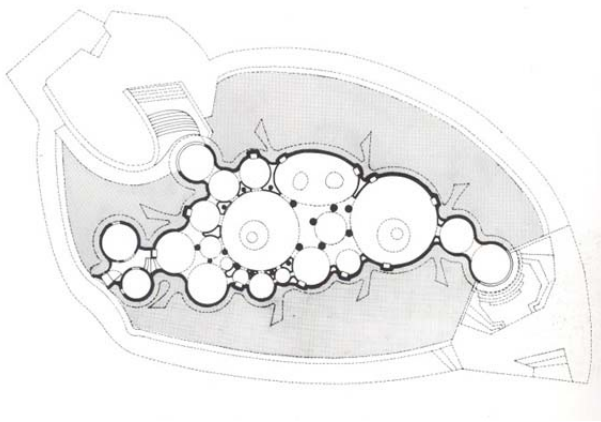


Fig. 4: Plan of Gufa



Fig. 5: View of Gufa from outside

B.V.Doshi has stated in one interview that “The Gufa design was also based on similar intentions of energy efficiency- but saw the relevance of use of computer technology due to Gufa’s complex design. We couldn’t use regular masons so we used tribal people from the neighbouring villages. Structurally, it was a challenge to design the configuration between the horizontal curved surfaces and the inclined vertical supports where the configuration changed. Challenges were that of structure, technical issues and unfamiliarity of forms, space and light.” This statement indicates the good designs are

always difficult to execute in India but good architects like B.V.Doshi accept these challenges of technology / construction and start new direction for future generations.



Fig. 6: View of Gufa from inside.

It can be concluded that form of this project reflects identity of its function i.e. reflecting artistic function through fluidity and dramatic effect of light. Doshi has explored the principles of ancient Indian Architecture e.g. use of stupa’s wisdom in making dome, Hussain Gufa like Ajanta Gufa etc but at the same time he is adopting new construction technology to built this very complex form and structure.

6. INDIAN INSTITUTE OF MANAGEMENT (IIM), BANGALORE:

This is most prestigious project design by B.V.Doshi and scale of project is very big. The site area of campus is around 102 acres. The campus is completed in 1983 and the main function component includes Academic Complex, Seminar Hall, Faculty Room, Library, Administrative Section, Auditorium Student Dormitories, Development Centre, Faculty Housing, and Dining /Kitchen. Doshi has already explored campus design of CEPT prior to this campus design but he wanted to create new vocabulary for future Institution design. He has experimented various possibility of spaces, landscapes etc in this campus for students interaction or other social interaction to make campus alive.

The concept of this campus derived from the Mughal City Fatehpur Sikri having series of squares, courtyards, passage and colonnades. Doshi reference this complex as “Bazaar of

Education”. In the complex one experience of weaving of Indoor and outdoor spaces in transition.

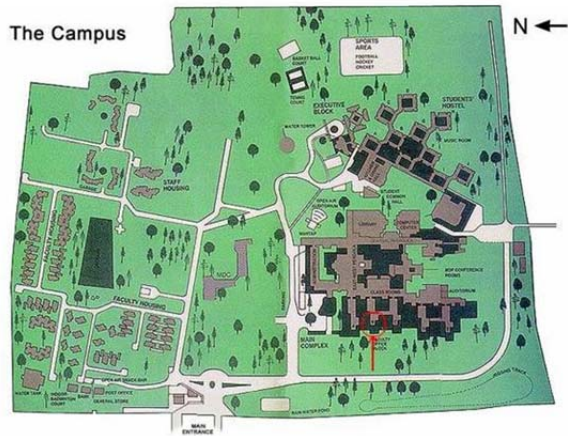


Fig. 7: Site plan of Campus

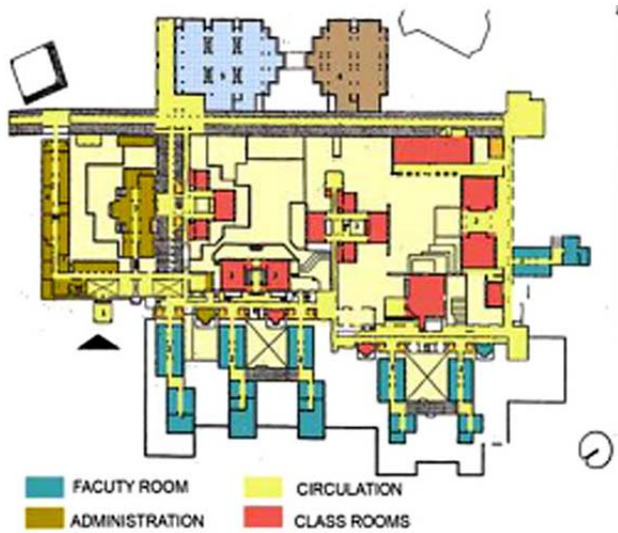


Fig. 8: Main block (Administrative and Academic)

The most important aspect in campus planning is segregation of vehicular and pedestrian circulation. There are three vehicular roads, one for housing, second for main block and hostel and third is service entry for dining area. The whole complex has been divided into four zones, faculty and staff zone, administrative and academic zone, hostel zone and sports area. The administrative and academic zone has been linked to hostel area through pedestrian for easy access. The hostel block and main block has been put to forms a grid of quadrangle skewed at 45 degree angle.

The main block consist of administration office, classrooms, labs, library has been arranged datum in a ladder like pattern. This block has been design to form series of courtyards and terrace at different level which are linked through corridor and

verandah. The teaching process could be done in open acting as random pavilions and width of corridor has been modulated to allow casual interaction. The corridors have been worked out in such a to allow light through pergola’s and roof on some part for walkway. The landscape spaces in corridor create interest for users as well shading.



Fig. 9: View of Corridor

It can be concluded that Doshi has achieved the functional planning of campus in terms of zoning, circulation etc but at the same time he has integrated nature so well, the relationship of outside and inside worked out so well, all circulation spaces are not only act as connector to different spaces but themselves act as feature of building which is very good sign of any complex. Doshi as usual has taken aspiration from principles of design of ancient city Fathepur Sikiri but at the same time he is giving new vocabulary of spaces in present demand of modern campus.

7. NATIONAL INSTITUTE OF FASHION TECHNOLOGY (NIFT), DELHI:

This project has been designed by firm Stein, Doshi and Bhalla architects. These three persons have worked together but design of NIFT considered as Doshi’s Project. This project has been completed in 1986 and site area is around 3 acre. The project is situated in Hauz Khas, New Delhi.

The complex is supposed to act as recourse center consisting of library of an Indian and Western garment and textile collection , a i laboratory and design studios, not only used for the industry , but as an example to general public , as well exporters showrooms , textile manufacturer’s showrooms and outlet for sale of cloth and textile . The requirements were very exhaustive and site area was very less, so almost the whole site has been occupied except 6 m set back. Doshi has created stepped court and water channel in middle aspiration from step well (baoli) of Ahmedabad which is considered a water conservation in ancient Indian architecture. This water channel is very narrow and long, so it gives direction to reach main entrance of building. Fashion needs very changing demand with respect to time, Doshi has created various

display galleries, low and high platforms, areas for formal and casual activities and court fulfills all need of the functions of buildings .The two courts are main feature of building and occasionally act as interactive space, steps of the courts act as sitting space.



Fig. 10: View of sunken court

The façade of building shows modernity by using glass and also circulation on upper floor design in such fashion to overlook courts, the bridge between two courts also gives feeling of unity in the whole building.

It can be concluding that Doshi has derived the idea of court from ancient architecture but he has changed its vocabulary to function of building. He has used so much glass on façade of building contrary to his philosophy of sustainability but it might be requirement to show modernity.

8. CONCLUSION:

B.V.Doshi has worked with two great Masters Architect of the world Louis I Khan and Le Corbusier and it is very difficult to come out from the shadow of such Master architect but still Doshi has tried to create his originality in architecture by using the principles of ancient architecture along with modernism learned by these two Master architects. He has whole heartedly accepted the influence of both architects.

As discussed above, the four projects shows fusion of ancient and contemporary design principles in very different way. For roof form, he derives ancient design principles of Stupa's for

Hussain Doshi Gufa and contemporary design principles of Kimbell art museum for the Sangath. For campus planning, he derives the ancient design principles from Fathepur Sikiri for IIM Bangalore and ancient design principles of step well and courts for NIFT campus. It is interesting to note that it is difficult to trace these aspirations until and unless B.V.Doshi himself state about these aspiration. B.V.Doshi maintains his originality in detailing out these fusions of ancient and contemporary design principles.

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