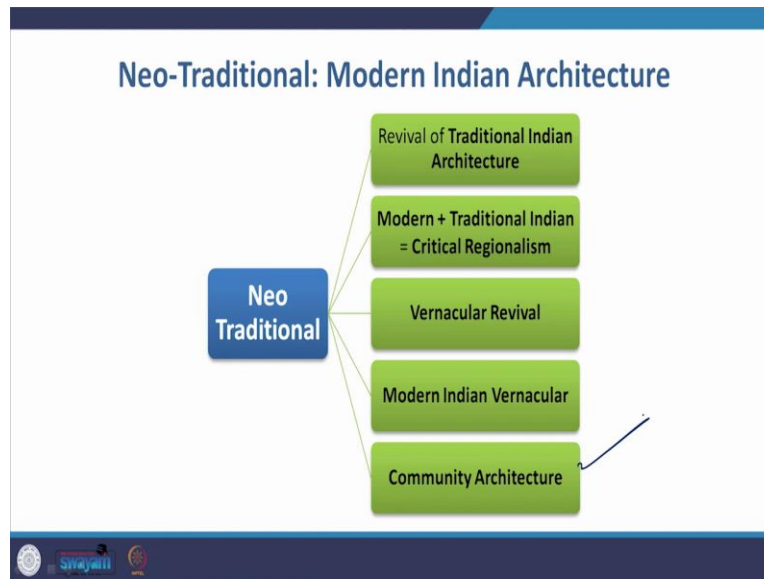


**Modern Indian Architecture**  
**Professor P.S. Chani**  
**Department of Architecture and Planning**  
**Indian Institute of Technology Roorkee**  
**Lecture 27**  
**Introduction to Critical Regionalism – Part 2**

Hello students. We will continue our study of Critical Regionalism with Part 2 of Introduction to Critical Regionalism.

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Now, you will be wondering if I am talking about critical regionalism, why is it? That last time I went in other direction. Why is it that? Instead of talking specifically about critical regionalism, I talked about.

Revival of Traditional Indian Architecture, the vernacular revival and modern Indian vernacular, because the basis of critical regionalism that is derivation from either traditional slash vernacular architecture forms the basis of all these five derivations, and therefore, the essential word being Neo traditional, the revival of traditional architecture in modern architecture or modern Indian architecture. So, we saw all the five strands.

So, let us now come to community architecture in the revival of traditional Indian architecture, I have talked about how our historical texts are playing a role, along with modernism in the works

of architects like K.T. Ravindran, for example, in the Raghunath house, or Charles Correa design of the Vidhan Bhavan Bhopal, when I talked about vernacular revival.

I talked about straight vernacular revival that you find in several projects, like for example, the works of a Sant Revati Kamath, you found in modern Indian vernacular, this whole lot of buildings being built all across India, which are an eclectic mix of traditional features, even colonial features.

Or even modernist features coming in from European Classical Architecture, like in the works of Hafeez Contractor, and giving us a new architecture, which John line coins that as modern Indian vernacular. This has been widely criticized by academically leaning architects, but there continues to be no dearth of people wanting houses and buildings like that. It has been, for example, a developer's dream that what Hafeez Contractor has done, for example, in Mumbai.

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**Community Architecture**

Efforts to improve housing conditions – consistent problem since independence & partition

One such initiative – ‘Sites and Services’ – much propagated in 1970s

Provision of plots of land, either on ownership or land lease tenure + bare minimum essential infrastructure needed for habitation\*

Architecture as system and process rather than finished structure

\* www.gdrc.org

D.V.R. Rao, Housing of squatters in Delhi - Search for a solution, Urban and Regional Planning Thought, vol. XVI, no. 2 (April 1973)

Let us now come to Community Architecture. There has been an effort to improve our housing conditions, housing continues to remain one of the most critical problems of built environment in India, shelter for our people. It has been a consistent problem since independence, and partition, if you remember my early lectures.

I talked about how CPWD had to work on a war footing to provide for houses for this huge influx of population in India, the refugees that were coming in, plus the growing Indian

population. And one such initiative many, many, many ways were tried to speeden the process of housing for our people, especially the economically weaker section, the low income group, and many of the ideas have not succeeded.

Many ideas have continued to remain only on the drawing board. Now, one of the ideas that did play some important role in the 1970s was called as sites and services. That is the provision of land either on ownership basis or on a lease basis, with bare minimum essential infrastructure that is needed for a habitable accommodation.

Now, you can refer to the GDRC document, the website GDRC dot org, to know more about sites and services. So, architecture here is not as a finished product. It is not a finished building. It is more of a system and a process. Here for example, is an example by DVR Rao as a search for solution. Urban and Regional Planning thought, housing of squatters in Delhi, he came up with this in 1973.

So, here is a squatter habitation where I believe the basic amenities have been provided. Now the squatter as he gets the resources, starts building on it, makes it bigger, makes a pakka house convert provides the barsati on the pakka house and makes it a two floor house. So, what is sites and services if we try to now break it up for you?

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**Community Architecture**  
Sites and Services

Low-income people in urban areas given opportunity to build own house as per availability of resources

Failure of conventional housing solutions + ingenuity of low-income group to house themselves

In third world/developing economies

Eg. Arumbakkam, MMDA – social facilities (primary schools, clinics etc.), roads and serviced building sites with sanitary core



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Low income people in urban areas are given the opportunity to build their own house, as per the availability of their resources, when they have the money, when they have the resources, they can continue building the structure. Therefore, this also in a sense represents the failure of a conventional housing solution.

When we build a house for the economically weaker section, we build a series of flats, and we hand them over, the reason, as we have moved forward in our economy, even a bare minimum accommodation is out of reach of the economically weaker section.

And it is also a failure because huge influx takes place from people from rural areas into urban areas every year. And these people who come in search for jobs end up living in slum areas. Now, the solution for that is how can we solve their problem of housing. So, the ingenuity the other thing is this, these people who land up in cities are very innovative, that they are able to create a dwelling for themselves.

And they are able to see to it that they have some kind of shelter to weather against the climate around them, are we able to have a protective shelter for them and their family. Of course, it is not a pakka dwelling many times it is not something that anyone would prefer to have. But it does reflect the ingenuity of the low income group to house themselves.

Now in third world and developing economies, the idea came up of sites and services. One example is a Arun Bakkam sites and services program by the MMDA Madras Municipal Development Authority, where I am sorry, Madras Metropolitan Development Authority, where the social facilities like primary schools and clinics etcetera were provided in the entire community development along with road networks and service building sites having a sanitary core.

Now the sanitary core was provided in a manner that you could have your the flush facilities, the water facilities, the sanitary, that was the only thing that was provided, and then they could build on that. So, today, if you go to Arun Bakkam you will find that the houses are all different from each other, simply because the client himself the owner of the property is the one who is putting the building together. And it is done in a manner that as he gets the resources he keeps on building, or when his family expands he keeps on building.

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**Community Architecture**  
Sites and Services

Varying designs as residents responsible for own house construction

Vernacular but seeks a modern solution for contemporary housing problem

Procedural principles:

- Participation of users in design and construction
- Participation of workers in entire decision-making process
- Multi-disciplinary design consultants

E.g. Aranya Low Cost Housing, Indore, B.V. Doshi, 1988

The slide features a 3x3 grid of aerial photographs showing different housing units. A red line is drawn across the top of the grid. The slide also includes logos for 'Swayam' and '5' at the bottom.

So, there are varying designs that happen as a result of this, because the residents are responsible for their own house designs. Its vernacular, but it seeks a modern solution for a contemporary housing problem. It is a vernacular approach. It is an approach of the local person, the local people building that house, but it is a modern solution, a rationally interpreted solution for a modern time.

So, the procedural principles are these. It is the participation of the user in the design and construction of the dwelling. It is the participation of the workers who are making the building in the entire decision making process of the dwelling. And then there are multidisciplinary design consultants always available to support the project. Another example of sites and services which is much more well known in India is the Aranya Low Cost Housing by in Indore by BV Doshi in 1988.

It is also in site and services. If you look at this example, there is the sub plots that have been cut out here that you see and let us take a site. So, here, the basic site has been provided, there is an option of providing a kitchen and then the sanitary and the water facilities are provided. Now the owner starts building it.

So, he completes the washroom unit, he adds a small room to it along with the washroom unit in our Aangan behind. Then he completes the dwelling further, keeps on building on it, building on it as he gets the resources. That was the idea.

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**Community Architecture**  
Sites and Services I Aranya

Aimed at EWS residents - simple plinth, service core (latrine + water tap or bath) and option of a built room (Kitchen)

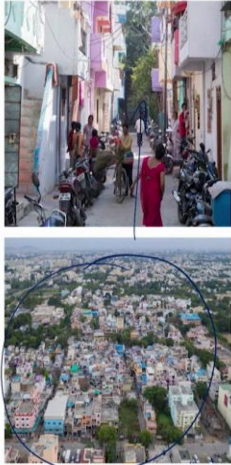
All connected to water and electricity

Unconventional configuration of plots and public spaces

The aim of at EWS , economically weaker section residents was that it was aimed at EWS residents and the intention was to provide them a simple plinth, service core having a latrine a water tap or a bath and an option not necessary, but an option of a built room. So, this is a picture of where the latrine or the service core has been provided. And that is it.

This is the overall Sectoral Lay Out of the Aranya housing colony or housing project, and all are connected to water and electricity. But the configuration of the plots and public spaces is unconventional and I will explain that to you.

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**Community Architecture**  
Sites and Services | Aranya

With Vastushilpa Foundation - Doshi preferred to:

- **Analyse social structures** and **unfolding of everyday habits** into spaces
- **Observation and study of traditional ways of living** and **residential structures** built by **anonymous architects** – tried to look beyond **aesthetic considerations**

7

Why is it unconventional? Now , with the Vastushilpa Foundation, Doshi preferred to analyze social structures and unfolding of everyday habits into spaces, he also observing and studying traditional ways of living and residential structures that were built by anonymous architects. And he tried to look beyond only the aesthetic considerations.

So, this is what the Aranya housing project looks like aially, and this is one of the lanes of the project today. As you can see, all the dwellings they are not of the same type because each owner has built according to his resources, and need.

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**Aranya**  
Sectoral Planning

7000 plots for approx.  
65000 people

65% plots for EWS with  
separate plots for HIG –  
integrated into scheme

Unconventional  
configuration of plots and  
public spaces

Residential commercial N

8

Now, there were 7000 plots in Aranya housing in the sectoral planning approximately for 65,000 people 65 percent plots were reserved for the EWS and there were separate plots provided for the high income group, which were integrated into the scheme. Now, what is the unconventional part? That this is not grid and orthogonal plan, it is having this unconventional approach to street layout with a pockets of spaces in between breaks in between, rest spaces in between, etcetera. And then they are connected to a larger central core.

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**Chandigarh ~ Aranya**

Sectoral planning in both

Grid-Iron orthogonal grid ~ non-orthogonal layout, with unconventional arrangement of plots and public spaces

Chandigarh – fully developed housing ~ Aranya – Sites and services

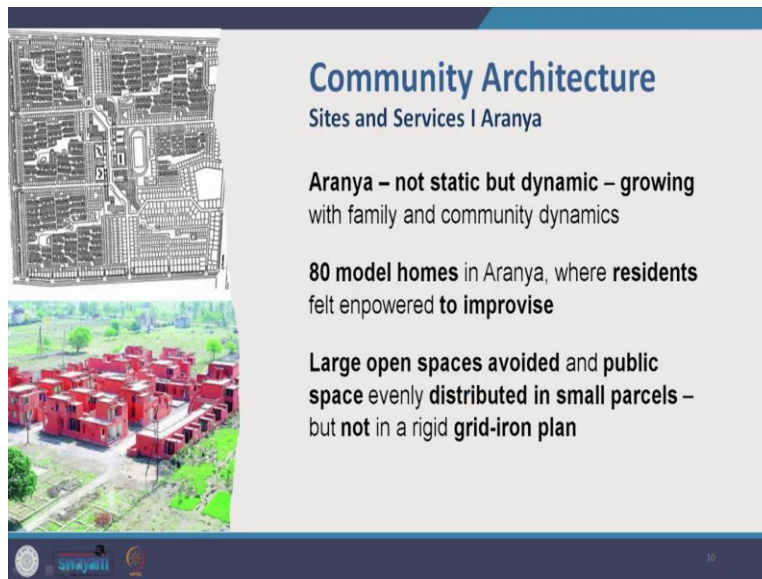
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Now, Sectoral planning is evident in both Chandigarh and Aranya. Now, the grid-iron, but let us look at the differences, in Chandigarh, we have a grid-iron, orthogonal grid that you see here. And I am not comparing the size because the size of Chandigarh it is a city. Aranya is just a project in a city, but I am looking at the concept of the planning itself.

So, there is sectoral planning, of the neighborhoods of the sectoral planning with neighborhoods in Chandigarh, all laid out in a grid-iron versus a non orthogonal layout in Aranya housing, an unconventional arrangement like I said of plots and public spaces. Chandigarh is fully developed housing , Aranya is a sites and services scheme.

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**Community Architecture**  
Sites and Services | Aranya

**Aranya – not static but dynamic – growing**  
with family and community dynamics

**80 model homes** in Aranya, where **residents**  
felt empowered to **improvise**

**Large open spaces avoided** and **public**  
**space** evenly **distributed in small parcels –**  
but **not** in a rigid **grid-iron plan**

Aranya is not static, but dynamic because it grows with the family and the dynamics of the community. 80 model homes were created by BV Doshi, these are the houses that he created, and where residents felt that empowerment they could improvise. Large open spaces were avoided and public spaces were evenly distributed in small parcels throughout the project, but not in a rigid grid-iron plan as I have stated.

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**Community Architecture**  
Sites and Services | Aranya

**Small pedestrian cul-de-sacs**  
smallest unit of communal space

Actually **service slots** created by **eliminating 1 or 2 plots** in a block

**Access + efficient single point connection** for water and sewage for upto 6 units

**Service mains in alternate streets** – infra. **cost reduction** by about 30%

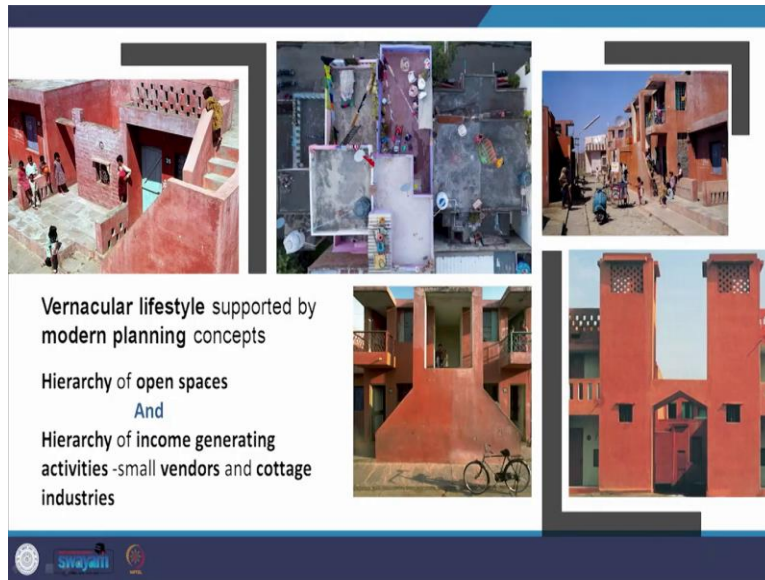
**Larger squares** – notes for **interconnecting network** of streets

Now, when you come to the project itself, there are these small pedestrian cul-de-sacs that you can see for example, here, and in other places. What happens here is actually that the service lots have been created by removing one or two plots from the block and axis and efficient single point connection to water and sewage is provided, for example to at least six dwellings, let me show you that here.

This is one dwelling, 3 4 5 and 6 dwellings. And this is these are the units of these dwellings that you see here. And so the access easily connectable water connections, the cost came down by 30 percent in the project infrastructure costs, because only every alternate street needed to have these points of connection, and that also you could have a common connection for up to 6 houses simultaneously.

So, this was a very intelligent way of planning, because this is a typical, modern, rational way of looking at a housing problem, lowering the cost of the project, at the same time able to create the spaces that are typically needed, which are traditional Indian spaces, pauses and rest within the overall site plan of the project. Small niches and corners if people can take a break, people can rest. The tree has been planted you can put a charpai underneath you can rest and there is also a larger square. Here, for example, where there is a network of streets connected with it.

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There is other things also, this pauses, these cul-de-sacs these open spaces that have been created are also the points where a cottage industry can thrive, small vendors and small cottage industries, papad making and other such projects, which for example, the housewife can take up to supplement the income of the family spaces were typically vernacular spaces.

So, relatable to an Indian vernacular context have been provided. And look at the intelligence of the solution because these spaces are coming up, because you are trying to save the infrastructural cost of the service provision of sewage and water connections. So, two things are happening simultaneously, both beneficial to the project, a modern solution with a vernacular subtext. The vernacular lifestyle is supported by modern planning concepts. There is a hierarchy of open spaces and hierarchy of income generating activities like small vendors, and cottage industries.

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**Community Architecture**  
Belapur ~ Aranya

Belapur Housing, Navi Mumbai, Charles Correa, 1983-86 ~ Aranya Low Cost Housing, Indore, B.V. Doshi, 1988

Modern zoning and planning were applied along with essence of local vernacular architecture

Both break monotony of modern and functional blocks and slabs – standard housing approach in India

Hierarchy of open spaces ~ Continuum of spaces

Another example of community architecture but different from Aranya is again Belapur. Now you will tell me so you talked about Belapur when you were talking about vernacular revival. True. So, in fact, Belapur falls, in a sense in both categories. It is a vernacular revival of an Indian village in a modern context, but it is also an example of community architecture.

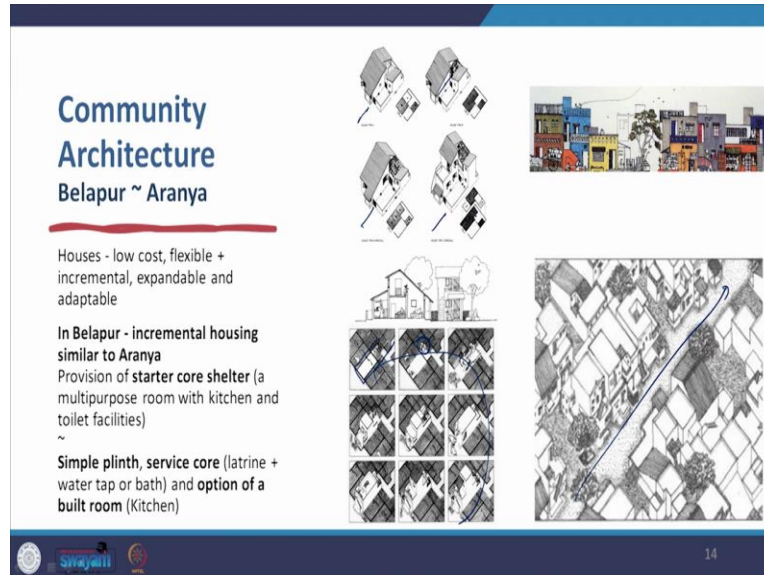
In Belapur housing in Navi Mumbai 1983 to 86 comparing it with Aranya in 1988. Modern zoning and planning has been used in both and there is an essence of local vernacular architecture. Both break the monotony of modern functional blocks and slabs, and bring in a standard housing approach, which was at the time a standard housing approach in India, these slabs and block constructions.

In both cases, there is a hierarchy of open spaces which Charles Correa defined in his book as continuum of spaces, there is a series of spaces hierarchy from small to big to bigger spaces. We will come back again to that of Charles Correa definition but to put it this way. Correa defines it by saying it is the courtyard of the house, opening up to a bigger courtyard amongst the cluster of houses opening up to a larger court, which is among a series of clusters and then moving out towards the maidan and the fields of the village.

So, for example, if you look at the Belapur plan, you have this space, which is the smallest space in within the cluster, then you have a space which is between various clusters, they have their individual spaces and a larger space between the clusters. And then each cluster unit comes

together to create a much larger central space. So, this hierarchy that you see is what he calls the continuum of spaces.

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Now, houses in both cases were supposed to be low cost and flexible, they are incremental, expandable, adaptable, but in Belapur, the incremental housing, those similar to Aranya is provided on the basis of, what is called as a starter core shelter? That means a basic shelter has been provided in Belapur, which has a multipurpose room with kitchen and the toilet facilities.

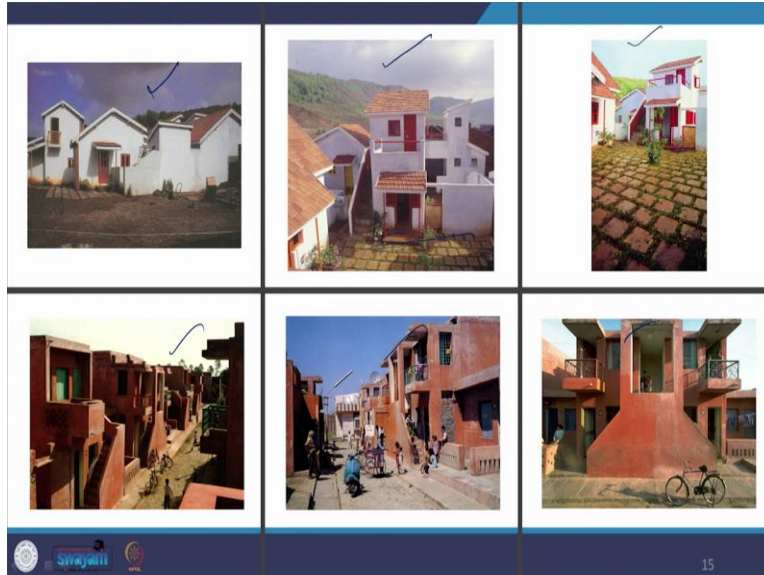
Whereas in Aranya, we come down to the brass tacks, it is a simple plinth with the service core and the option of a kitchen unit which may or may not be there. So, if you look at it, the Aranya housing begins with this, at most the service core has been provided and then the client builds on it.

This is a street example of Aranya and here you see in Belapur, you begin for example, with some basic structure of a room or kitchen and the service core, you build on it, you build on it, you build on it, rather I think I am going in the wrong direction, but you can study it later, how he is building on it?

And increasing the over all the how incrementally the house is growing. So, in that process of incremental growth, it is identical to Aranya. But it is more controlled. The overall expanded house is more symmetrical in its final product versus Aranya. Where various kind of facades or

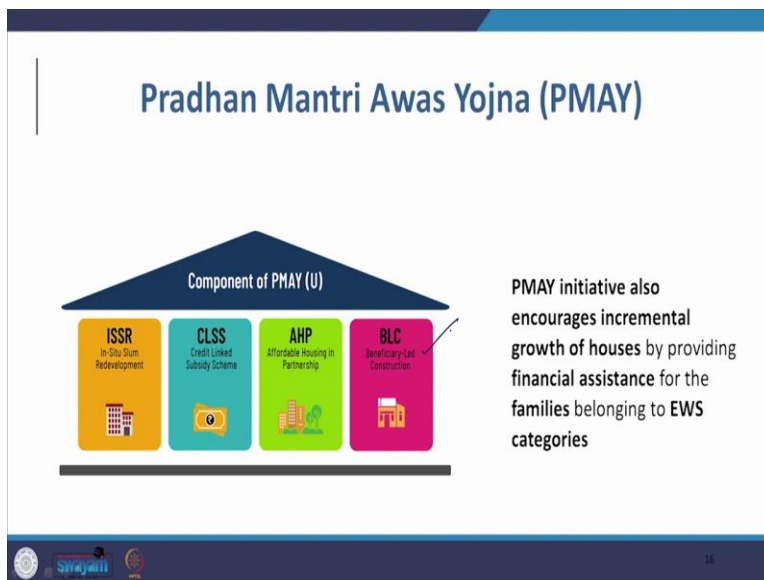
various kind of houses can come up. And in a sense, the starter core shelter gives a head start to the client, because it gives him a basic dwelling to begin with.

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These are the pictures to show that how the two housings have developed , the central court in the village et cetera. And then this is the example of Aranya. Both are amazing examples of how to find a solution for housing for EWS.

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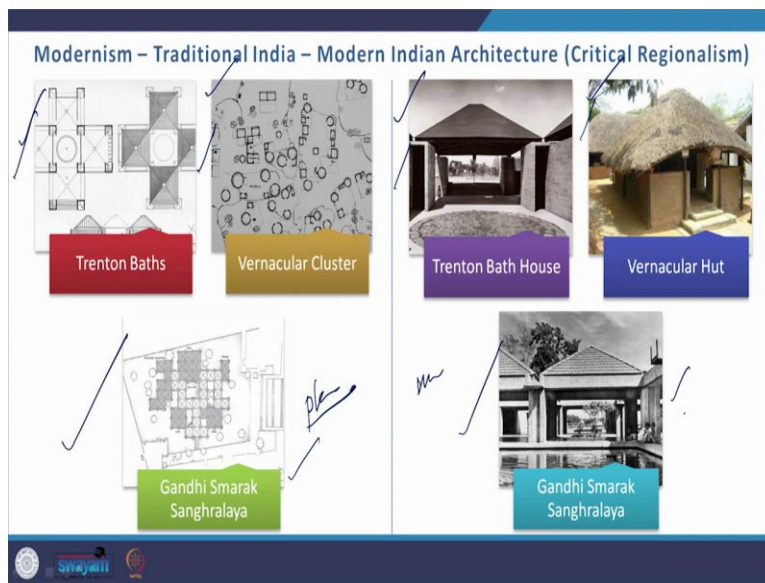


But they did not work out to be viable schemes on a mass level in India, particularly post liberalization, when the funding for the government resources for such projects were reorganized in a sense. And now we are working with a much more quantifiable approach, the quantifiable approach because now, the game has changed entirely.

We need millions of houses I think the requirement is around 2 million houses. I would look it up that , I will come back to you with this data, because later on when we talk about a search for a new architecture in India, we will have to refer back to this problem. But definitely you would have heard of the Pradhan Mantri Awas Yojana or the PMAY.

Now the PMAY initiative also encourages incremental growth of houses by providing financial assistance for the families belonging to the EWS category. So, it is also called as beneficiary led construction. PMAY is trying to strike at the very root of the problem EWS housing, and I hope that we will have an opportunity at the end of the series to focus in a small way on this approach of trying to solve the problem of housing in our country.

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Now, let us come to critical regionalism in actuality, what is critical regionalism as one of the subsets of Neo traditionalism? Modernism in traditional India led to modern Indian architecture. So, modern plus tradition, let us take an example. This is Trenton Baths designed by Louis Kahn, and this is a Vernacular Cluster of village houses in one area of India, put it together. And we have the cluster organization, the overall layout of the Gandhi Smarak Sanghralaya.

Again you take the Trenton Baths, again, you take a Vernacular Hut, and you come up with the single module of the Gandhi Smarak Sanghralaya. That is what critical regionalism is in overall planning. And in a single unit, you take a western model, you can connect it to an Indian or a vernacular model and get a critical regional plan or a modern Indian regional plan.

You take a western example a modernist example, connected to a vernacular hut and you get a module which is regional Indian. This is one of the strongest symbols of modern Indian architecture.

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**Even before – Indian architects subconsciously pursuing the idea in their building design vis-à-vis:**

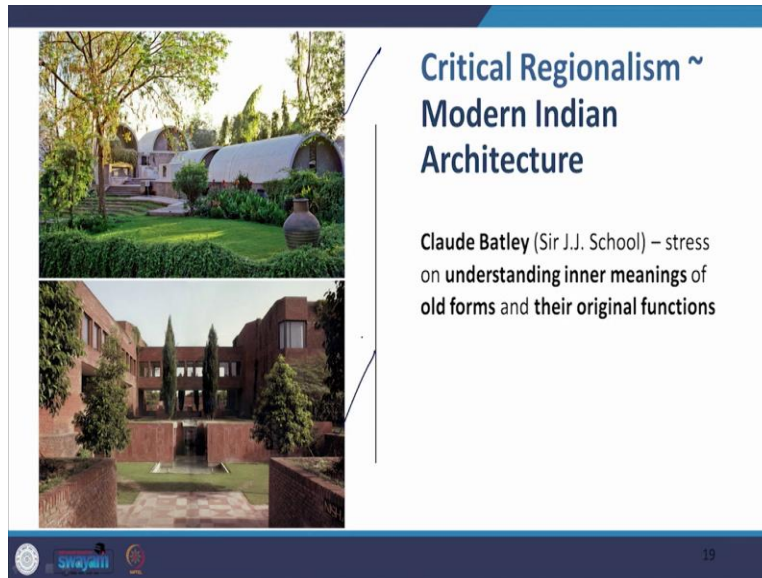
- **Siting** of buildings
- Use of **light and shade**
- Nature and use of **materials**
- **Construction** process
- Use of **climate responsive features**
- Use of **traditional elements in a modern context**

At the bottom of the slide, there are logos for IIT Bombay and Swayamii.

Even before, even before we were with Kenneth Frampton, defining critical regionalism as a term in 1983. Indian architects were subconsciously pursuing this agenda. The ideas in their buildings design, were connected to the siting of the building, use of light and shade, the use of materials, the process of construction, climate responsiveness in their design, and the use of traditional elements in a modern context example, India International Center by Stein.



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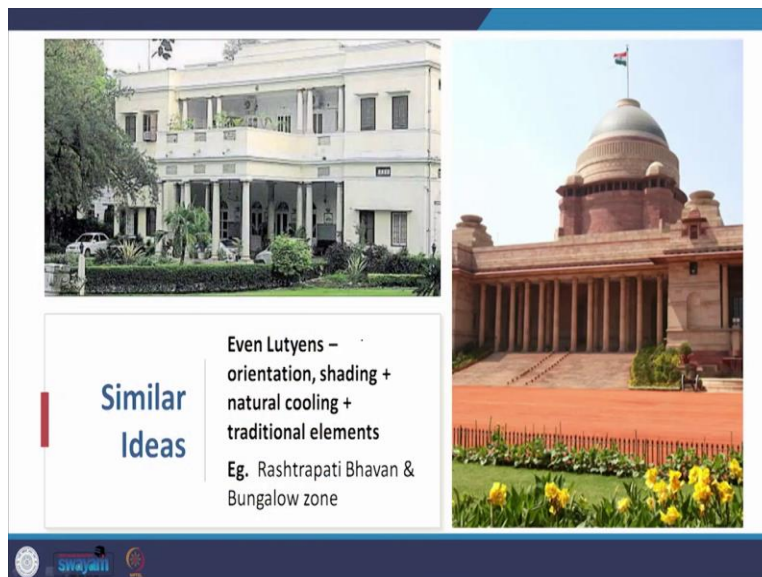
**Critical Regionalism ~  
Modern Indian  
Architecture**

Claude Batley (Sir J.J. School) – stress on understanding inner meanings of old forms and their original functions

19


And then again, critical regionalism or modern Indian architecture, even Claude Batley in Sir JJ School way back posts just post independence, late stress on understanding the inner meanings of old traditional forms and their original functions. How can we interpret them in a modern context? These are two examples of critical regionalism. This is the Sanghat by BV Doshi in Ahmedabad and this is the Mughal Sheraton Hotel by the A.R.C.O.P group in Agra. We will be looking at these projects later.

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**Similar Ideas**

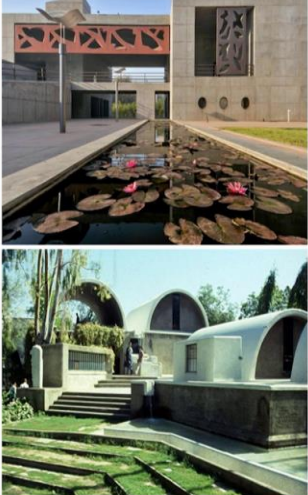
Even Lutyens – orientation, shading + natural cooling + traditional elements  
Eg. Rashtrapati Bhavan & Bungalow zone



### Similar Ideas

Corbusier and Kahn also responded to context – shading, natural ventilation, appropriate use of materials, landscape and traditional spaces/elements

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### But

Generation that followed (and even worked with the Masters) – a truly modern regional architectural language – Doshi, Correa, Rahul Mehrotra, Bimal Patel...

**..Critical Regionalism**

Similar ideas were also explored by Lutyens and Herbert Baker in terms of orientation, shading, natural cooling, traditional elements. So, we find that in the Rashtrapati Bhavan. And we find that in the Bungalow Zone of Delhi.

Similar ideas were also explored by Corbusier and Louis Kahn, who also responded to the context by providing shading, natural ventilation, appropriate use of materials. Listening to the voice of the natural landscape around them and providing traditional spaces and elements in their building that they derived from the traditional architecture around them in Ahmedabad for example.

But the generation that followed them, the young Indian generation. That it earlier worked, even with the masters, they truly brought in a modern, reasonable architectural language with great force. And they were Architects like Doshi, Correa, and now, we talk about the Rahul Mehrotra, Bimal Patel et cetera. So, this has continued, I am not putting I would like to put myself in this strong position and say it here, I believe critical regionalism is the strongest symbol of modern Indian architecture.

There is a I will be looking at different examples today to show you there is a global approach and there is this critical approach, but that which identifies a modern Indian architecture globally are these buildings, which are a modern building with a traditional context.

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**Critical Regionalism (CR)**

Influence of CR varied with political, economic and social changes

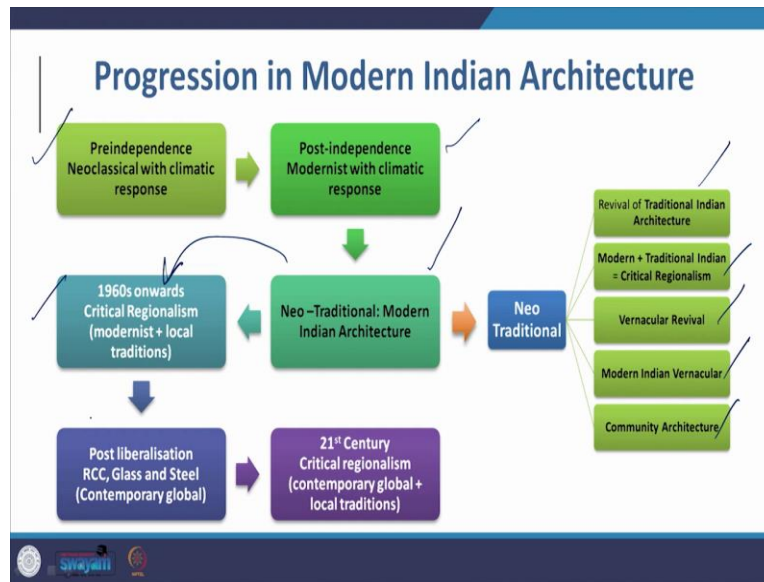
After economic liberalisation (1990s) – more projects adopted 'global' architectural style – glass curtain walls and plastic finishes

But – induced greater inclination in certain architects towards CR

The slide features two photographs of buildings. The top photograph shows a multi-story building with a traditional Indian architectural style, characterized by its brickwork and intricate facade. The bottom photograph shows a modern building with a glass curtain wall, reflecting the 'global' architectural style mentioned in the text. The slide also includes a logo for 'Sri Jayanti' at the bottom left.

So, the influence of critical regionalism or CR varied also with political, economic and social changes, after the economic liberalisation early 1990s. More projects adopted a global architectural style of glass curtain walls and plastic finishes. But this induced further inclination in the architects whoever, working in area of critical regions, to work harder to justify the context of their buildings.

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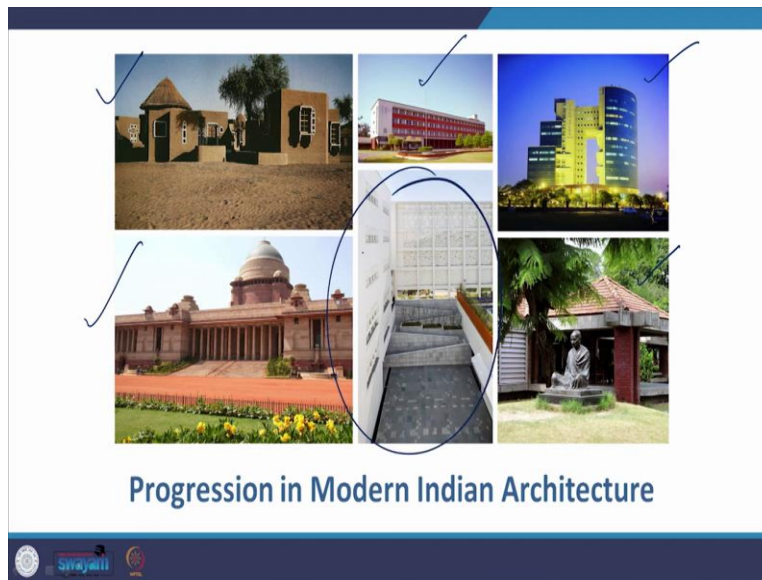
So, if we look at the overall picture, through this flow diagram, we have the progression of modern Indian architecture. We have pre independence, neo classical with the climatic response Lutyens and Herbert Baker, we have the post independence with modernist architecture with the climatic response, Louis Khan, Corbusier, AP kanvinde, the Habib Rahman etcetera.

Then we have Neo traditional architecture, five strands. Revival of Traditional Indian Architecture, Critical Regionalism, Vernacular Revival, Modern Indian Vernacular, Community architecture leading on to 1960s. This would be parallel actually, because this is directly derived from Neo traditional.

And then we have post liberalisation, RCC Glass and Steel buildings which are contemporary global buildings, followed by a very strong revival of 21st critical regionalism in the 21st century, contemporary global and local traditions and the amazing thing that we will be looking at an end of this series is how vernacular principles and elements are now being studied through digital technology.

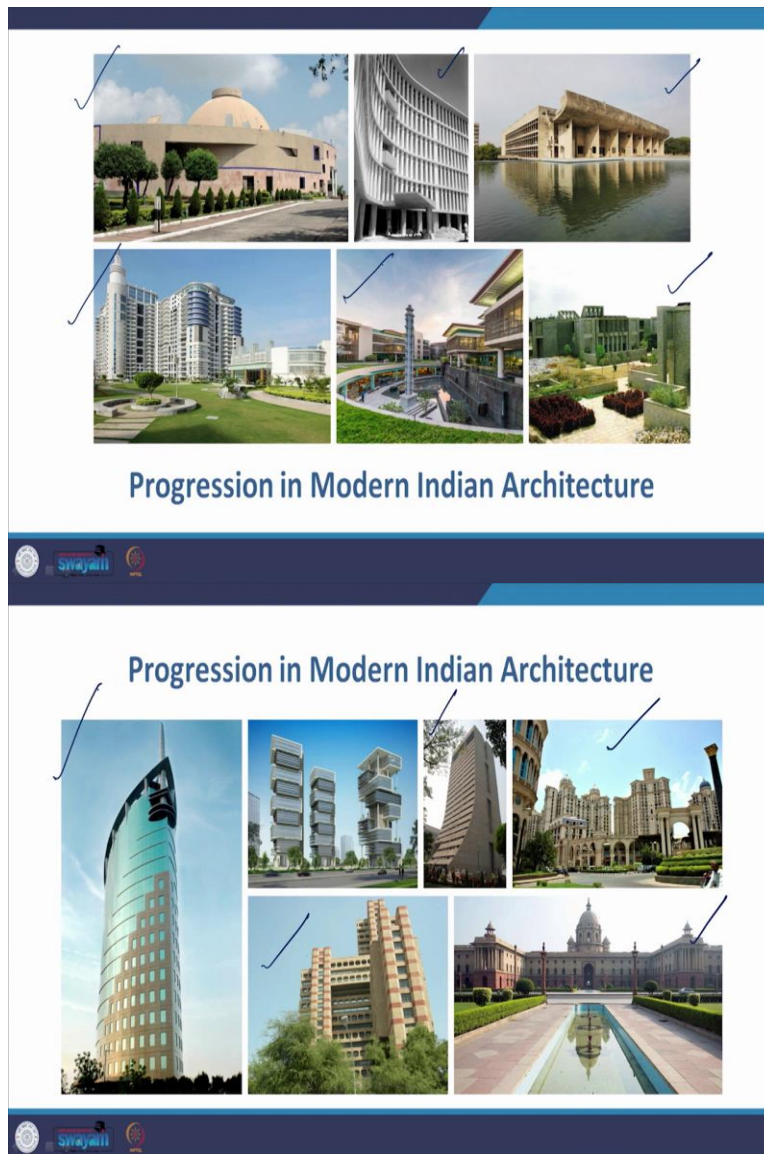
They are being mathematically analyzed, for example, solar path analysis, et cetera. To make these elements ideally suitable for thermal comfort day lighting in buildings, energy efficiency in buildings, it is not hit and trial anymore. The same ideas that were tried by our ancestors, over centuries of development are now being studied mathematically and scientifically and the results are outstanding.

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So, if you look at the progression of modern Indian architecture, we have for example, the earlier neoclassical approach with a climatic response. Then we have the modernist approach with the climatic response, the ATIRA building by AP Kanvinde, we have the critical regional approach, we find that in the Gandhi Smarak Sangharalya, we have the vernacular revival that we find in the works of Vasant and Revati Kamath. We have the global accommodation, the global context coming in post liberalisation and now we have the 21st century critical regionalism, the British school by morphogenesis in Delhi.

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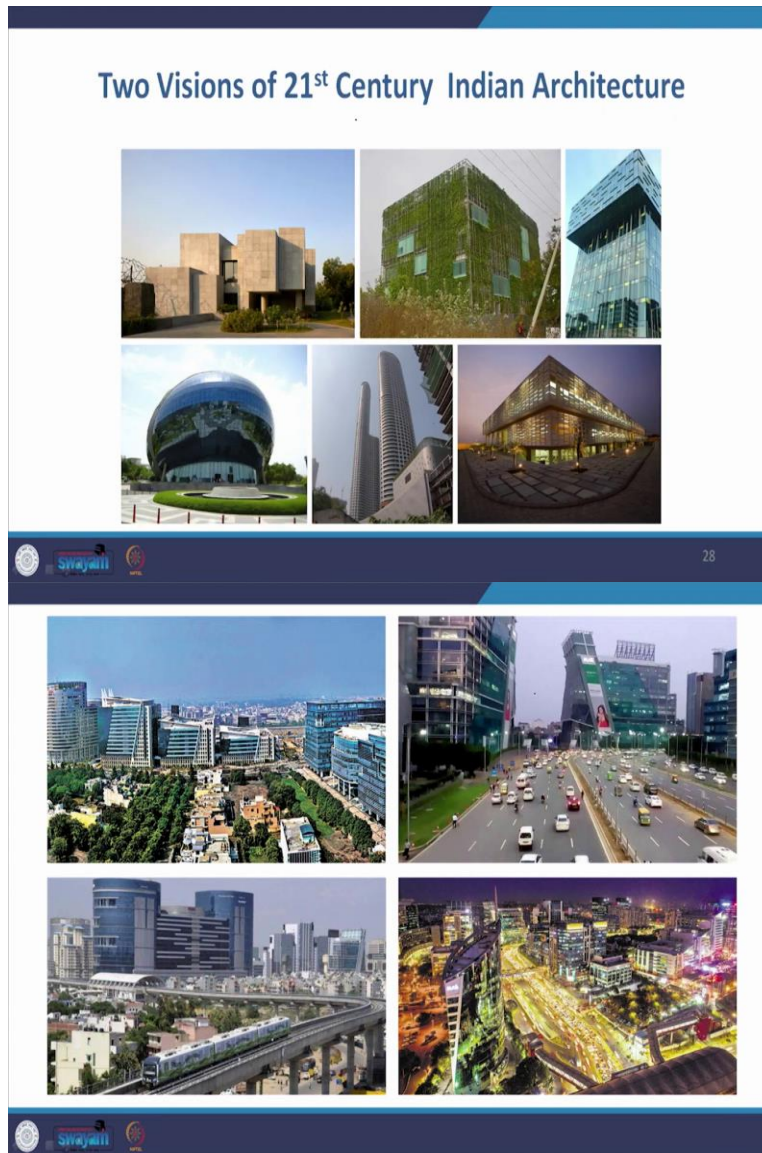


Again, examples that we find of Modernism, Corbusier, Habib Rahman climatic response, then we have critical regionalism. We have again a revival of traditional principles, Vidhan Bhawan, we have critical regionalism, IIM Bangalore by BV Doshi, we have then the global context by this housing in Gurgaon.

And we have then a revival of critical regionalism 21st century, this project by Christopher Benninger, Suzlon project. Or we have again this progression that you see neoclassical, then we have critical regional. This is the HTC building Raj Rewal. In between we have the modernist response of brutalism by Kuldeep Singh.

We have the modern Indian vernacular post modernistic, eclectic response we find in Hiranandani apartments by Hafeez Contractor, we have the global response of the DLF building in Gurgaon in glass and steel. And we have critical regionalism is a project that is coming up in Gurgaon being executed by morphogenesis.

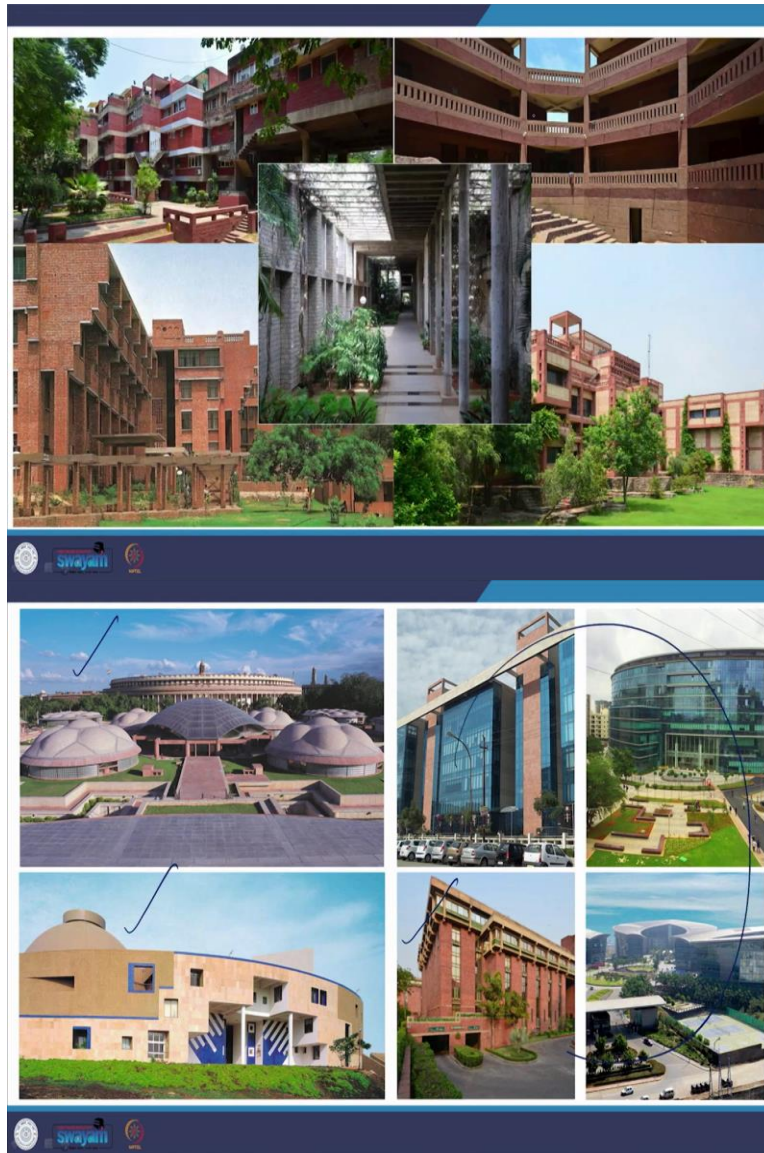
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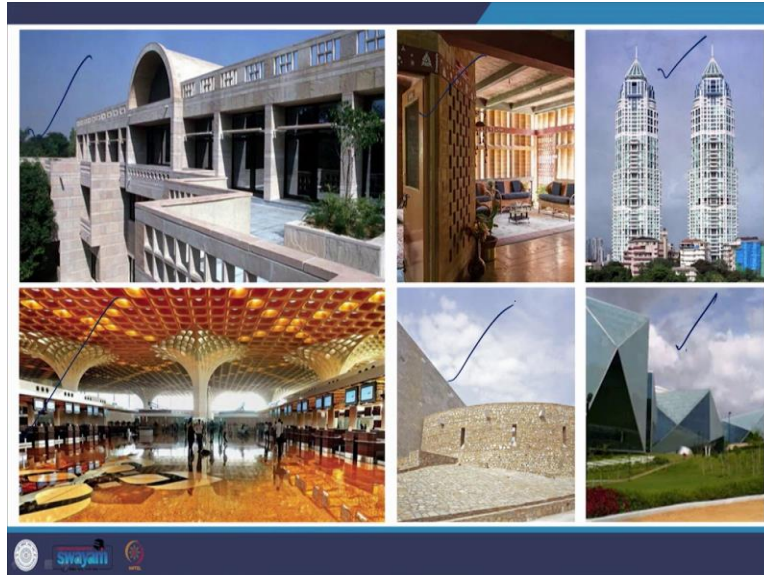
Again series of examples that we find of a modern brutalism context that is today, glass and steel, glass and steel, glass and steel, critical regionalism by morphogenesis Pearl Academy, and this is a building by Rahul Mehrotra. This is what the global context has given us. These are images of Gurgaon. It is a global city.

It is a city, if you were to put these pictures together with the city from China, a city from Europe, a city from the United States, sometimes it will be difficult for you to find out which city is which, because it is having this placeless identity, it looks very exciting, and it is exciting. It is full of life. And it is full of a dynamism of a modern city.

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But this is critical regionalism, it is more subdued, it is more responsive to Indian conditions. Now these are comparisons, this is the parliament library, the Vidhan Bhavan, the IHC all three of them a part of the larger context of CR and these three are examples of RCC glass and steel buildings.

Again, we find the same thing we find this post modernistic response of Imperial towers by Hafeez contractor, and this glass building again I believe, Hafeez contractor and we have these massive airport designs, which also have an Indian symbolic Indian identity in them . This is the Mumbai airport and you have the works of Raj Rewal. And we have other works which are connected with critical regionalism in the 21st century.

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**Impact of the Global Style**

- Aim to be **sophisticated and modern** – being rejected by the west
- Reliance on technology** to light and condition buildings + cars to reach them
- Very high **energy consumption** + corresponding **carbon emissions**
- Creating **unpleasant urban environments** – **greater disparity between haves and have-nots**

**Critical Regionalism**

Modern building – but provides sense of place and meaning

A different approach from homogeneously global architecture by relating architecture to a place

What is the impact of the global style? It is the aim to be sophisticated and modern , the ironical thing is this has been rejected by the West, this reliance on technology to light and air conditioned our buildings and to have automobiles to reach them, overall producing a vast amount of carbon emissions due to global warming.

Very high energy consumption and corresponding carbon emissions, creating an unpleasant urban environment where there is also a great economic disparity between the haves and they have nots. If you look at this picture in the background, you find these fine houses for the rich and you find these slums for the poor in Mumbai. So, though on the one hand, the rich are

getting better and better facilities, the poor become on the much lower side of the spectrum in the economic when we look at it economically.

Now, modern buildings, but they provide a sense of place and meaning. The Kanchanjunga in Mumbai is an example. The HTC building by Raj Rewal is an example. This is an example of amazingly wonderful modernism, the Seagram Building, and these are series of buildings and I believe in New York, there is no doubt they were excellent buildings of their time. Let me add one thing here. Do not misunderstand me that I am against modernism , not, in fact . I love modernism. I love the works of Mies van der Rohe and Corbusier. There is so much to learn from them.

But there was a context. Modernism also has a context. That context somehow disappeared when it became a rootless placeless model in countries, which had a traditional regional identity and that is why this approach a different approach, from the homogeneously global architecture, by relating architecture to a place.

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So, there is placelessness versus context. This is context, a house by Alvar Aalto. This is a context does this have a context, Tugendhat has an amazing house by Mies van der Rohe, but placed in a situation where there is a very strong traditional identity already existing, what happens in that situation.

Then there is a sensitiveness to local climate and the technical constraints of the local building industry. Critical regionalism in which architect extracts only the, essence of regional tradition, it is not a mimicking of tradition, it is deriving the essence , rather than literally referencing it like in this British Counsellor housing by Raj Rewal.

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**Mutual Shading**

**Critical Regionalism**

- Historical Context
- Climate Responsiveness
- Local Materials and Construction
- Ecology Sensitiveness
- Cultural Appropriateness
- Technological Sustainability



**Historical Context**

Take into account – **building traditions of region** – but **only essence** and not literal reference

Andrews Ganj Housing, New Delhi, S.K. Das, 2001

There is the idea of mutual sharing, for example, derived from Jaisalmer seen in the Tara group housing by Charles Correa. So, in critical regionalism, we will be looking at historical context, climate responsiveness, local materials and construction, ecological sensitiveness, cultural appropriateness, technological sustainability.

Historical context for example, is like Andrews Ganj Housing by SK das in 2001, which takes into account the building tradition of the region takes this image from Jaisalmer of mutual shading, and brings it idea here in the streetscape of the housing, but only essence , not a literal reference.

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**Climate Responsiveness**

Respond to **climatic conditions of site** – benefit from **best solar radiation + minimise dependence on mech. means - AC and artificial lighting**

**Climate Responsiveness**

KMC Corporate Office, Hyderabad, RMA Architects, 2012


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Climate responsiveness we find, for example, in Sanghat, with the barrel walls that have been covered with broken ceramic tiles, to reflect back the solar radiation, respond to the climatic conditions of the site, benefit from the best solar radiation, minimize dependence on mechanical that means air conditioning and artificial lighting.

We will talk more about this project later. Responsiveness of climate towards climate you see in the KMC corporate office in Hyderabad by RMA that is Rahul Mehrotra associates, in which we find that the entire building is covered up with a living wall or a green wall. And there is this gap

created between the wall and the actual glass facade inside and how it takes care of an amazingly thermally comfortable environment within.

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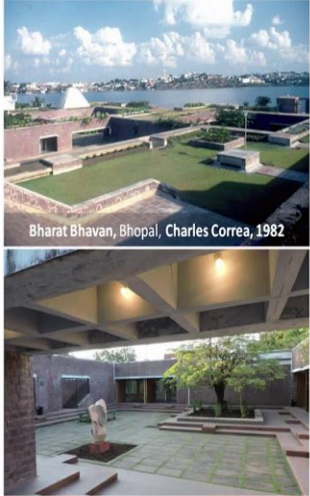


Jodhpur University, U.C. Jain, 1971

### Local Materials and Construction

Locally available materials used with local methods of construction

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Bharat Bhavan, Bhopal, Charles Correa, 1982

### Ecological Sensitiveness

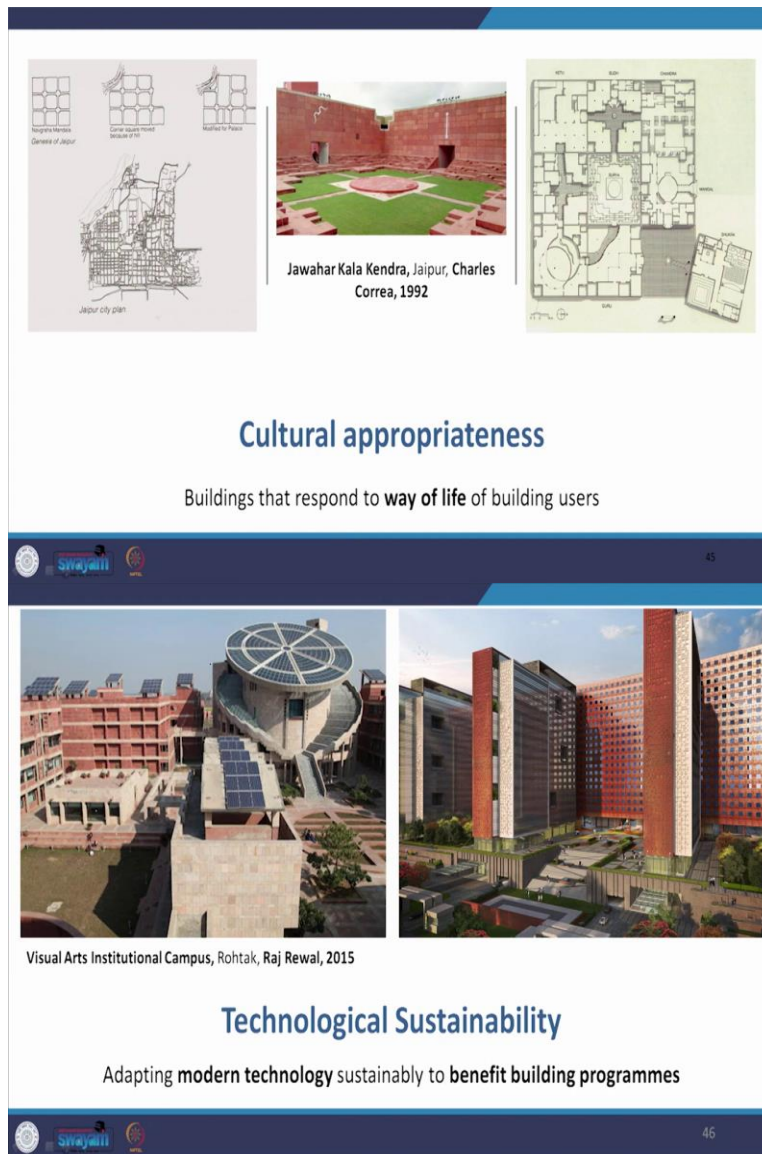
Min. impact on ecology of site and surroundings

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Local materials and construction. We have already seen the example of the Jodhpur University by UC Jain 1971. We have just briefly skimmed across it locally available materials use with local methods of construction. Ecological sensitiveness, not to destroy a site, but to let the site the project become to merge with the site and minimize the impact on the ecology of site and surroundings as in the Bharat Bhavan by Charles Correa in 1982.



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The slide is divided into two main sections. The top section, titled 'Cultural appropriateness', features three images: on the left, a set of architectural drawings including 'Genesis of Jaipur', 'Jaipur city plan', and 'Jawahar Kala Kendra'; in the center, a photograph of the 'Jawahar Kala Kendra, Jaipur' by Charles Correa, 1992, showing a courtyard with a green lawn and red walls; on the right, a detailed architectural floor plan. The bottom section, titled 'Technological Sustainability', features two photographs: on the left, the 'Visual Arts Institutional Campus, Rohtak' by Raj Rewal, 2015, showing a building with a large circular skylight and solar panels; on the right, a modern multi-story building with a red facade and a central tower. Both sections include logos for 'Sriyanti' and '45' in the bottom left and right corners respectively.

### Cultural appropriateness

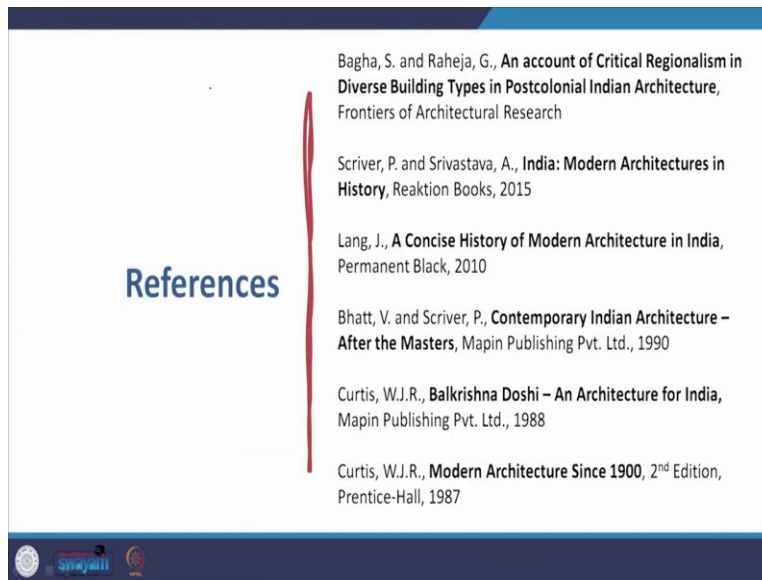
Buildings that respond to **way of life** of building users

### Technological Sustainability

Adapting **modern technology** sustainably to **benefit building programmes**

Then the cultural appropriateness not only is Jawahar Kala Kendra falling in the identity of the revival of traditional architecture, it is also culturally appropriate to Jaipur buildings that respond to a way of life of the building users. Then there is technological sustainability, for example, in the visual arts Institutional Campus in Rohtak in 2015, by Raj Rewal, which is adapting modern technology sustainably, to benefit the building program.

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So, we will be looking at these identities again. We will take them one by one and start by looking at how they help in generating the architecture that they did. Thank you.