Modern Indian Architecture Professor P S Chani

Department of Architecture and Planning Indian Institute of Technology, Roorkee

Lecture: 09

The First Generation (1945 - 1970) - Part 2

Hello students, we will continue today the same series that we had begun earlier on the first

generation of Indian architects from 1945 to 1970, this is part 2 of the series. And what we

saw last time was the impact of CPWD and the work that they did with regard to public

buildings and in mass housing.

Just after partition a massive refugee influx happened in India and because of this large

population that came into the country plus the already rising population there was a very

tremendous need of housing as well as other services and buildings that were required and

CPWD stepped in to meet that need. And in spite of their limited resources they have done a

very major service to the country, in the way that they laboured during those in spite of

having limited manpower and limited resources.

The other thing we looked at yesterday was the way they approached the public buildings in

Delhi, because Delhi already had a very strong urban design scheme that had been designed

and built by Lutyens and Baker and their entire team and this was predominantly colonial and

so they all they had an alternative model of modernism and modernism said that we should

rather break away from the past and go for a new format for creativity.

And the example I quoted was that of carpenter center in Harvard by Corbusier, where he

changed the way the building was sited by changing the inclination of the layout of the

building and thus breaking the access in that area of the campus.

But CPWD did not go in for that alternative model, they continued with the same existing

urban design model of Lutyens and Baker only and they did bring in symmetrically organized

buildings on both sides of the Rajpath, but the difference in their buildings and the buildings

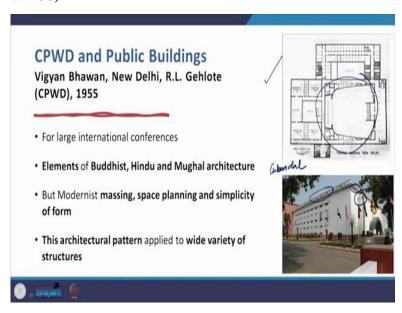
done earlier by the British was that they had gone in for a neoclassical building with

traditional Indian elements, whereas CPWD they went in for modernist buildings with

traditional Indian elements that is a very simple way of presenting it.

202

(Refer Slide Time: 2:58)

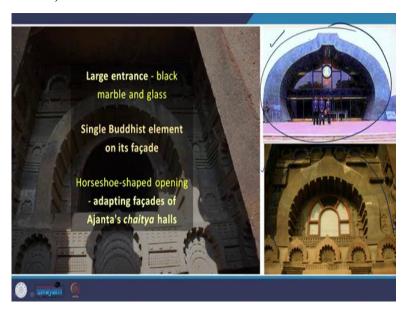


One of the iconic buildings they did during this time was the Vigyan Bhavan in new Delhi by R L Gehlote in 1955, just designed for large international conferences. Some of the most important conferences; historical conferences in India have been held in Vigyan Bhavan and so this Vigyan Bhavan is completely modern in its planning having this large central auditorium hall and the surrounding facilities.

But on the exterior facade of the building we have elements of Buddhist, Hindu and Mughal architecture. For example, if you look at the parapet you have the Jali work here, then you have brackets et cetera, you have this kind of design on top of this large fenestration in the front which is derived from Mughal architecture, but the building itself the overall layout of the building is modernist in its massing in its space planning and in the simplicity of form.

The form essentially is cuboidal, derived from the cuboidal white planar geometry that had come in with modernist international style architecture of Corbusier and Gropius et cetera. And this architectural pattern, the mix of this modernist space planning massing and form simplicity along with traditional elements on the outside was followed by CPWD and many of its public buildings.

(Refer Slide Time: 4:29)



So, here in this example, the large entrance of the Vigyan Bhavan is actually in black marble and glass and it is so obvious that it has been derived from the Chaitya graha, the entrance to the chaitya halls in Ajanta. So, this horseshoe shape design is directly imitated here or in a sense interpreted in modern materials to form the entrance of the Vigyan Bhavan and this single Buddhist element is there in the facade.

(Refer Slide Time: 5:10)



Now, this is a very important design point and the designers deliberately implemented it because they knew that this conference center would become a hub for international conferences and thus it would be able to draw international attention with this very iconic entrance to the building.

(Refer Slide Time: 5:30)



And so the building is not truly integrated in its envelope that is the exterior facade form of the building is different from its interior, when you look at the interior it is very high tech to meet the requirements of a modern conference facility, but on the outside you have say for example the entrance way from the Chaitya halls or you have this top part of this long fenestration from Mughal architecture you have the Jali work here in the parapet and the brackets beneath it.

(Refer Slide Time: 6:09)



So, they could apply these traditional elements in the facade, but it could not be the traditional planning could be carried on inside, because the building itself required a modern spatial organization to meet modern requirements. So, there was a disconnect between the

way the building appeared from outside and with these traditional elements and what it was on the inside which is completely modern.

So, true modernism would avoid this disconnect between exterior and interior, true modernism would avoid this disconnect between exterior and interior, the building would speak the same language both in its form and in its inner space organization and planning and massing.

(Refer Slide Time: 7:02)



This building speaks one language when it comes to its massing, because the massing is modernist, it is a simple cuboidal mass to the extent that it is a white planar cuboidal geometry, but then it has these traditional elements attached to it and it is using conventional materials that have been used to erect this building, because such a large conference facility on an auditorium is simply not possible without framed construction in this case RCC.

Now, what we did was that we tried to see if we changed this outward appearance, we changed the look of the envelope. So, we modified it and thus we gave it a kind of a modernist appearance in order to bring in a unity between the exterior and interior.

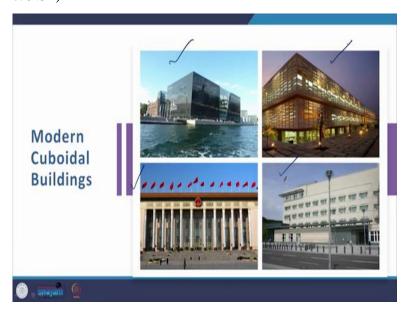
So, if I was in the classroom with you face to face I would ask you: do you think that this change is bringing that kind of unity required between the exterior and interior, of course because this is just the envelope many, many permutations and combinations are possible, you can go in for all glass facade as you would do for a modern 20th, 21st century building, you could you could even play with the form and make it even more dynamic in its

appearance you could do that because the plan itself is not being touched at all it remains intact only the outward envelope is changing.

So, there are many modern cuboidal buildings today which there is not a lot that has changed with regard to the internal plan layout, if free plan organization came in the beginning of the 20th century with modernist architecture it has pretty much continued to be the same, I at least whatever little reading that I have done I do not find that there has been a massive shift in the way buildings are planned in terms of space organization over the past 100 years, there is no such radical idea that you see except for a few that came in with high-tech architecture in the 70s and the 80s with the work of works of Richard Rogers, Renzo piano and Norman foster.

A certain critical ideas that Norman foster gave us for the Stansted airport for example that completely changed the way an international modern airport is designed into a single envelope design, the way they went in to design buildings that had a factory aesthetic and that had some fundamental philosophical ideas that may or may not have succeeded over time, but they were tried out and some of those ideas were carried forward and they are seen in our buildings today.

(Refer Slide Time: 9:54)

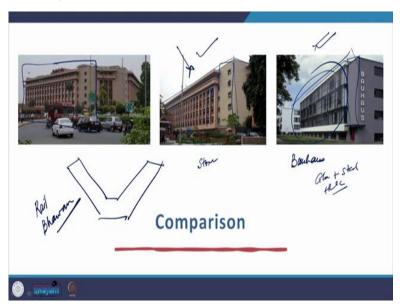


Therefore, when you look at a modern cuboidal building whether it is in all glass, whether it is for example about a 100 years back I believe this is a building in Europe and this is as you can see it is predominantly neoclassical or you have this building which has a series of fenestrations, harmony, harmonize across the facade or this is the pearl academy by

morphogenesis which is using a modern version of the Jali to climatically control the thermal comfort and lighting within the building.

So, the building remaining cuboidal it has got different envelopes which are on the outer periphery, what is really inside with regard to the plan I do not think much of a change.

(Refer Slide Time: 10:46)



If taking this comparison further, in another building which is the ministry of railways this is called the Rail Bhavan or the railway bhavan in New Delhi. So, this building is more like in this form, but if you just take this part of the building.

And so if you just look at this and then compare it with the Bauhaus by Walter Gropius and you come across a form an arrangement which is nearly identical in its overall massing, say the block itself as this and even up to the extent of the way this stands out separately and the difference is this has been done, this has been cladded in stone, this is predominantly in glass and steel and RCC.

This is a complete curtain wall one of the first such large curtain wall arrangements in a building in the modern times and this on the other hand does not have a curtain wall this has got sun shade projections over it, this is got these intermediary columns in between and then there are these windows that are pushed in so as to provide maximum shading over the windows and the overall facade is heavy and when you look at it and the windows are recessed inside, so as to prevent the direct impact of the sun.

Whereas, here in Bauhaus you want the sun to penetrate the building because of the cold climate, here you do not in Delhi you want to keep the sun out. So, that climatic response is

the reason that is deciding why these two buildings look so different from each other, but at the core they are nearly the same at least this much part of the rail bhavan is very, very similar to the Bauhaus, the climatic response or even the materials that are available that makes the difference.

(Refer Slide Time: 13:01)



So, if we again make a comparison between pre-independence and post-independence, this is neoclassical with traditional Indian elements of Lutyens and this is of CPWD modernist with traditional Indian elements post-independence. So, here we find for example that you have this entire building of the central secretariat is in a neo-classical facade and this dome at the top with the surrounding chatris, so the chatris are from traditional Indian architecture.

And here this building form is modernist and the chatri is then added on as a traditional element, why were they doing it? Because, they were also trying to identify the building with India as you know that I had told you last time that the style debate had erupted again, the British were having this debate, because what style should be adopted to make our buildings indigenous without being making it too much of a concession to the subjects that is we Indians.

And here they were trying to make the buildings indigenous without appearing too much backward in the way the buildings looked. So, the addition of the traditional elements to a predominantly modern building.

(Refer Slide Time: 14:29)

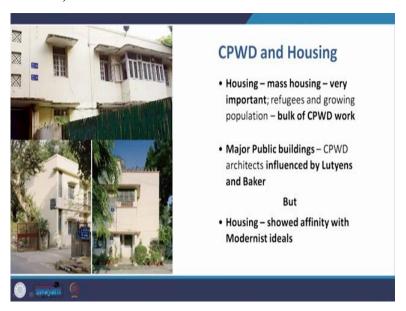


Let us again look at this picture this is the neoclassical building central secretariat and in this image if you see carefully the chatris have been taken out. So, this is now in a sense a purely neoclassical building taking the same argument forward in this building the dome or the Indian traditional dome has been taken out. Call it a larger chatri that has been taken out and so now what you have is a modernist building more like of the flavour of the soviet union style of heavy set building that you have here.

So, this is what happens to the building just by removing the elements that have been added and the interesting thing is that the removal of the elements are in no way changing the building at all, the building continues to remain exactly as it is, there is no damage done to the structure and no change done to the functional organization of the building, it remains just as it is; it is like an ornament added that somebody is wearing.

So, you take off the ornament nothing changes only the way the person looked in appearance this has undergone a slight change that is why this is purely ornamental addition to the building both when it was a neoclassical building and when it was a modernist building.

(Refer Slide Time: 16:06)



Now, the other section where CPWD made a big contribution was in housing. Mass housing was important, because refugees and growing population formed the bulk of CPWD 's work in the early years. The major public buildings as I just mentioned they were influenced by Lutyens and Baker, but in housing they showed great affinity to modernist ideals , housing wherever they built in Delhi, for example it did not have any addition of any traditional element there were simple cuboidal blocks in the modernist form.

(Refer Slide Time: 16:38)

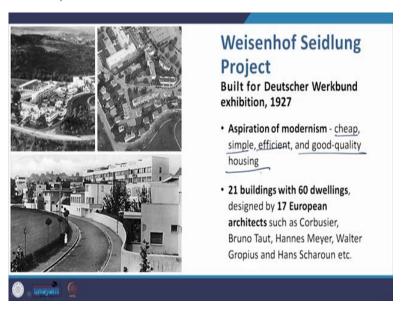


So, they were it was not designed, these houses that are in in the government of housing of Delhi, row housing and the enclaves that have been built by CPWD, they were not meant to be architectural statements like the Weissenhof Seidlung project that was planned and

executed under the leadership of Mies van der Rohe with many architects participating. I will show you what the project is in the next couple of slides.

But the modest goal of the CPWD was to provide a wholesome comfortable shelter in acceptable settings particularly with regard to climate and there was no such desire for any architectural honour, the desire was to provide the adequate housing. The housing that was needed by Indians at the time. So, this was a practical wholesome architecture to meet the needs of the common citizen.

(Refer Slide Time: 17:41)



This is the reason of Seidlung project, which was built as a part of the Deutscher Werkbund in exhibition in 1927. And this was supposed to be a demonstration of what modernism had turned out to be in totality in the 1920s and that was a large number of architects who all were a part of what was called as CIAM council international the architecture modern, they were all a part of, members of, that of that institution and they all were labouring and working towards the same modernist ideology.

So, the aspiration of modernism with regard to housing was cheap, simple, efficient and good quality housing and in this project which was done in Wiesenhoff this project was planned overall by Mies van der Rohe the overall planning of the project and one of the housing blocks was designed by Mies van der Rohe, two for example were designed by Corbusier and his cousin Jean-pierre Jeanneret so in all there were 21 buildings and 16 dwellings with about 17 European architects participating like Corbusier and Bruno Taut, Hannes Meyer, Hans Scharoun, Walter Gropius et cetera.

(Refer Slide Time: 19:00)



And this project had variation in form the buildings were informed they were different from each other, this is a work by Corbusier, for example, this is the housing block by Mies van der Rohe for example, but they had a standard design language all of them had this white planar cuboidal geometry with sharp edges, for example simplified facades, flat roofs would be used as terraces, window bands or what Corbusier called as ribbon windows and a free plan interior layout.

There was also high level of prefabrication use which is also another thing that Corbusier and the architects were pressing for and this got erected in just about 5 months and it was emblematic or symbolic of modernism.

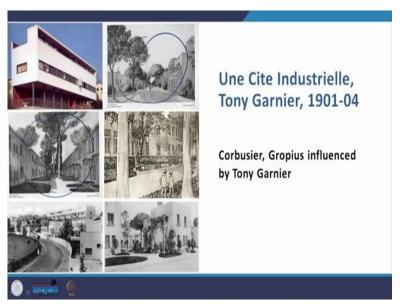
(Refer Slide Time: 19:53)



So, I will give you a picture to try to show you the difference between what the Weissenhof Seidlung was and what the CPWD housing was. This is for example if you go to a high class restaurant to have food, the food per se it is just not the flavour it is also the way it is presented to you, it is a statement, the reason of Seidlung project was a philosophical statement about modernist architecture and its approach to housing.

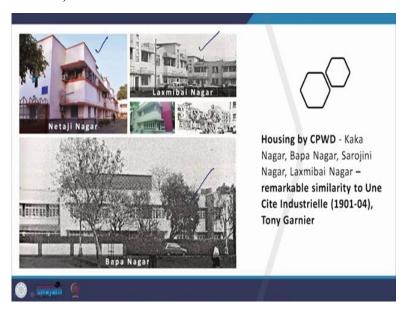
Whereas, this is your Ghar ki Dal and Roti, which is home cooked, wholesome food which is not meant for anybody's honour, it is meant to give you a good nice nutritious meal and that is in a sense what I want to say was what CPWD was doing, a nice wholesome housing to meet the needs of the common citizen.

(Refer Slide Time: 20:45)



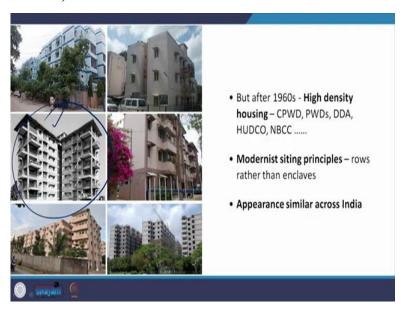
On the other hand, there was also the work of the industrial city, Une Cite Industrialle by Tony Garnier from 1901 to 1904. And both and the entire city layout we will not be studying this the organization of the Cite Industrielle, but the entire city layout; the way the greens have been organized the way the houses have been organized, they are simple cuboidal mass blocks, Corbusier and Gropius were both influenced by Tony Garnier and we also see the impact of this industrial city in the vision of Seidlung project.

(Refer Slide Time: 21:21)



Now, we see the same impact in the housing by CPWD, whether it was in colonies like, Kaka Nagar, Bapa Nagar, Laxmibai Nagar, Sarojini Nagar in Delhi, those of you who are from Delhi and nearby places have been to Delhi know these places, these are known colonies in which the government employees and officers live in Delhi. And these are for example Netaji Nagar, Laxmibai Nagar and Bapa Nagar et cetera and they bear a remarkable similarity to the industrial city by Tony Garnier.

(Refer Slide Time: 21:57)

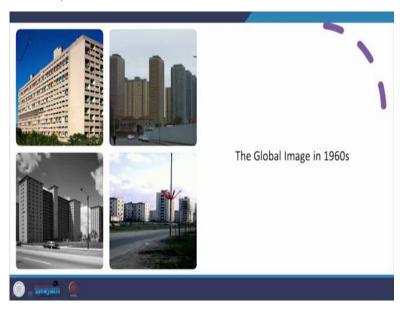


But after the 1960s CPWDs, PWDs, DDA, HUDCO, NBCC, all of them have shifted towards more towards high density housing, like one of the early beginnings was made by CPWD in the work of Habib Rahman in the housing in RK Purum, this is the one and others followed

throughout the country it is similar appearance throughout the country and it has a modernist siting principle that rather there are rows of these tall buildings or multi storage housing rather than enclaves which was what CPWD was doing earlier these were enclaves and or rather you can also simple word in Delhi, you call them colonies.

And here you have row housing or tall apartment blocks and this is carried on into the 21st century. Now, a lot of private players private developers are already there and the latest developments taking place in Gurgaon, Bangalore, Pune, Lucknow and other parts of the country as I showed you in the introduction slide, they are all coming up in this high rise apartment format.

(Refer Slide Time: 23:10)



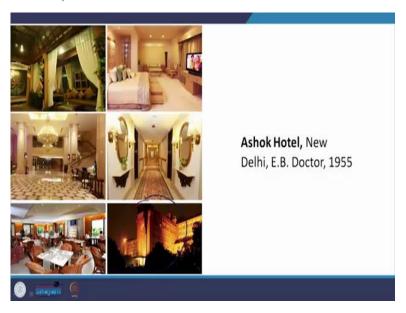
So, this was also a similar global image in the 1960s for example one of the earliest projects where an entire united habitation was considered was done in this building in Marseille by Lee Corbusier in 1948 called Unite d'habitation you might have studied it as a part of modern world architecture. And there are other such examples from different parts of Europe.

(Refer Slide Time: 23:32)



Besides what CPWD was doing a very similar approach was also adopted by leading architectural firms from 1945 to 70 and other PWDs, that many buildings they were modernist in their overall layout but they had traditional elements in which they were embellished or the envelope was traditional Indian made of traditional Indian elements, so, as to place the building in an Indian context.

(Refer Slide Time: 24:14)



For example, the Ashok hotel by EB Doctor in 1955 in new Delhi, one of the most iconic and grand hotels of India post-independence, a five star hotel has a very important place in the social history of Delhi, it was a hotel; on the inside was a contemporary five-star hotel as would be any other five-star hotel across the globe.

So, this is what the interiors of Ashok hotel look out .Of course these are some of the latest interiors and the hotel interiors as you know keep on undergoing refurbishment and upgradation, renovation again and again, so definitely not the interiors of 55, but also showing at the same time when you look at this, the spaces have remained the same, the structural system inside his remained the same, they are showing vast expanse of open spaces and large rooms and then you have the traditional envelope on the outside.

(Refer Slide Time: 25:06)



Now, the impact of these leading architectural firms and PWDs was let us if we just consider the example of the Ashok hotel let us just focus on this to come up with certain points, because this in a sense is representative of what was happening. It is facade that is the jali work and the chatris and the huge jharokhas that are there in Ashok hotel.

If you go back to the picture you see all these brackets here you see the Jali work here and then you then the jharokhas and then you have the like a chatri like format at the top the chatris here on the side. So, these cantilevered and supported by bracket like here for example this entire thing cantilevered out and supported by these massive brackets.

Such eclecticism, such collection of mixed languages was considered to be dishonest by the modernist, because they said that this is lacking internal logic, remember what I said a while back the modernist way of thinking was that the exterior and interior must speak the same language. But it also became they started realizing that this is become acceptable because of the limitations of the modernist ideology.

Now, this is a very interesting point that I am making here, I will be coming back to it after a series of lectures when I talk about regional modernism or critical regionalism that there were limitations to the modernist ideology. The modern modernist ideology played a very important role in spreading this movement this ideology spread globally and impacted architecture everywhere, but over time its limitations also started coming forward, limitations of being a faceless entity not linked to the local architecture of that particular region whether it was Indonesia or any other part of South Asia or Japan or India or anywhere where it went.

Therefore, when this started happening, it became a little acceptable that we need to give our buildings, a regional outlook or flavour for example, Rajasthan was increasingly Rajasthanified that is they were increasingly using traditional elements in their public and private buildings, whereas the buildings per se were being designed as a on a modernist space format like this.

(Refer Slide Time: 27:38)



Let us take another lateral example to explain this. Air India flies Boeing aircraft I am talking about the air India of old when it actually started in 1950s, 60s, 70s and when Boeing was brought in into the into air India and air India continues to fly Boeing and of course now it has been again taken over by the TATAs.

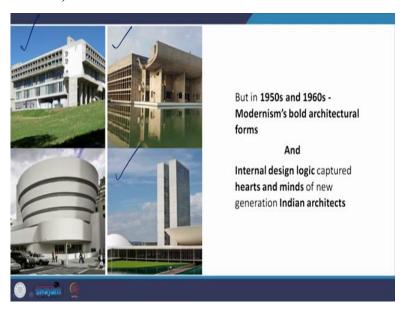
Now, what do we find here? These modern technology Boeings were being flown by every major international carrier national carriers across the world. Now, in order to give it an Indian identity when air India aircraft would be parked in an international airport the identity is not just the logo or the name on the aircraft the identity would go beyond that by providing this kind of a Jharokha over every window, remove this nothing happens to the aircraft or the interior decoration with traditional Indian artistic work.

So, the modern technology a modern aircraft is made to differentiate with all the other aircraft parked on the tarmac of an international airport simply by these certain features. So, when the aircraft flies for example it is perfectly modern technology but, it has been given a traditional Indian aesthetic on the inside. The aircraft has all the modern amenities that is a lateral example to kind of relate how we were trying to work it out in our buildings.

When international guests for example come to stay in Ashok hotel they could have stayed in a modern five-star hotel anywhere in the world, but staying in Ashok would keep on giving would give them a reminder that this is an Indian five-star hotel, because of the way the hotel had been presented in its outer outward appearance.

This explanation that I am giving you, this reason that I am giving you will undergo a much more mature adaptation as years pass by and after the next 15 or 20 years from this time Indian architects would not need to resort to such obvious implementation of traditional elements or obvious addition of traditional elements into their buildings. They will go ahead in the 70s in the 80s to make modern Indian buildings that do not have such overt representation of traditional elements, but they are easily identified as Indian buildings, whether it is the works of Raj Rewal or Charles Correa and others.

(Refer Slide Time: 30:37)



Going back again to this period in the 1950s and 60s modernism's bold architectural forms and internal design logic captured the hearts and minds of this young generation of Indian architects, whether it was the example of the Brutalist example of monastery La Toure in France by Lee Corbusier or it is the general assembly of the assembly building in Chandigarh by Corbusier, whether it is the work of Oscar Niemeyer in Brasilia or whether it is the Guggenheim museum in new york by frank Lloyd wright.

These international buildings that merged the harmony between the exterior and the interior ,the overall organization was greatly appealing to the Indian architects.

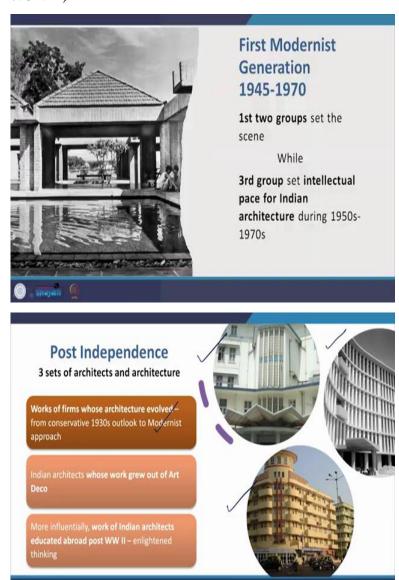
(Refer Slide Time: 31:26)



So, just to recapitulate post-independence: 3 sets of architects and their architecture, first the works of firms whose architecture evolved from a conservative 1930s outlook to a modernist approach, like for example this one this is a building I believe done by Claude Batley and his firm GBK.

Then there was Indian architects whose work grew out of art deco, this is art deco and their work graduated forward from art deco and then there was more influentially the work of Indian architects who were educated abroad post world war II and had an enlightened thinking about modernist architecture and an enlightened world view and they came and built in India like this building by Habib Rahman and we will come back to these works later.

(Refer Slide Time: 32:14)



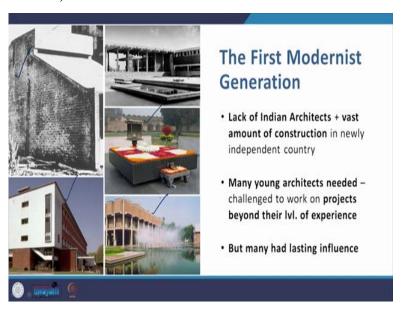
Now, the first two groups that is this one which evolved to a modernist approach or this one the work that grew out of art deco, they set the background scene. Whereas, the third group these young architects Indian architects studying abroad coming to India and working in India, they set the intellectual pace of the way Indian architecture should grow and become during the 1950s to the 1970s, this is an example of one of the iconic works 1958 Gandhi Samarik Sanghralya, the first major commission of Charles Correa in India.

(Refer Slide Time: 32:51)



Now, India was going through the Nehru era, the vision was that of a newly independent country with motivated Indian (young Indian) particularly young Indian population and Nehru's rationalist philosophy also impacted young Indian architects, the young Indian architects were looking mainly towards the US for inspiration and also for their postgraduate education simply because the US was seen as the intellectual and political powerhouse of the western world.

(Refer Slide Time: 33:21)



So, the first modernist generation in India the background of this; there was a lack of Indian architects at this time, I told you that the turn of time of independence, India had just about 300 architects or 1 architect for every 1 million population or 10 lakh population. So, there

was a lack of Indian architects and a vast amount of construction that this newly independent country needed.

Now, many, many young architects were needed and they were challenged to work on projects that was the young Indian architects who came back to India they were challenged to work on projects that were beyond their level of expertise or rather I should say experience, but the amazing thing is that we will see they all rose to the challenge and designed some of the most iconic buildings of India that continue to remain amazing examples of architecture even today.

Whether it is an experimental cube house by Charles Correa, whether it is this ATIRA building, the institute building by AP Kanvinde or this Gandhi Samarak by Vanu Bhuta or the library of IIT Kanpur by AP Kanvinde and many of these buildings continue to have a lasting impact upon us they continue to teach us about architecture.

(Refer Slide Time: 34:45)



So, the first modernist generation and the places where they, just to give you a glimpse is AP Kanvinde he studied at Harvard, Charles Correa he studied at Michigan and MIT, Hasmukh Patel he studied at Cornell, Nari Gandhi studied at Taliesen under Frank Lloyd wright and others who started with him were MM Rana.

So, also Gautam Sarabhai and his sister Gita Sarabhai and then there was Jhabvala, C S H Jhabvala who studied in London and Habib Rahman who studied in MIT he studied in MIT and Piloo Mody who studied in the university of southern California. So, all these people were the first generation of modern Indian architects.

(Refer Slide Time: 35:31)



Now, they learned modernism in the western classrooms predominantly US, they brought these concepts and ideas to India, they were influenced by the new architecture of simple solid blocks without ornamentation clean structural system and large fenestrations. And also an architecture that was free both from the historical and the colonial past. The conceptual or rather the philosophy behind modernism to look forward into the future rather looking back into history and historicism was the same concept they brought into India.

(Refer Slide Time: 36:10)





And so it was a diverse group but they were unified in a number of ways, they worked for major architects abroad. Habib Rahman for example worked for Lawrence Andersone, he worked for Walter Gropius and Charles Correa worked for Minoru Yamasaki who designed the original world trade center buildings that were destroyed unfortunately in the terrorist attack in 9/11.

These architects they travelled widely, there they were also influenced by the Bauhas thinking both directly and indirectly, they had read books on architecture, they were widely read and they were also inspired by Brazil that was coming up as a completely new city the capital sorry, I am sorry. So, they were they were impressed by Brazil in how brazil embraced modernist thought in the design of Brasilia, the capital of brazil planned overall by Luccio costa buildings designed by Oscar Niemeyer.

So, this is where I would like to stop here today with this second part of first generation and we will begin next time by looking at the works of some of the first generation architects. Thank you so much for today.