

Contemporary Architecture and Design
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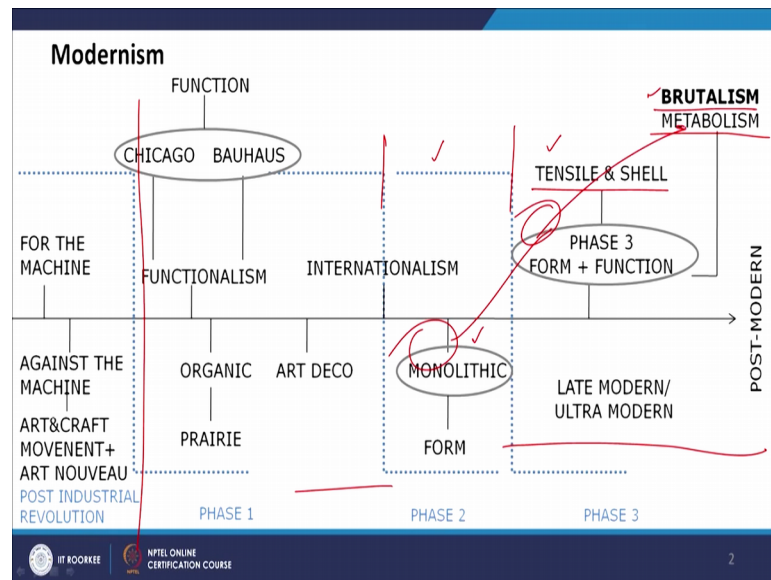
Lecture - 24
Phases of Modern Architecture- Brutalism

Welcome students to the online NPTEL Course Contemporary Architecture and Design. In the previous class we discuss the phase 3 where we have seen that tensile and shell structure started flourishing and it was and the their aesthetic preference and stylistic approach was different from the internationalist as well as the monolithic movements.

So, today we will discuss about the other architectural movement of phase 3 modernism and this is almost on the verge of transferring from modernism to post modernism. So this is the where the amalgamation between the modernism and post modernism are happening and these movements are after the World War 1 and World War 2. So lots of influences of these movements were carry carried towards the post modernist architecture as well architecture as well as the design.

So, today will discuss architectural movement brutalism, so this is typically an architectural movement and because this evolves from the material preference of architecture. So this Brutalist movement was not seen in art and design, because we will see where the how brutalism evolved and what is the concept of brutalism so brutalism and metabolism was two other architectural movement that flourish at the end of modernist era.

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So if we look at the timeline from pre modern so we have passed phase 1 where there were different architecture styles and which was which was away from each other and before that we started with the tool absolute opposite pole for the machine and against the machine which started with the one started with the machine aesthetics and another started with craftsmanship and the biomorphic design.

And then in the phase 1 there were different movements in phase 2 there was one particular internationalist movement and the continuum of that which is monolithic form. And then we have a little more value preference was given to the aesthetics, so we have seen a tensile and shell. So after that so these phase which is phase 3 is also called late modern or the ultra modern where the Gogie architecture the tensile and shell was the there and as well as brutalism and metabolism.

So, these brutalism, metabolism, tensile and shell transformed and changed change their style and percolated in the post modern movement. So we will discuss about brutalism today, so this is a typical example of metabolism also this can also fall on the brutalism. So brutalism and metabolism as we discuss we will see that many of the architecture style which can fall under brutalism as well as in the meta[bolism] metabolism movement.

So, the architectural features of brutalism.

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Brutalism (Modernism Phase III)

ARCHITECTURAL FEATURES

- Flourished between 1950's and 70's
- French word 'Brut' means concrete. Exposed concrete construction: British architects Alison & Peter Smithson (1957). 'Beton Brut' (raw concrete)- used by Le Corbusier to describe his material preference > exposed concrete with marks of form-work
- Brick Brutalism: Exposed brick work along with exposed concrete.

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This flourished between 1950's to 1970's also it was carried forward later in different form of new brutalism or new brutalism and this term is actually of came from a French term brute which means concrete. So brutalism does not in many of the times it looks visually very heavy and sometimes it sometimes people think that this term came from brutal aesthetics like in art we have discussed fauvism. So which looks it is nothing to discuss it is not similar as fauvist movement or the brutal term is not the etymological source.

So, so the term brute means concrete, so this came from a material preference this this architectural movement was only confined within the domain of architecture it did not go to design and art, because concrete was the main texture and the material which was shown. So the exposed concrete construction was the first was the prime stylistic feature of the brutalism ah. So British architect Alison and Peter Smithson started designing with experimenting with this kind of structure then the term Beton Brut which in French means, raw concrete which was used by Le Corbusier the famous French architect.

Who also have many example many of his architectural design which is in India specially in Chandigarh; he have designed the Chandigarh's city plan as well as many of the important buildings of Chandigarh. And he described this material preference his material preference and he describe he connoted the term Beton Brut and from there the brutalism this movement the word came from that. So when we were discussing the

monolithic architecture style we discussed the metastasis form where we have discussed the proportion lay modular which was derived which was designed by Le Corbusier and he have implied implied that in many of the many of his design like ronchamp cathedral and other designs.

So, all these examples which we have discussed in other movements where the exposed concrete was the prime material; which was the material preference of Le Corbusier that can also fall under brutalism. So architecture is not just one movement ends and then other movement starts there can be a continuum and many of the examples can fall under different other movement.

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So, this those examples which you can place and a monolithic style and also in a tensile and shell we have discussed one of the Le Corbusier example where form and function both came together which is Ronchamp Cathedral, which can also be connoted under brutalism, because the exposed concrete was the main material of that building.

Now, there is another term from this it started with the concrete; so concrete where because of that the Brutalist movement started, but later concrete got replaced with many other material. So one was brick, so from there brick brutalism movement started so many of the cases we will see that exposed brick was used and no plaster and no

cladding was used the raw texture of the brick, the original material and the texture of the brick will be visible in the building so that movement is called brick brutalism.

So, brutalism this term although came from concrete, but brick brutalism use uses only brick mostly brick as a key prime material. So brick brutalism is that and many of the cases we will see also brick sometimes can be replaced by stone as well. So all this movements which has the similar look and other architectural features of brutalism which we will discuss will be falling under brutalism and from brutalism there was a neo Brutalist movement started where Brutalist Brutalist movement blended with metabolism; so we will discuss metabolism and then we will discuss the Neo Brutalist movements which will come after that.

so other features of this, because it started with concrete now it can also be brick, now sometimes it can also be stone; so what is the visual feature of brutalism so it is not started with a material, but it has a visual principle which connotes the Brutalist movement.

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Brutalism (Modernism Phase III)

ARCHITECTURAL FEATURES

- ✓ Features derived from pure Materials & process of Construction
- visually Heavy structure
- New Brutalism: CIAM (Congrès International d'Architecture Moderne: International Congress of Modern Architecture) | "The New Brutalism: Ethics or Aesthetics" by Alison & Smithson | ideology of Brutalism & Metabolism: Truth of Material & Truth of Design : exposed material & concept of servant & Served

The slide includes two hand-drawn architectural sketches in red ink. The first sketch shows a rectangular structure with a grid of lines, possibly representing a window or a wall section. The second sketch shows a similar structure with a vertical line extending downwards, possibly representing a column or a structural element. The sketches are simple and focus on the basic forms and lines of the structures.

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So, features which derived from the pure material and process of construction will be visible. So the pure material which can be concrete can also be brick and sometime stone which will be visible; so this purity of material this come this is coming from this internationalist movement, where we have seen that pure color and pure material was very important.

So, here they are not using the color, but the material preference was very important and showing the pure material was one of the key characteristics and the process of construction. So all this columns beams and everything will be visible and we will see how they have shown the process of construction and this everything which will be visible from outside.

So this is also visually heavy structure, so in internationalist movement there was a tendency to make the architectural the structure visually light for that we have seen that it was elevated on pilotis and sometimes on overhang of a platform; which we have seen in a Farnsworth house and there was extensive use of glass which looks visually light, so use of glass in brutalism was very minimal.

So, if you look at the facade in a internationalist movement, majority of this facade from outside the elevation we will see glass which is a very lightweight material, but in brutalism we will see that most of the materials will be from outside, the facade will be very visually heavy. Now if this is totally glass curtain wall so an[d]- with very light steel membranes, so this building come outside the fenestration is heavier ratio of the fenestration of glass is much more than the concrete and steel..

But here in the brutalism we will see fenestration, ratio of the fenestration very less so that is absolutely opposite to the internationalist movement where the fenestration or the visual percolation between inside the indoor and outdoor was much much higher. And in brutalism we will see the fenestration is very less and the concrete or the brick wall will be very heavy and the so this architectural design looks visually light and this looks visually heavy, because concrete has a heavier material and this has the fenestration becomes much more opaque than transparent. This was very transparent that was the key features of the internationalist movement and in monolithic the it got little diluted because of the form, so many of the time the forms where made out of concrete shells and others.

And in brutalism the transparency become very less and so this the building looks very opaque in nature and visually heavy and also the overhang and floating elevated cantilevers were not there in this Brutalist structure. So this will be much more and the process of construction will be shown so the concrete columns and beams will be visible from outside. So that it will looks very visually heavy and the new brutalism which we

will discuss later after we discuss metabolism because this is a combination of metabolism and brutalism.

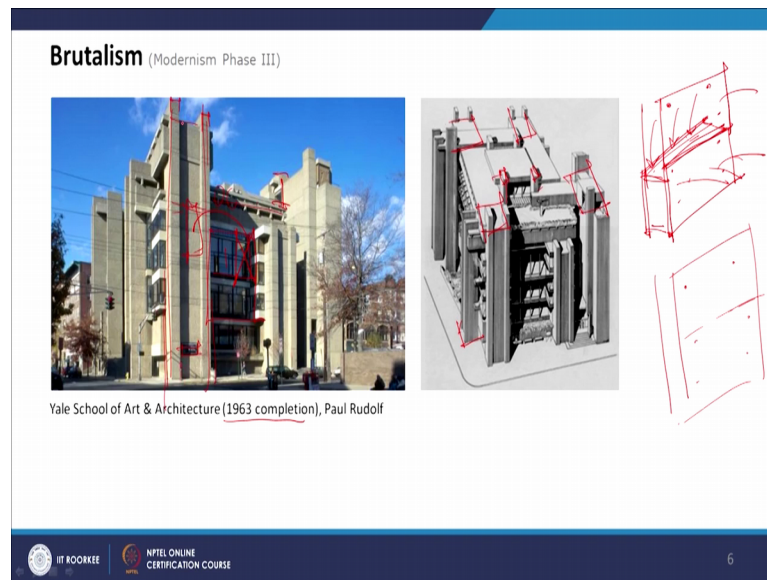
This was started in CIAM the congress international d'architecture modern which was there in the which happened in the France. So international congress to congress of modern architecture if we translate that in English; the new brutalism was evolved what we were discussing. So the aesthetics of the Brutalist movements, because the Brutalist movement was based on the aesthetic of particular style; so there was a guideline of brutalism movement was aesthetics for example, if we look at the guideline of Bauhaus movement was functionalism.

So, the building has to be functionally very strong and then there was a few material preference, few stylistic preference, like it has to be cuboidal few color preference that only pure color has to be there, but in case of brutalism it was purely aesthetics; so aesthetically it should look heavy and aesthetically these are the material which has to come and then it will fall under Brutalist movement.

So, aesthetics of brutalism was taken from a Brutalist movement and the ethics or the functional or the process of construction was taken from metabolism, when we discuss metabolism then we will understand what is the ethics of or the functional requirement of metabolism, how it blended. So the true material and true to design, so that design principle was taken from the metabolism because metabolism was only based on the principle of design; so the principle of design was taken from the metabolism and the aesthetics the aesthetic stylistic guidelines were taken from the brutalism and then the new Brutalist movement started which was again transformed into the many other post modern movements.

So, we will discuss when we discuss the post modernist movement later on. So if we look at this example of Brutalist movement this is Yale school of art and design, this is called Rudolf hall because this has been designed by Paul Rudolf this is in 1963 when it got completed. Now this example we will also discuss this in new Brutalist movement.

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Because this also has the features of metabolism as well as brutalism so this actually falls under new Brutalist movement, but this is an example of Brutalist movement as well. So from outside if we look at so this building it is made out of concrete and the concrete is visible from outside there is no plaster done from the outside of the concrete.

So, the form work of the concrete will be visible the form work is what we if we look at the construction process, so there can be steel from form work there can be wooden form work. So form work is outside skeleton and which we have to design before construction, so if this is a form work of the steel form work and the concrete will be poured within the void of this and then because the concrete is a semi liquid this is the mixture of different aggregates cement, sand and stone chips. So that is that is a muddy mixture so that will be poured within that and this shuttering will be removed; so that is the form work and when there are many shuttering. So if this is two steel plate so when you remove this and this concrete wall will have the marks of the shutters.

So, if there are 2 screws so screw marks will be there and in between this between these 2 shutters there will be a small line thin narrow line of shuttering and it depends on what is the process of shuttering and different types of shuttering can give different kind of marks. So if you look at exposed concrete wall from outside the shutterings mark will be visible from outside and that becomes a aesthetic feature and that was exposed and that was the stylistic feature of the Brutalist movement. So from outside if you look at so

there is there will be lot of marks of shuttering in in the Brutalist building and that is the stylistic feature. And if you look at the building the building looks very robust in nature and the as I was telling that the amount of fenestration verses the solid or concrete wall was very less the amount of fenestration was very less and if you look at this wall only has a little bit of fenestration over there and all over this wall is solid concrete wall.

And even if you look at this construction members were quite quite thick, so these were not thin slender steel members so these were thick concrete members which also looks very opaque and visually strong. And there were lot of elements added in that so which also gives lot of volume into the building and the figure ground relation relationship or play with the massing was created was giving a very solid look. Now if you look at the floor plates this is a 7 story building and there was lot of difference in the floor level within that, but from outside if you look so these are the service cores which you can see from outside as well. So there was service cores which is coming and which is going above the floor plates so this is the excess height of the service cores and this services are again protruding out which can be visible from outside.

And has a different existence which was not merged within the built volume so this was coming out and this service cores are coming out of this building volume. So these services and the treating the services in a different way is the style of metabolism; which we will discuss that is why this comes under the neo brutalism, where the ethics or the principles of design, where the service core will have a visual emphasis was the process of doing metabolism. That is why brutalism and metabolism sometimes they blended with each other and then the neo brutalism many of the examples of brutalism are within the neo brutalism.

Now, another example of Brutalist movement is Kurashiki City hall in Japan which is designed in 1960 by Kenzo Tange one of the very famous designer and architect of Japan.

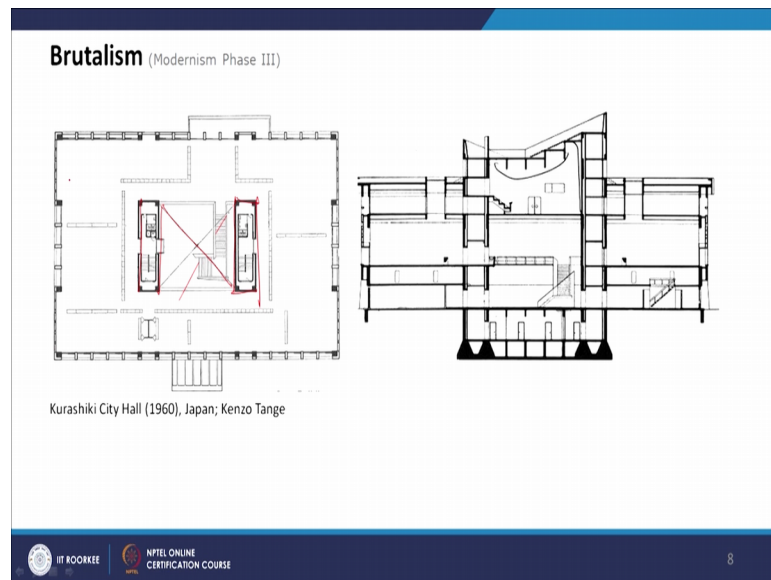
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Now after the World War before World War most of the movements and the architecture movement started in Europe and then came to USA, but after World War we will see lot of movements and from brutalism and also we have seen in shell structure and tensile structure Kenzo Tange is work, so works were there started happening all over the world and Japan was in shell structure and tensile structure was also there in the Japan and Kenzo Tange have designed Olympic stadium using tensile structure.

Now, Japan started Japan, Japan has lot of examples of brutalism and metabolism is third phase of modernist movement as well as the post modern movements where also predominantly happened in Japan and the Asian countries. So Kenzo Tange is one of the examples in brutalism is Kurashiki city hall.

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If we look at from outside so is also has a very robust structure from outside lot of grids are visible and thick platforms or thick pillars are there. You can think that this has a antigravity look, but this is not because if you look at the building mass this does not give a visually lightweight look.

So, this is not the concept of pilotis which was given by Le Corbusier in internationalist movement, because if you look at the amount of fenestration the fenestrations area is quite low if you compare with the internationalist movement. From inside also the service cores are well delineated in these and the void and the service cores were in the central and the spaces is around the service core.

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Now, another example of a Brutalist movement is a Joan Miro museum. Joan Miro was one of the famous painters of the modernist movement. And if you want to check his paintings, you can see this. This is abstract paintings of pure geometric as well as the biomorphic lines and very solid colors he used to use. Now this is his museum designed by Josep Sert in Barcelona, it is in 1975. So this started from the 1950's almost ended in the 1970's, but also went on because many of the architects started using the neo-Brutalist movement and then changed the style.

Now, these are the lines of the formwork of the shuttering, so there might have been a steel shuttering which ended over here then another shuttering, so there is another mark of the shuttering, so another shuttering could have been ended over here. So these are the marks which come and the shuttering is not very smooth that is why the concrete structure is not smooth. It has a particular texture which is a tactile texture. If you touch it, there will be a texture of concrete; so it is not very smooth like plaster. So those are the textures so you can see little green in the concrete green within that so that becomes that is the stylistic feature of concrete.

So, here also you can see the shuttering lines and the concrete texture all over the building. So this is also an exposed concrete work and also if you look at the building volume, the fenestration level was quite low and then the building looks quite robust from the outside.

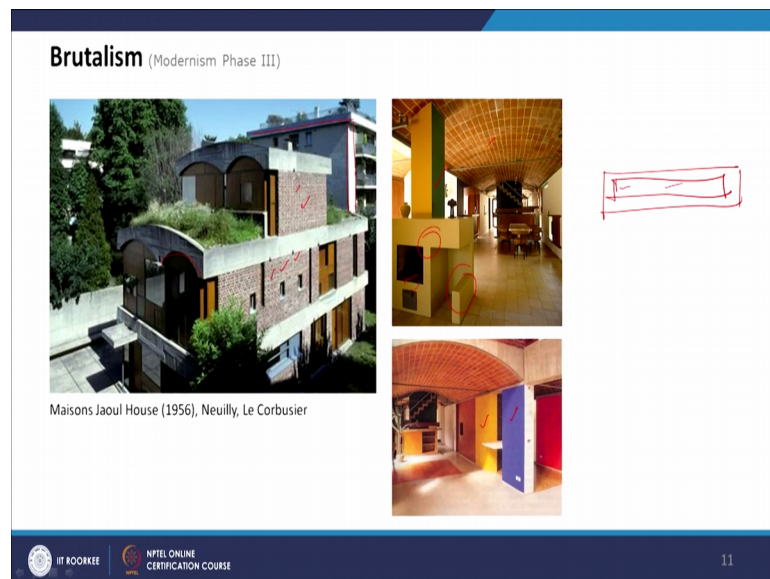
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So, this is the another example by Le Corbusier this is Maisons Jaoul house this is this is in France this is designed in 1956.

Now, here also you will see this brutalism because this is a movement in third phase so lot of percolation visual style was there from the previous architectural style. So this building has been designed with a series of walls, so these are walls, which is supporting the roof and on top of that there was a flat roof which was filled in these areas of the vault and then flat flooring was designed on top of the vault.

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Now, from outside this building you can call it brick Brutalist architecture as well, because from the vault also the brick is visible. So is the vault is constructed with the brick and from outside façade also the brick is visible, but also there is a concrete solid wall, so it is a mixture of concrete brutalism and a brick brutalism and also the Brutalist style was also there so it has a solid has much solidity in from outside ah.

And if you compare this with the Le Corbusier villa Savoye; villa Savoye has a very villa Savoye had a band window and window has had an emphasis in the design, but here if you look at so there is no band window. So this fenestration is not the protagonist of this architecture, so the material of the solid material of brick and concrete is visually much more important than this band window which he have designed in villa Savoye. Now if we look at the inside of this building you will see the in emphasis of pure color, so from outside this is emphasizing the pure material which is concrete and brick from inside this is also emphasizing the pure color which is which started in Bauhaus movement, but this is definitely not a Bauhaus building because lot of elements are there.

So, there is vault going on series of steps of solid and void was there and this is not a pure cuboidal building; so lot of elements were added within the building as well. Now you can see this blue, yellow and red color was is taking emphasis in this color palette of the this interior as well as green. Green is also used in many of the cases like for example; Frank Lloyd Wright used green instead of blue in his paintings and this interior design. Now also Le Corbusier was a painter and these colors were dominant on this his painting and this sculpture and many of the other architectural example when will discuss we will see these are the colors he used to he sometimes used as a accentuation color; with the text and material of this pure brick and or concrete movements.

This is a another example Marseilles in France by Le Corbusier in this building also you will see this Brutalist features.

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And the same features were there very solid wall and when one way of making the wall look solid is putting the punctuations or the or the fenestration in one particular area and then this could have been a one single punctuation of of glass then it will look the glass will look heavy.

So, if there is one in this building if you put a fenestration like this, it will the fenestration will have lot of importance.

Now, if you treat the fenestration in a different way for example, if you break the fenestration, but if you do not without reducing the area of the fenestration then the fenestration will not look very heavy, because here it is a one solid rectangle, but here it is broken. Now if you spread the fenestration all over then also it will look there is fenestration all over the building, but if you just club the fenestration in one particular area and leave the rest of the area blank and all of these area becomes very solid then it will look very solid.

So, this in this kind of treatment this it will look there is a visual punctuation, there is more visual, visual connection between inside and out so there punctuations are scattered in every all over the façade, but in this case this punctuations are only in a particular small space clustered together and the rest of the areas are left blank and this is the solid wall.

So that is what he is doing there is a solid big solid wall so that is why this the texture of concrete is becoming a protagonist. So which we have also seen in the Yale centre and all over the other example, so they here there is a lot of punctuation over here if this punctuations were taken from here and kept here so this solidity of this total mass will be diluted. Now in these cases also in Joan Miros center.

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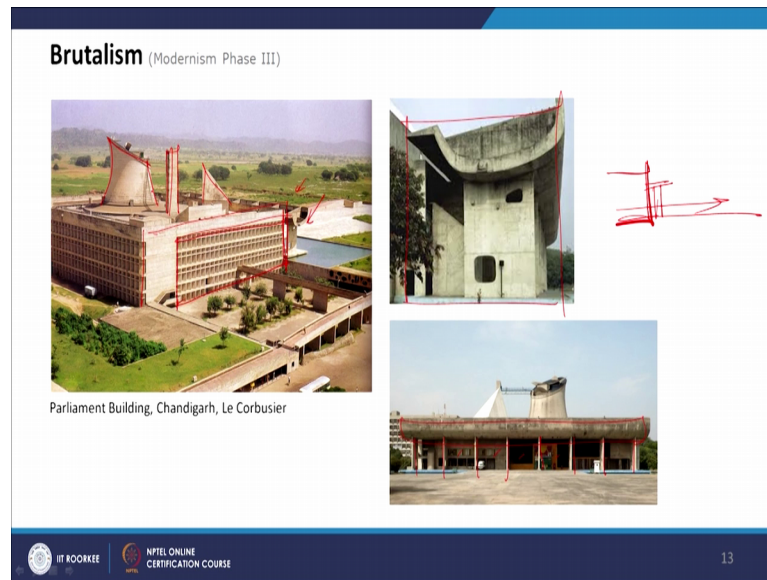


This is the front elevation; from front elevation we will not see much fenestration so fenestrations because also this is a museums. So light if the light comes from top and deflects here and then goes to the installation; so in if in the section if we look at so the north light comes from or the south light comes from here and then it becomes a diffused light and then if there is a art installation and people are seeing from here. So then there is a diffused light coming in the installation that is also the functional requirement, but outside this looks very solid because of the positioning of this fenestration or the windows. ah

So, here as well we have seen this and also this fenestration could have been a solid band window like thing ah, but he is breaking this with lot of different members which is going from passing from each other. That is why this fenestration is looking visually less, so actually there is lot of fenestration is there in this building, but because of this members so this fenestrations are not becoming visually heavy and also from the bottom it this thick solid concrete columns and beams are giving visual weight in this design.

So, Le Corbusier have designed many buildings in India as well, so specially his works are there in the Chandigarh. So parliament building in Chandigarh is designed by Le Corbusier and also this is the Brutalist movement.

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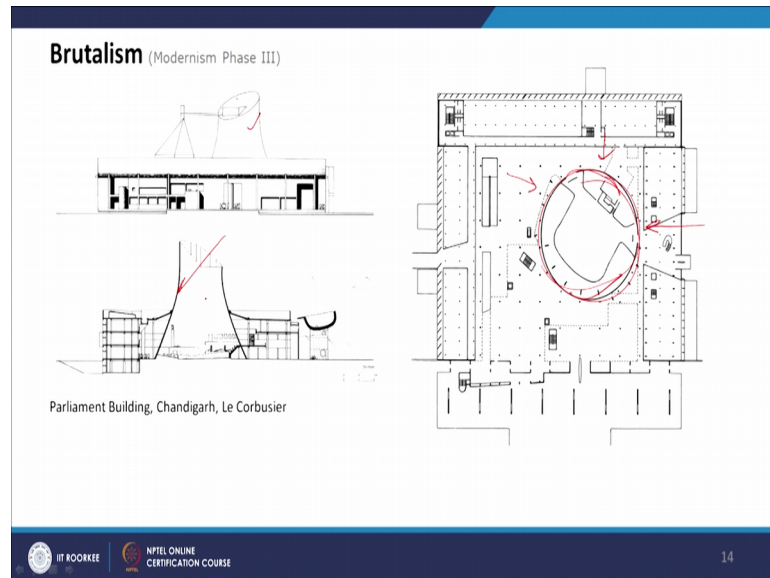
And Le Corbusier one of this style was this Brise Soleil or this device which cuts the sun which cuts the sun to come within the building. So this is an added treatment of concrete vertical and horizontal members which also we have seen in this example is used in Chandigarh, because of the climatic conditions and the inside building has to be protected from the sun light. So these kind of elements were added on top of the building as a visual elements.

So, in the front façade from this side so you will see this series of a long concrete walls, shell walls which is holding this inverted vault like structure which is added on before the building. So building actually stops over here so this part is added and this also dilutes the solidity of this thing because lot of this there is a rhythm and then solid and void was there. So this stops the sun light to go inside the building and this actually helps the building to merge with the nature. So this there is a solid building and if you add these kind of members and there is a gradual transition from this inside to outside.

And if you look at the building from in totality so this building also is like a cuboidal concrete chunk and if you look at the members other members which is coming out of

this building was very robust and solid in nature and this is the this is on top of the assembly hall and in plan we will see is top in on top of this.

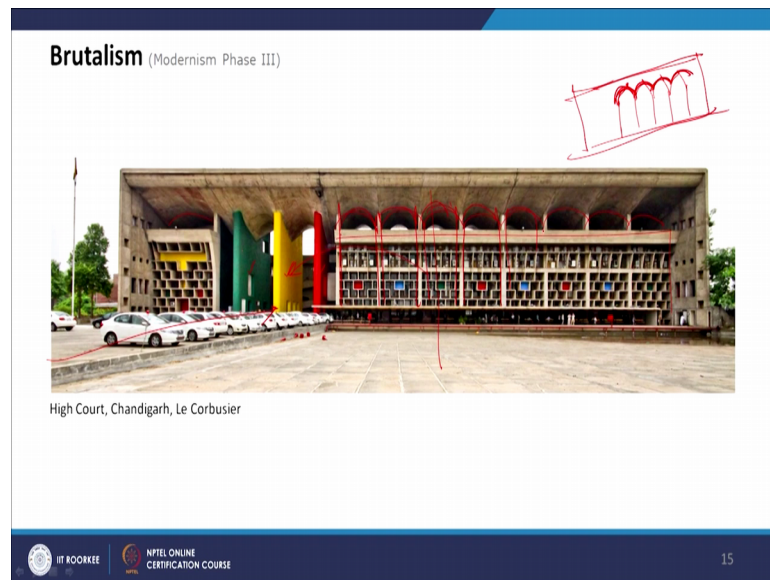
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So this takes the takes the sunlight from outside and so this building though this does not have any outside connection from the elevation side. So it takes light from the top and so this the room becomes valet in the in the day time.

So, from this skylight this light comes from top, but if you look at the shape of this skylight; it looks like a chimney and which also shows the progress of this area of Punjab where with the industrial progress with the of the area of Punjab. Now this is the another building high court building in the Chandigarh capital complex designed by Le Corbusier and here he have used this 3 accentuation color which focuses which marks the entrance.

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So, this is the entrance of the building which is not in the centre, but in the other side is designed like that. So the emphasis is given to the entrance like that and again the same Brise Soleil was added here in the in the chandigarh- in his design and if you look at this looks like a series of arches which have taken from the Indian Mughal architecture; where we have we see the series of Mughal arches and in many forts and castles. So this has been translated into more modernized format and covered within the within cuboidal chunk and this onion shaped arches where translated into semicircular fragment semicircular arch, so that it becomes more modernized.

But this looks this creates as a visual connotation with the series of arches which has been taken from the Indian style. So this can be kept in a another post modern movement which is called critical regionalism where the regionalist visuals and functions were taken within the architectural form. So which was opposite to the internationalist movement where there was no contextual connection of the building.

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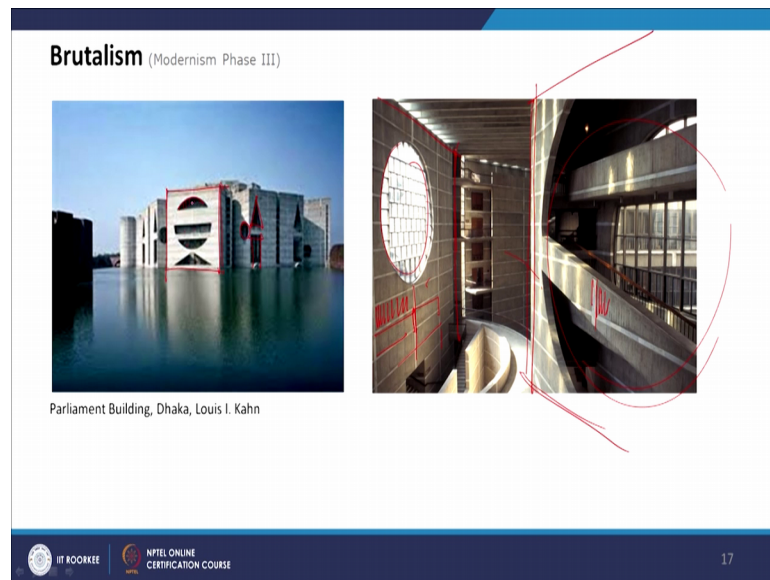


So this is the is the same Brise Soleil which is added on top of the fenestration, so actually the fenestration has lot of glass works, but when this concrete solid chunks were added on top of this fenestration it looks more visually robust.

So, this is the view from the inside, so here this thick shell was concrete shell was were added also it gives a visual weight in this building and there was lot of big concrete columns which takes the weight of the this huge cantilever is a creating a visual weight. And here also this huge cantilever is not creating anti gravity weight look because this might be a cantilever, but this thickness of this cantilever is not what a internationalist movement were there. So in internationalist movement there is be there will be very thin cantilever even in the Robie House in prairie architectural style there was a very thin cantilever will be there, so that looks visually lightweight, but here the cantilever is very thick and it looks visually heavy.

So, another example of this subcontinent is Louis Kahns parliament building in Dhaka. So if you look from outside this Dhaka building also has a is a pure concrete Brutalist architectural style.

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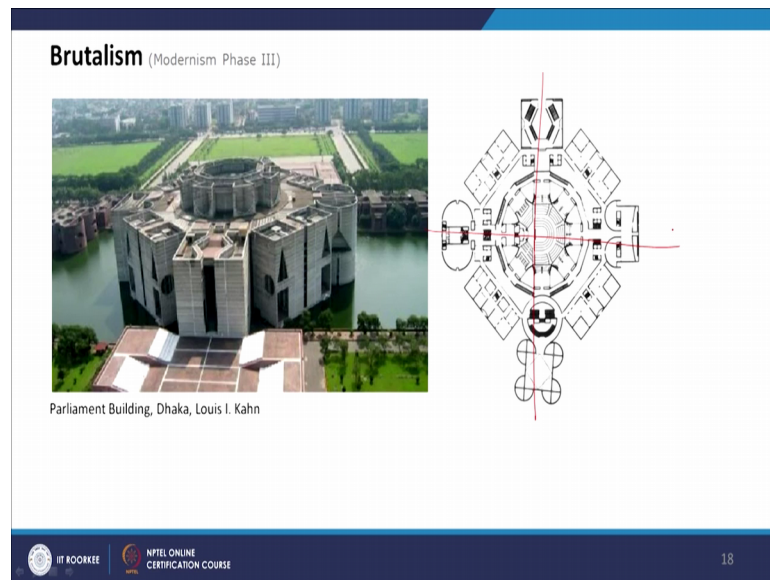


And from within you can see the form works and also there is a because this texture there was a texture added to it there was a it looks darker in color. So within that so there is this where there is no textures, so this flat works looks lighter, so there is a texture so this texture has a darker it appears dark..

So from outside so this also has a can be falled under the critical regionalist movement because Bangladesh has the water is very important then the Bangladesh s[o]- context. So the water was used in the in the building and then this monument looks like a Kassel within the water which has take an inspiration of Bangladesh is kingdoms, which was there and in the fortress of Bangladesh and also this has been modernized with the pure circular and triangular and also rectangular fenestration from within this there is a wall which is added on before the building.

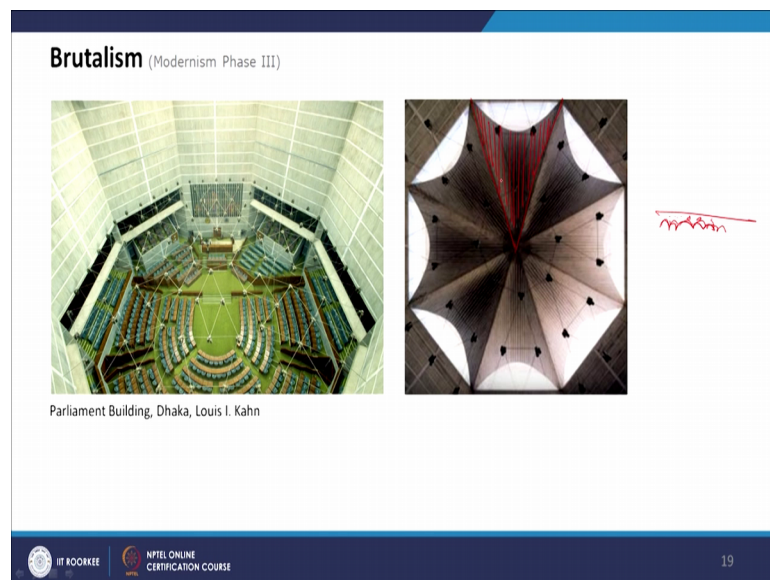
So the building most of the functional elements of the building were confined within this space, but there was another free wall which is added on before this building, so you can see there this building functions were going on that façade, but another façade is added on top of it and which gives a very strong solidity in the in from outside from the outside of this building.

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So, this also because of this bilateral symmetry and this robust look this also gives a visually heavy visual heaviness in the building.

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This is the inside of this parliament building of Dhaka and this is the skylight on top of this assembly hall of this parliament building. So if you look at this assembly hall so these are the this the form work this assembly hall you can see lot of lines which is coming out which is visible from here. So this form work has been done with bamboo, so these are marks of the bamboos so this the series of bamboos were added as the bottom

base of the form work and because of this curvatures of the bamboo and on top of that the concrete mixtures were poured so these lines of this bamboo lines were retained.

So, this also has the bamboo texture was embedded within the building because bamboo was predominantly bamboo has is a is a natural vegetation which is there in Bangladesh and the northeast of India. So that also creates a connection with the nature within the building so which is also opposite to internationalist movement. So this can also be placed within the post modern movement the precursor of this post modern movement of critical regionalism which we will discuss where the regionalist elements will be added in the building, but definitely this is a Brutalist movement building within the Brutalist movement.

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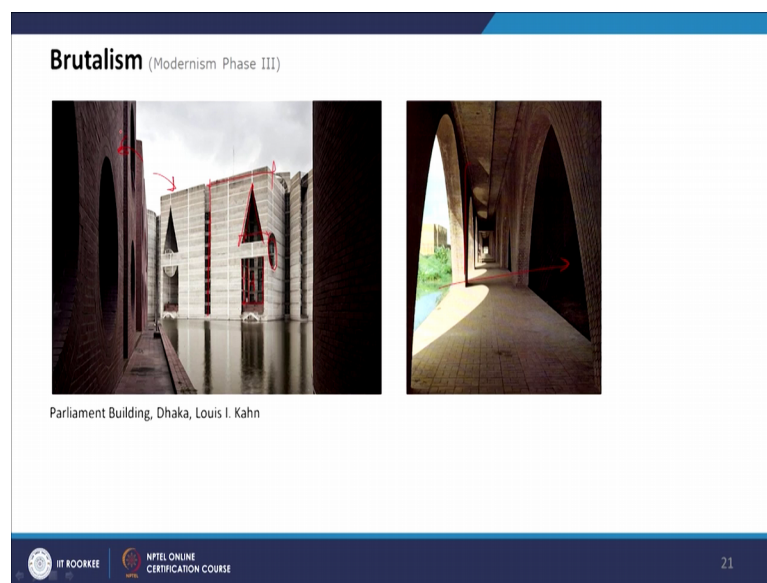


So, there other buildings in the parliament complex, so where he have used the brick Brutalist architecture style; but the similar architectural principles were added. So from outside there was another façade which is going on many of the functions where happening within, so from outside façade this looks very solid chunk of form which have which has a very less amount of fenestration in a visible fenestration. So here there is another way of translating the Mughal arches into the design. So if you look at the arch so this has been translated into the trabeated form which is because of the trabeated form looks more modern, because this is this is square. So trabeated is where you put the a

beam and then start constructing so, but on top of that there is a slight connotation of the arch.

So, this arch has been designed by brick by layer layering this bricks on after one and another and this concrete member is taking the load of this arch and which is actually joint with each other; so same is happening with this. So this is also gives the connotation of the Mughal arches of the Indian subcontinent which is also there in the interior.

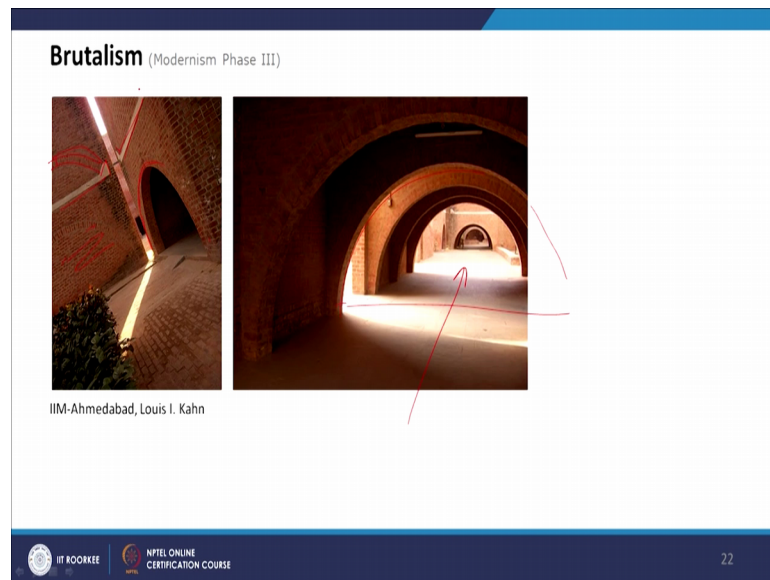
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So, these are another photographs of the same building and so here you can see so there was another wall added on top of the building to create this geometric patterns and as well as the solidity. So you can see the other functions were happening where there was much more because of the need of this functions there was much more fenestration which was there within the building.

But because of this robust wall the building looks much more visually heavy and robust. So here also you can see this concrete brutalism and the brick brutalism together in this complex.

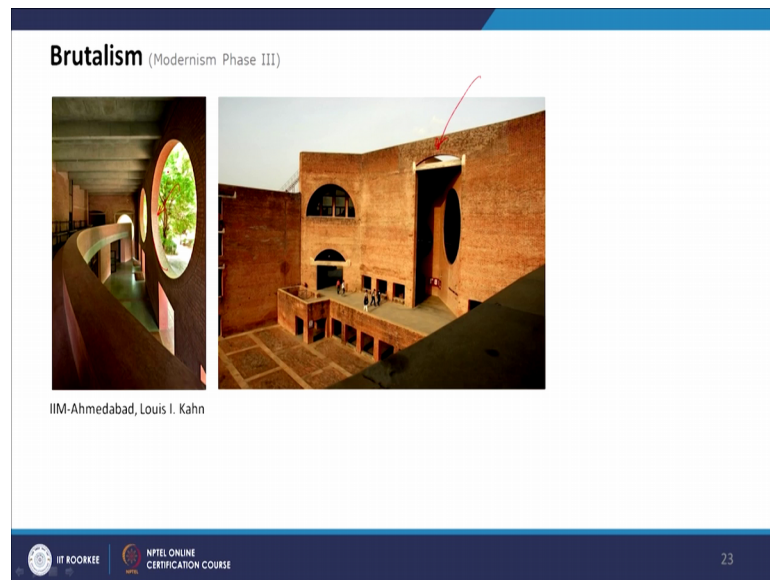
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This is the another example by Louis I Kahn in India which is IIM, Ahmadabad and he have used the similar visual principle over there, but this is in brick Brutalist style. So the similar way of series of arches where the therein much more modernized version, so this arches are in this cases are absolute semi circle and this series of arches are there so which is also you can see the contextual connection between this arches, which can be seen in Lucknow and Delhi or Agra where the series you have to pass the series of arch in a Mughal or Saracenic corridor; so which gives a similar connotation of this Indian ancient architectural history and which has been translated into the modern or post modern movement.

So, here also similar concept has been added so this is this also gives a texture of the arch from outside, but covered with the brick and this arch is also there and the similar elements are there.

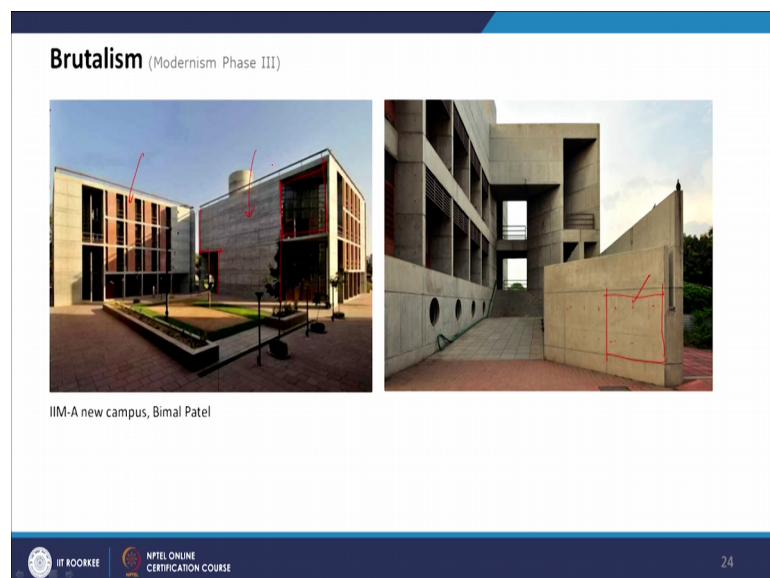
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So, here also the same treatment has been done which has he have used in the in Dhaka and also you can see this wall which also works as a functional element as this cuts down the sun because, Ahmadabad is a in a hot and dry area so the sun is a is the amount of more sun if more amount of sun light comes within the within the interior.

So, the climatic condition will the livable condition after building will not be so would not be suitable. So that is why this kind of a walls are added on top of it as a functional element as well and also you can see the similar treatment are there.

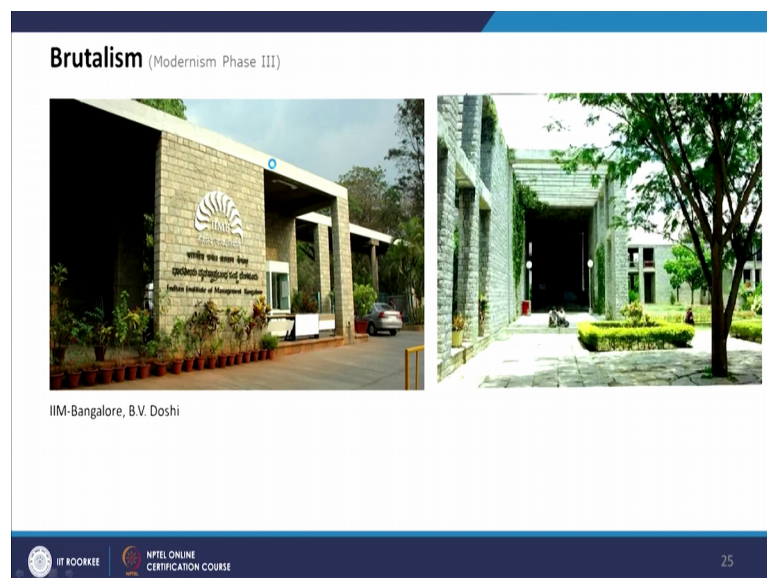
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Now, this is an extension of a IIM, Ahmadabad which is designed by Bimal Patel the HCP construction and where the similar few similarities has been taken from a the context has been from IIM, Ahmadabad's the main campus designed by Louis I Kahn, but this is designed in concrete brutalism and here you can see the concrete form work is visible and this screws to hold the form work is also visible.

And here there is a mixture of concrete brutalism and the brick brutalism and also there is a solid robust wall and fenestration was put kept in the particular corner gives soli[d]- adds to the more solidity of this building.

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Now, as I was telling is it it might be concrete it might be brick, but it sometimes might be the native material might be something else so this is IIM, Bangalore designed B. V. Doshi one of the famous architect of India in Bangalore this stone was very is a locally available material.

So, using stone was much more economic economic and it also gives connects the nature and the context with the building. So instead of this brick or concrete he used a stone to design the IIM, Bangalore's building, but the style and approach of this IIM, Bangalore's building was quite similar to the brutalism so this here the Brutalist movement style and features has been translated with the with the locally available material which is stone of from the local stone quarry. So from outside also it has a very robust look and the

similarity is you can if you look at there was lot of similarity with the the brick the Brutalist movement, but the material was changed into the stone.

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So, in the next class we will discuss metabolism and later we will discuss, what is the neo brutalism and how in Indian context? In Indian context many of the famous architects have used neo brutalism; so in Indian context, how the Neo Brutalist movement has an impact.

Thank you.