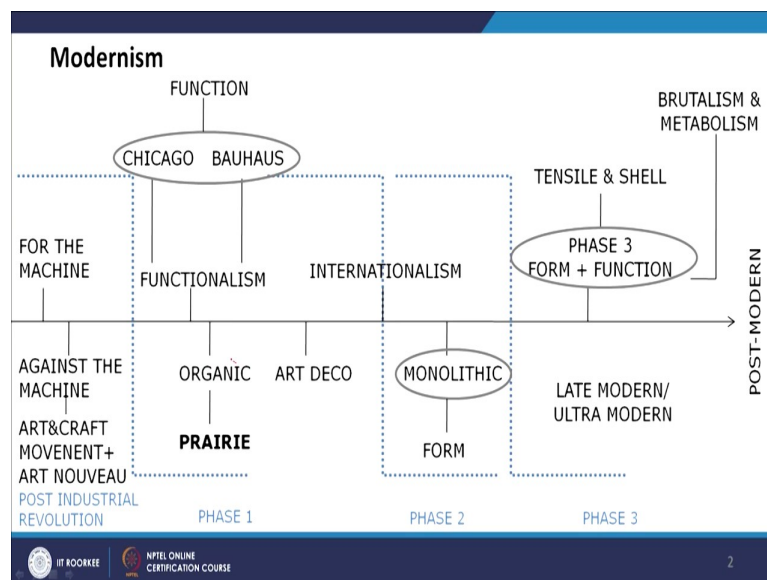


Contemporary Architecture and Design
Prof. Saptarshi Kolay
Department of Architecture & Planning
Indian Institute of Technology, Roorkee

Lecture – 14
Phases of Modern architecture- Organic Part I

Welcome students to the online NPTEL course Contemporary Architecture and Design. In the previous class, we were discussing about the prairie architectural style and today we will discuss about organic architectural style which is similar and prairie style... organic architecture style evolve from the prairie style and they both went hand in hand and they have lot of similarity and similarity in approach and design language.

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So, if we look at the time frame here, we will see that organic style is actually organic and prairie together are quite same. They branch out in the from the same manner and both evolved in USA and in both the cases, Frank Lloyd Wright's works are predominant in the both the architectural style.

So, prairie has been discussed earlier and today, we will see the organic architectural style. In prairie, we have seen it evolve from the nature and the design language evolve from the natural landscape of prairie flatland, which is in America and which is against the reaction of the neo classical style and the Chicago's style and neo classical style which was the inspiration was from Europe.

So, American architects thought that, there has to be something native to the America and then in the quest of that style, they imbibed the visual language from nature because, previous architectural styles all were from... predominantly from Europe.

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So, here if we look at, so, this is Robbie house which falls under the prairie architectural style. And then, we also have the falling water arch... building, which is by Frank Lloyd Wright.

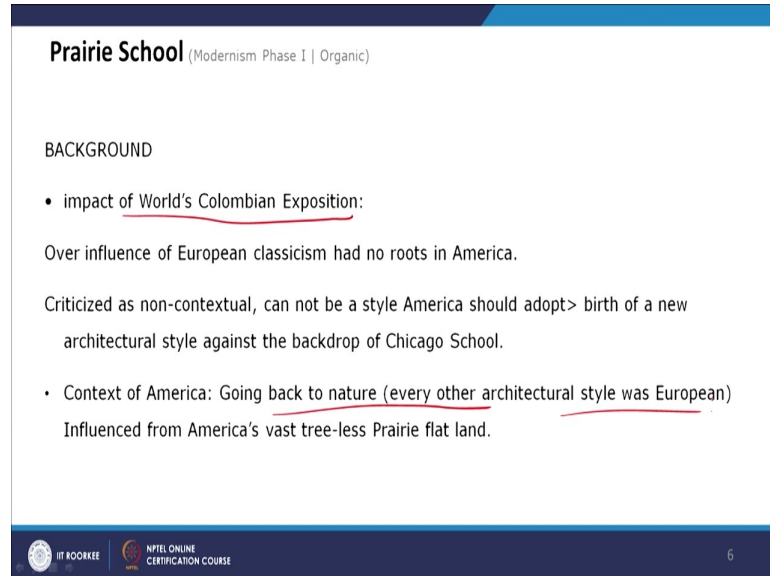
Both the architecture, both the designs are by Frank Lloyd Wright and they are quite similar. And this falling water building comes in the organic movement. And organic and prairie sometimes they are they are quite blended and their philosophies are same and their visual languages are quite similar because they evolve from the similar thought process.

And here, we will see from the stylistic feature there are lot of their ornamentation is important because, the ornamentation the prairie and organic style came from ornamentation which opposed the new classical style. And the ornamentation came from the Native American flatland.

So, here, it is not like Bauhaus where only functionality will be predominant and then box like structure and pure geometry. It is not like that; definitely pure geometry is taken and then lot of ornamentation using the pure geometry and superimposing different

geometry they have created the ornamentation. So, ornamentation also has a priority in this style.

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Prairie School (Modernism Phase I | Organic)

BACKGROUND

- impact of World's Colombian Exposition:
Over influence of European classicism had no roots in America.
Criticized as non-contextual, can not be a style America should adopt > birth of a new architectural style against the backdrop of Chicago School.
- Context of America: Going back to nature (every other architectural style was European)
Influenced from America's vast tree-less Prairie flat land.

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So, if you look at, in the prairie architecture how it evolved. So, we already discussed this. There was a reaction against the world Colombian exposition where they have made the white city which followed the neo classical style and then they went back to the nature.

And, so, which is opposed to the architecture style of European architecture style and because this was non contextual to the style of America and here, they have the styles of prairie architecture is horizontal line color palette derived from the prairie which is brown. And the color is reassembles the dried grassland of prairie.

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Prairie School (Modernism Phase I | Organic)

✓ BACKGROUND

- Horizontal lines, colour palette derived from the Prairie flat-land. Started designing asymmetrical buildings.
- ✓ ORGANIC architecture

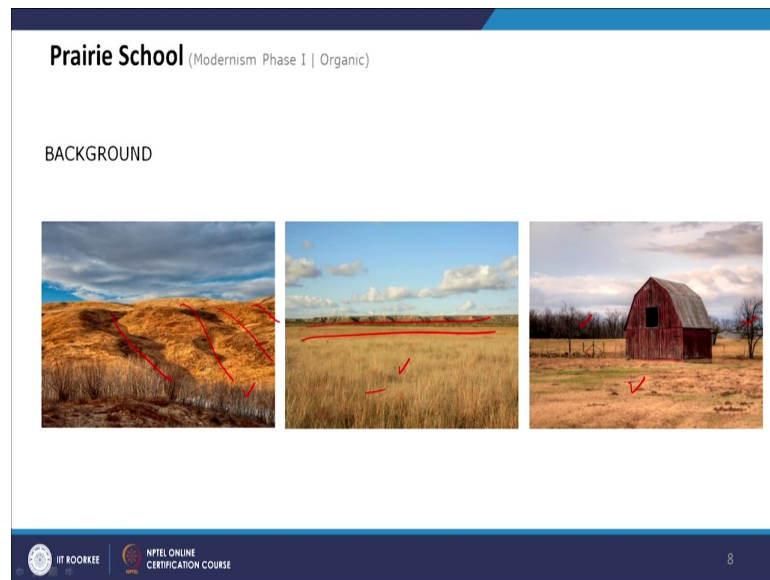
"Nature builds a tree from the inside out. That is what organic architecture is. It is building the way nature builds"- Frank Lloyd Wright .

The slide features a dark blue header and footer. The main content area is white with red checkmarks and underlines. To the right of the text, there are three horizontal red lines of varying lengths, mimicking the style of the slide's header.

And this horizontal line came from the lines landscape lines of the prairie architecture, Prairie style. In organic architecture also, it evolved from the nature so, nature and its context will generate the architecture the building style that was also the philosophy of prairie and prairie is based on a particular flatland of prairie American style. But organic architecture style talks about what... wherever the contextual context of the building is, it should evolve, it should respond to the context of surrounding of that particular place.

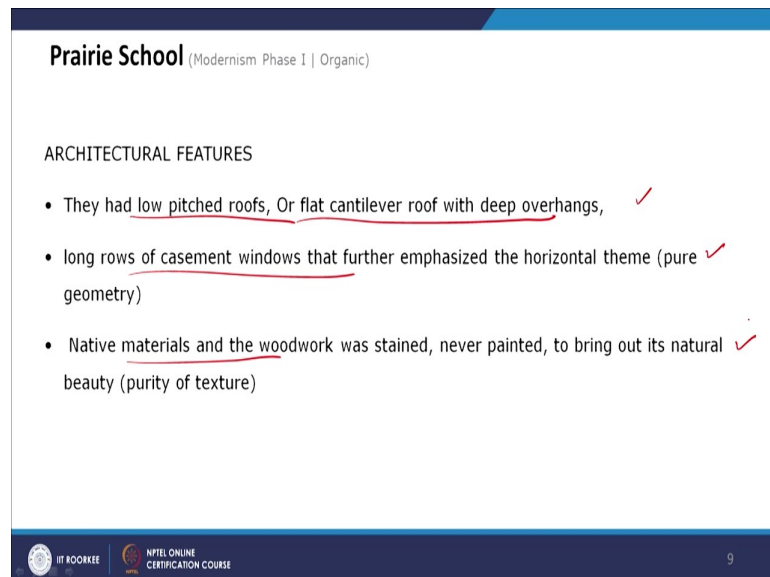
So, philosophically, they are similar, but only the prairie architecture style takes the visual language from prairie flatland. But organic architecture style will take the nature, natural surroundings of that particular context, where the building is positioned. So, this is the Frank Lloyd Wright's quote that organic architecture "nature builds a tree from the inside out that is what organic architecture is, it is building the way nature builds".

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So, this is followed in the prairie architecture style. We have discussed earlier as these horizontal lines, which comes for... from this undulation of the flatland and the color palette this brown color palette and dried trees, those are the inspiration of the prairie architecture style.

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We have seen the low pitched roof, the flat cantilever long rows of casement windows and native material. These all attributes it will also be there in the organic architecture style.

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Prairie School (Modernism Phase I | Organic)

Examples:

- Ward Willits House; Oak Park (1900-02) Frank Lloyd Wright ✓
- Robie House, Hyde Park, (1908-10) Frank Lloyd Wright ✓
- Harold House; Henry Louis Sullivan
- Frederick Carter House; Evanston, Illinois (1910) Walter Burley Griffin
- William H. Emery, Jr. House, (1903) Walter Burley Griffin
- F.L Wright's house, Oak Park (1893) Frank Lloyd Wright
- Winslow House, Illinois (1893) Frank Lloyd Wright

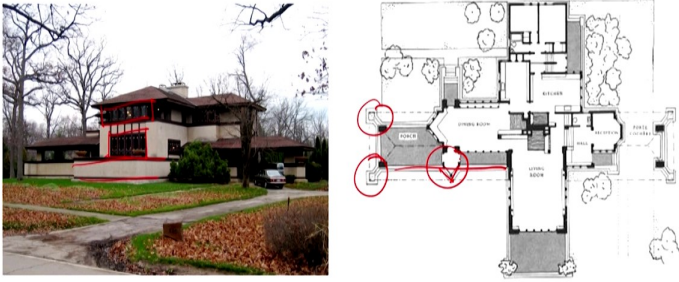
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Now, we have also discussed these buildings in prairie architecture style.

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Prairie School (Modernism Phase I | Organic)

Ward Willits House; Oak Park (1900-02) Frank Lloyd Wright




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So, if we look at this oak park's building by again Frank Lloyd Wright, we have also seen some Frank Lloyd Wright's typical architecture style of this kind of windows will be there and strong horizontal lines and this series of a windows, that is, his style. And also these punctuations of the straight lines with a triangular projection and casement windows is also there in his architectural style.

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Prairie School (Modernism Phase I | Organic)

Ward Willits House; Oak Park (1900-02) Frank Lloyd Wright



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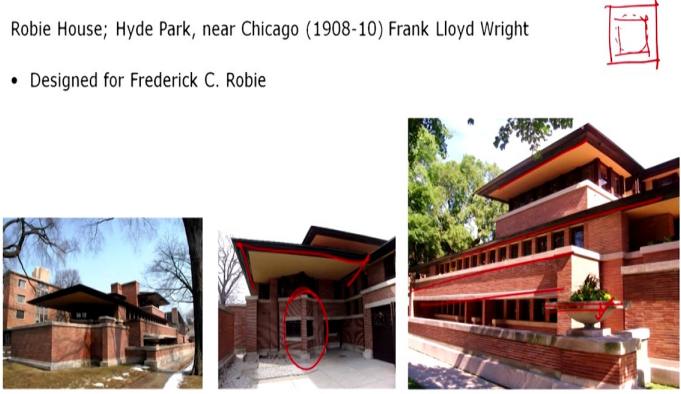
And also, we have seen this kind of windows and typical Frank Lloyd Wright glass painting on the windows are also there. And if we look at the industrial design here, in cases of lighting design and the false ceiling and the windows, we have seen the similar color... similar color palettes. Similar straight lines are there and if we look at this... light you have you see that this is a pure globe and square which is which is coming from the pure geometry. Again you will see the pure geometry in different ornamentation as well.

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Prairie School (Modernism Phase I | Organic)

Robie House; Hyde Park, near Chicago (1908-10) Frank Lloyd Wright

- Designed for Frederick C. Robie



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Similarly, in the Robbie house also you will see the flat overhang cantilever this protruding triangular lines which is coming and which was seen in the plan. And also, which is a typical Frank Lloyd Wright's furniture and other designs. So, here you will see, if you look at the plan, you will see a square and then, in the bottom, there will be this pure circle and again there is a square. So, this coming from again pure geometry and straight lines these are the characteristic feature of prairie architecture style.

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Prairie School (Modernism Phase I | Organic)

Robie House; Hyde Park, near Chicago (1908-10) Frank Lloyd Wright

- Designed for Frederick C. Robie



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Again inside this Robie house as well you will see the similar kind of treatment in the interior design.

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Organic (Modernism Phase I)

ARCHITECTURAL FEATURES

- They had low pitched roofs, Or flat cantilever roof with deep overhangs,
- long rows of casement windows that further emphasized the horizontal theme (pure geometry)
- Native materials and the woodwork was stained, never painted, to bring out its natural beauty (purity of texture) ✓

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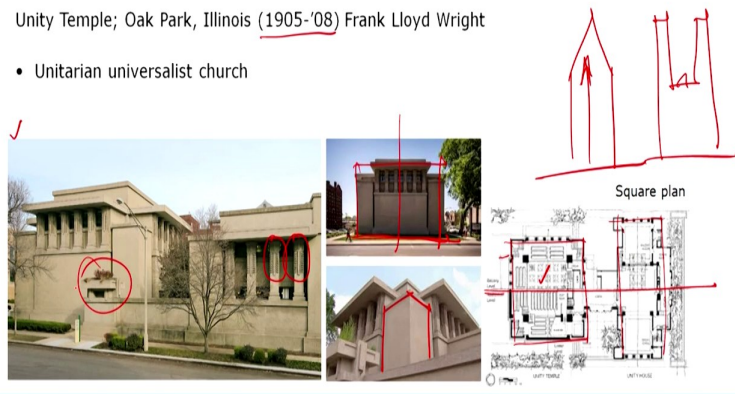
So, now talking about organic architecture we will see the these similar styles will be replicated in the organic architecture style as well with a little variation. So, there also there is low pitched roof flat cantilever, which is there in the prairie will be repeated in organic architectural style as well. Long rows of casement windows is also there which emphasis the horizontal... horizontality of the style and pure geometry and the native material which is also there in the organic architecture style.

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Organic (Modernism Phase I)

Unity Temple; Oak Park, Illinois (1905-'08) Frank Lloyd Wright

- Unitarian universalist church ✓



The slide features several architectural elements for Unity Temple: a large photograph of the exterior with red circles highlighting the flat roof and casement windows; a smaller photograph of the tower with a red vertical line; a red line drawing of the tower's profile; a red line drawing of the square plan with a red horizontal line; and a detailed architectural floor plan with red annotations.

Square plan

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Now, if we start discussing organic architecture style will predominantly focus on Frank Lloyd Wright's work because he is works in a organic architecture style is, he is a pioneer of organic architecture style. And most of his designs belong in this particular phase and he has lot of different works in architecture, industrial design and furniture design as well. So, we will focus on Frank Lloyd Wright's work. And also, there are some examples like Guggenheim, New York which does not fall under organic style which is also done by Frank Lloyd Wright that will be discussed in the corresponding architectural movement.

So, unity temple is one of the previous works of Frank Lloyd Wright which is 1905 to 1908. So, you can understand this is just before starting modern movement. So, it is one of his initial works. So, if we look at the building. So, here, we will see in the plan it comes from the square this is the temple. So, Unitarian... an Universalist church.

So, if we look at this is the temple or the church and this is the residential part. So, here, it follows a bilateral symmetry which is a style which comes because, it is church. So, previous church is on the when we think about church, the mental model comes that it has to be a bilateral symmetry. So, it is there in a elevation it is there in plan as well, but still, it has the modern look and in the plan it is pure circular.

And the way church looks like with the lot of ornamentation classical and neo classical ornamentation that is, been eliminated and pure geometry is used instead of the classical or pre industrial revolution styles. And if we look at the volumes, there are lot of juxtaposition of cubes and cuboid and in the plan also, you will see the same pattern and if you look at here also, in comparison of a church volume.

So, generally, it will have long... more verticality or something like this, but here, in the state of this there is a proportion maintained over here. And this is quite short in terms of the mental model of a church and if we look at this kind of ornamentation.

We will discuss later with Frank Lloyd Wright's style of ornamentation; we will have a similar... you will see the similarity of these designs in his through his painting, through his furniture design this kind of works are there. And this kind of a stylistic ornamentation is there in his different works and also the planter box, which we have seen in the Robie house planter box as well has a similarity in the design language.

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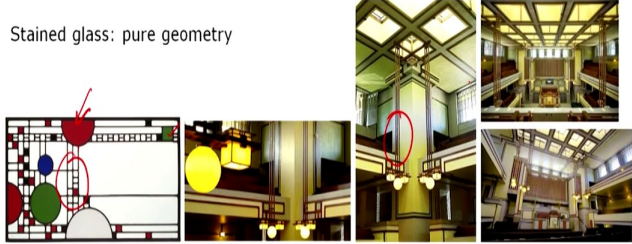
Organic (Modernism Phase I)

Unity Temple; Oak Park, Illinois (1905-'08) Frank Lloyd Wright

- F. L. Wright's style of architecture

Robust outside with reinforced concrete structure

Stained glass: pure geometry



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And so, if you look at the inside and the interior decoration of this church also. You will have a similarity... you will see the similarity which is the way Robie house and oak park building has been designed has lot of similarity with the interior design of the church. And he is in the church... in case of church is a chandelier also, he is using pure geometry. And in case of this, they have a globe and the cube is used even in the roof. Also you will see the pure square which is also there in the Oak Park's building and Robie house.

Here also Frank Lloyd Wrights another style is the series of vertical lines and wooden works is also quite similar. And if you look at the glass painting, there is also similarity in this style.

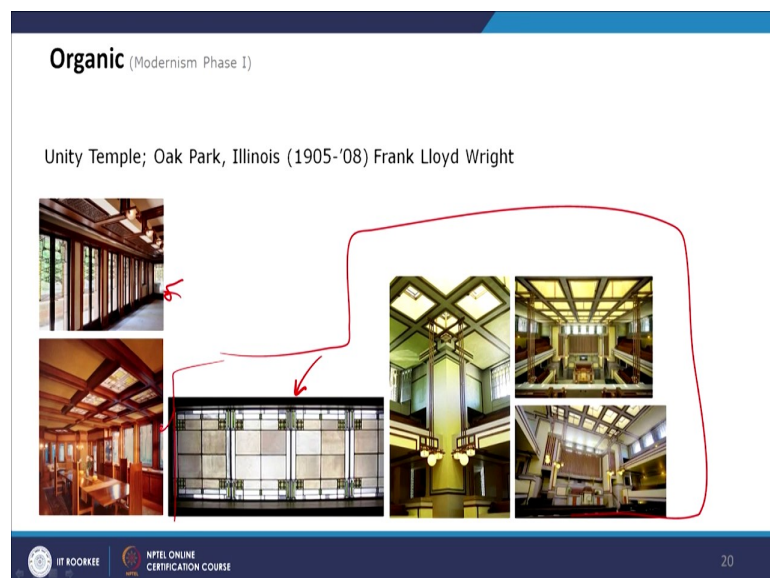
So, this is if you look at the outside, this has a robust volume in the bottom. So, which cut downs there is no fenestration in the eye level. So, there is no the outside surrounding does not visually interrupt the church's interior whereas, you will see the fenestration on the top part of the church where the light comes within and the so, inside also you will see lot of lights which comes from the sky lights on top and the windows on the, which is above the human eye level.

So, there is lot of ample light is there, but there is no visual connect form the, from inside. So, that the serenity is maintained based through this design. And if you look at the color palette here as well, the predominantly brown, green and yellow is used. So, if

you look at the Frank Lloyd Wright's painting which we were discussing earlier. Similar kind of geometry and visual color you will see. So, it is brown, green and also yellow because, we were discussing earlier that yellow is the primary color and which has been used in Bauhaus which has also used in... used by Frank Lloyd Wright in his glass painting as well.

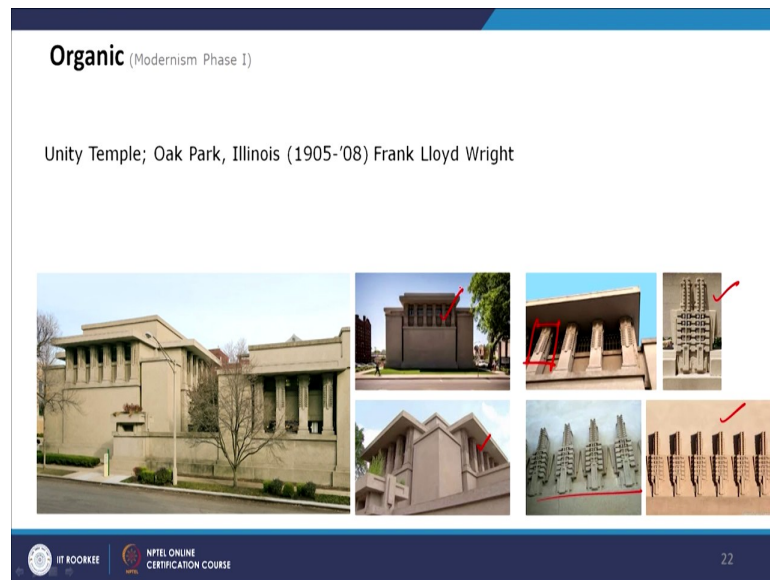
So, these are the colors and this kind of line qualities are there in his painting as well as in his design as well. So, series of a straight lines and dividing it in... smaller grid of lines is also there in his painting and in interior design.

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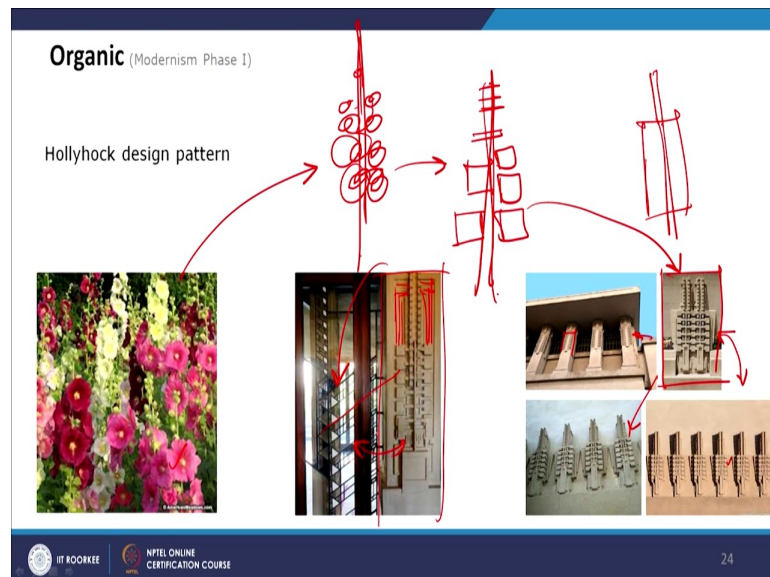
And so, you can see the similarity this is this is a unity temple's skylight on top and this is this part is unity temples design and this is Robie house and Oak Parks building. So, you will you will see visual simile in the design style.

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Now, another interesting pattern which evolved from Frank Lloyd Wright's design style is if you look at the ornamentation on the top of the columns. And also in the.. on the.. on the wall you will see these kind of patterns coming in many designs of Frank Lloyd Wright.

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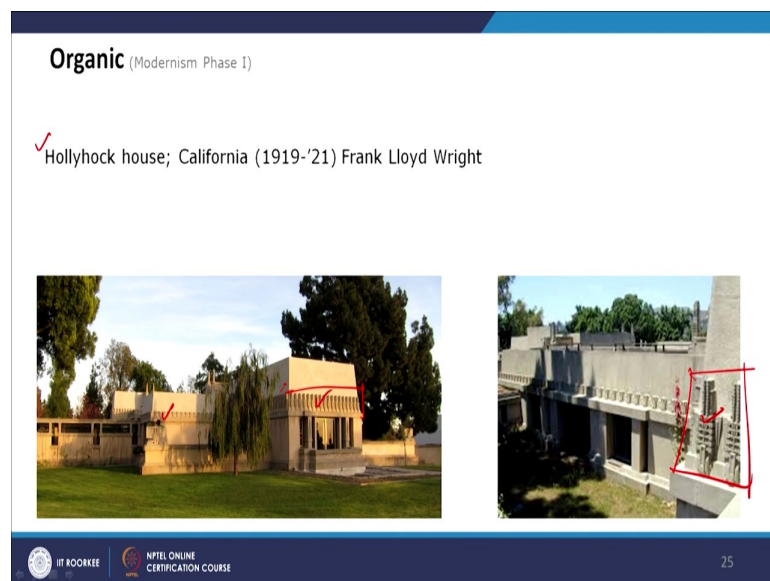
So, this evolved from the hollyhock orchid or hollyhock flower which is something like this. So, if you look at the pattern of the flower in the in the florescence, the flowers goes like this and then as a small stem comes up.

So, here, if you take this flower and start doing the abstraction and thinking about the abstract form of this in pure geometry, then this will come something like this. So, these... these depicts the flowers and then it will come like this. If you translate that in pure geometry which is something he have adopted in this kind of style. So, this is... these 2 if you see, there is minor variation in the detailing, but has the similar pattern all over. And here this goes throughout the square goes in a same format and then tapers down.

So, this is how he from the nature, he is taking inspiration and creating a design pattern out of it. That is why this is called organic architecture. So, it take inspiration from nature and through the pure geometry because, this is the modernist movement through pure geometric abstraction. It is translated in the design.

So, it is not taking the prairie architectural style flat land style, but taking an another inspiration from the nature and simplifying it in the abstract format and creating the... generating the pattern out of it. So, even in the interior, you will see the this similar kind of patterns and series of straight lines is also a style of this and then Frank Lloyd Wright's window painting which matches which complements this interior work is also you will see inside the building.

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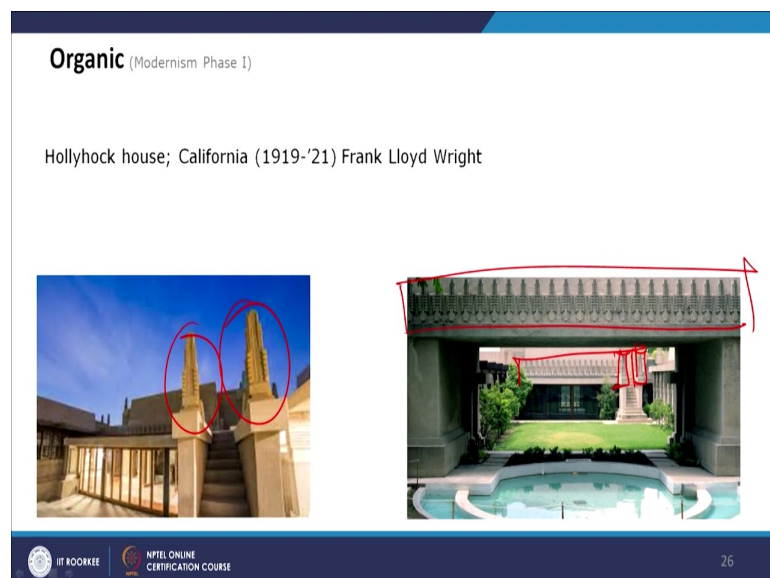


So, it is a hollyhock house. It is also designed by Frank Lloyd Wright; the owner has a fascination of the hollyhock flower. And Frank Lloyd Wright evolved a design style out

of it and then you will see throughout the building this kind of patterns which evolve from hollyhock is used not only in the architecture, but also in the furniture design and the other elements in the... in the interior.

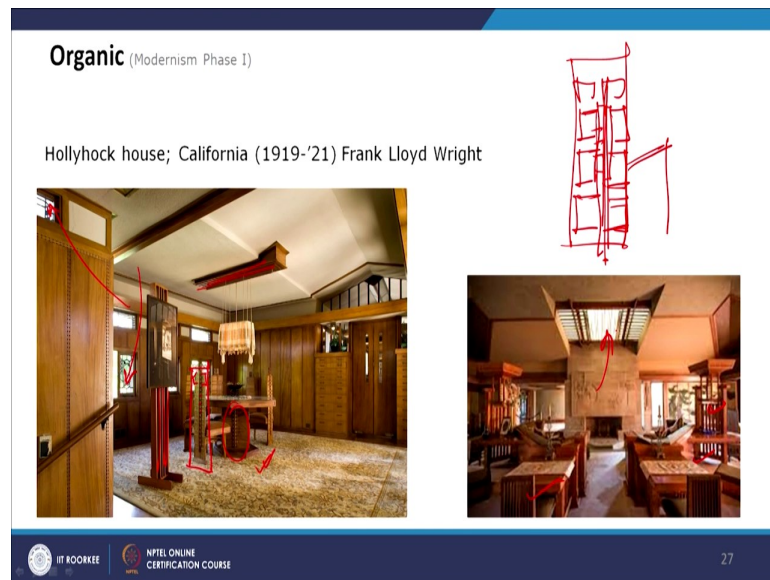
And also, if you look at this, has a similar kind of color palette which is there in the unity temple. And similar kind of proportion of the unity temple and also you will see this pattern all over as a decorative format and predominantly... format of this building. So, you will see it here and in many other cases even in the pinnacle like structure on the paraphet you will see this pattern coming up.

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So, here in the entrance also, you will see these patterns are there even in the top of the eaves you will the hollyhock pattern is there. And even here in the pinnacle like structure you will see the hollyhock style.

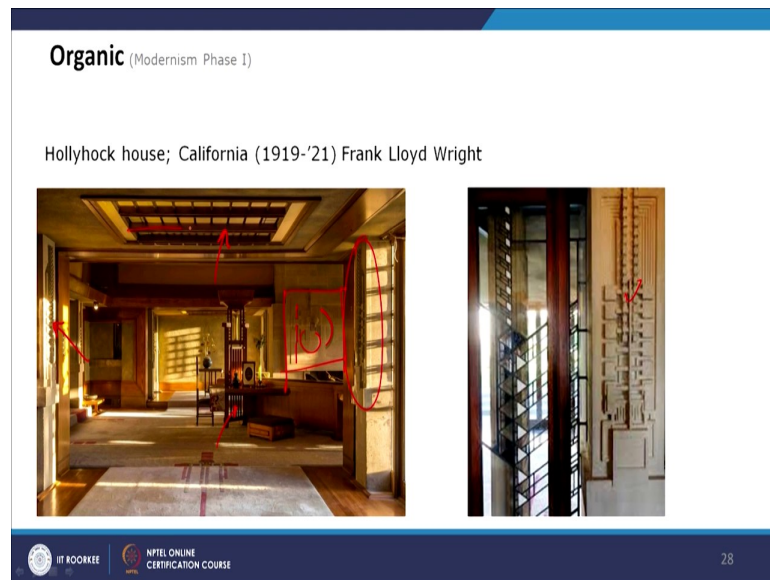
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And if you look at the interior, similar kind of line works which is there in the Robie house is also there. And now look carefully within the, in the furniture design; this furniture is designed by Frank Lloyd Wright himself. All the furniture actually have designed by Frank Lloyd Wright and if you look carefully in the back of... back rest of the chair, you will see the same pattern which is evolved from the hollyhock flower.

So, you will have the spine like the stem and then the this small part coming up from the stem and then these are... this depicts of flower of a hollyhock flower which is translated from the natural biomorphic form to an abstract geometry. So, this becomes the backrest of the chair and then the chair goes like in a very straight rectilinear line. So, that is also there in the supporting structure of the table and here also, you will see series of lines and similar kind of glass works of which is a typical style of Frank Lloyd Wright is all over inside the interior and here as well.

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In the other elements of interior elements, you will see the similar kind of works by Frank Lloyd Wright and even if you look at the murals on the wall, this is also is a composition evolved from pure geometrical shapes which juxtaposed by each on top of each other and that creates the pattern.

Even here, the series of a straight lines with woodworks and hollyhock style is there and then the on the false ceiling as well. You will see the similar kind of crisscross works which generates lot of squares which is also there in the his designs which falls under the prairie architectural style.

So, another series of... he have Frank Lloyd Wright also designed a series of... a architecture building which is called Usonian houses. So, there is a 60 different a... small houses which is designed for low cost, low income group economic houses. So, these series of 60 flat, one storied houses are called together called Usonian houses. So, he this is the term Usonia is the term which Frank Lloyd Wright converts to depict the new American style ah.

So, this is his term he have evoke this term and he depict the new architecture style of America under this name Usonian.

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Organic (Modernism Phase I)

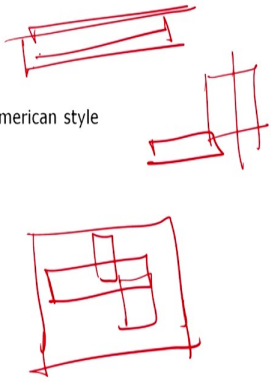
Usonian house: Frank Lloyd Wright

The term 'Usonia' is used by F.L. Wright to depict new American style

Group of around 60 houses

Small homes : single storied, without garage

- Local material ✓
- Cantilever overhang



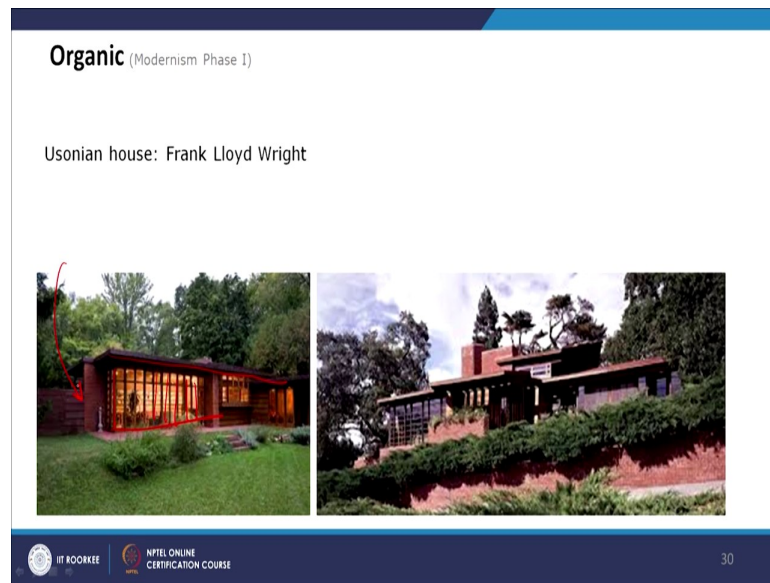
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And he have designed small houses even the city plan of Usonian city plan and Usonian architecture of different style which comes under the usonia. And Usonian houses, when we connote this term, these group of 60 houses which is of very small house single storied without garage without much rooms that comes under the Usonian houses.

And most of these houses are designed for a... on a very small land not as we have seen in Robie house and other luxurious houses, which in prairie school architectural style or the hollyhock houses not that luxury... luxurious category of houses, but very, very small scale houses are there in the Usonian houses.

So, most of this houses are rectilinear in plan or L shaped or just 2-3 cuboids combined with each other and local material is used. And if you look at the elevation, there will be lot of cantilevers and because it is single story. So, it will be the horizontality will be there and local material; for example, similar kind of brick work and wood work will be there.

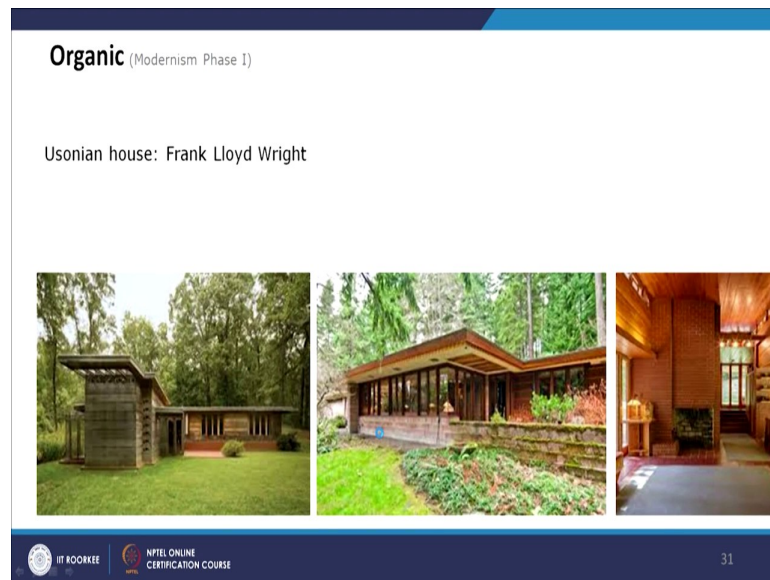
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If you look at the Usonian houses, there are 60 different Usonian houses, but here you will see few examples. So, here also, you will see the flat cantilever and also the series of windows which is Frank Lloyd Wright style and this brick work which is also there in the Robie house. So, it is kind of a Robie house in a very small and more as a minimal identity of the Robie house and if you delete lot of ornamentation and lot of spacious luxury from the Robie house, you get a Usonian house kind of style.

So, also here, you will it is its bit more luxurious then this one, but here also, you will see juxtaposition of cuboid and straight horizontality and this kind of windows.

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And the other Usonian houses, they have also the flat cantilever and similar kind of color palette and which has a lot of horizontal lines and so, you will see the similar style in the Usonian house. And which blends with the nature all the color palette which comes from the local material is contextually very feasible and contextual colors are there. So, it blends with the nature and then natural color palette is imbibed within the visual style and the color selection of the building as well.

So, in the next class, we will also discuss will continue discussing the organic architectural style few more examples and definitely we will discuss the falling water building and then will start with the other architecture movement as well.

Thank you.