

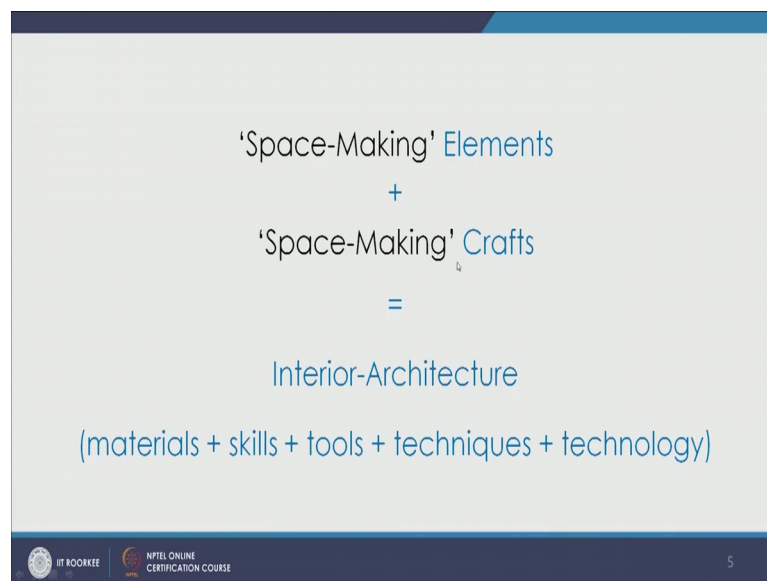
Role of Craft & Technology in Interior-Architecture
Prof. Ar. Smriti Saraswat
Department of Architecture & Planning
Indian Institute of Technology, Roorkee

Lecture – 03
Interior-Architecture and Craft & Technology:
Establishing Inter-Relationships

[FL] Hello again. Today we will discuss the module 3 of our ongoing course Role of Craft and Technology in Interior-Architecture. This module concentrates on understanding and establishing interrelationships between interior architecture and craft and technology; The contents of the module space making crafts and space making elements, examples the overview of the module and some references that will be beneficial for all of us.

Now, before understanding the interrelationship between craft and technology and interior architecture, it is very important that we try to understand what are space making crafts and what are space making elements. We already have a little understanding of the concepts of space making and place making, so with that understanding let us just try to move on.

(Refer Slide Time: 01:32)



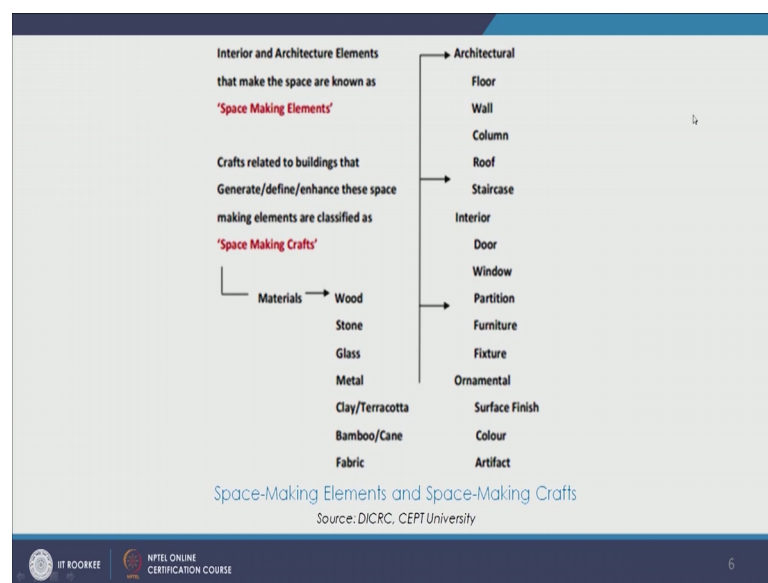
If I want to simply put it in a sort of an equation. Let us just say that I would like to put it as space making elements plus space making crafts is equal to interior architecture. Now,

what we see common over here in both of these terms it is space making. Space making is of very crucial point, and role over here in this equation.

So, we can say that space making elements and the space making crafts be together create interior architecture, and when we talk about this creation there is a great role of materials, skills, tools, techniques, technology the entire process involved. So, just starting from this basic equation we will just move on and see elaborately what are space making elements, what are the crafts and how do they create interior architecture.

This is one chart that is prepared by DICRC at CEPT University, the center that I have been mentioning; like even I was a part of the initial program and the entire framework that had come up. So, they have defined space making elements and space making crafts in a very comprehensive way.

(Refer Slide Time: 02:40)



So, space making elements could be referred to as interior and architecture elements that make space. Now, these elements could be architectural, like we have a floor, wall, column, roof, staircase; these elements could be at the interior level like the door, window, partition, some furniture or a fixture, or they could be ornamental like a surface, finish colour or artifact like an object for decoration. So, this is the list for space making elements and the more could be added to these.

Now, if we talk about space making crafts. The crafts which are related to buildings that is interior architecture and which generate or define or enhance all the space making elements that we see over here they could be classified as space making crafts. And like we saw in module 2 these crafts are also define through medium the material.

So, we have here materials like wood stone glass there is metal clay terracotta or largely we can call them as earth materials then we have bamboo or cane there is also fabric. So, this is a comprehensive list. And once we have a slight understanding and as we graduate towards other modulus we can have a clear understanding, a clear perspective, we can add dimensions to all this available literature and data and the framework.

So, space making crafts then borrowing from the understanding from all the previous slides they could be defined as crafts which are directly or indirectly related to interior architecture. And like we had a very slight discussion in the earlier module they are more popularly called as architectural crafts or building crafts, and they largely contribute to this entire building sector, the construction industry.

For example, bamboo crafts again if we do not use them only for utility like a basket or a mat, but if we incorporate them for creating the entire structure of a building whether it is a foundation or a column or a wall then we would like to call it as a space making craft.

(Refer Slide Time: 05:03)

- Space Making Crafts may be defined as crafts, which are directly or indirectly related to Interior Architecture. They are more popularly called as Architectural or Building Crafts.

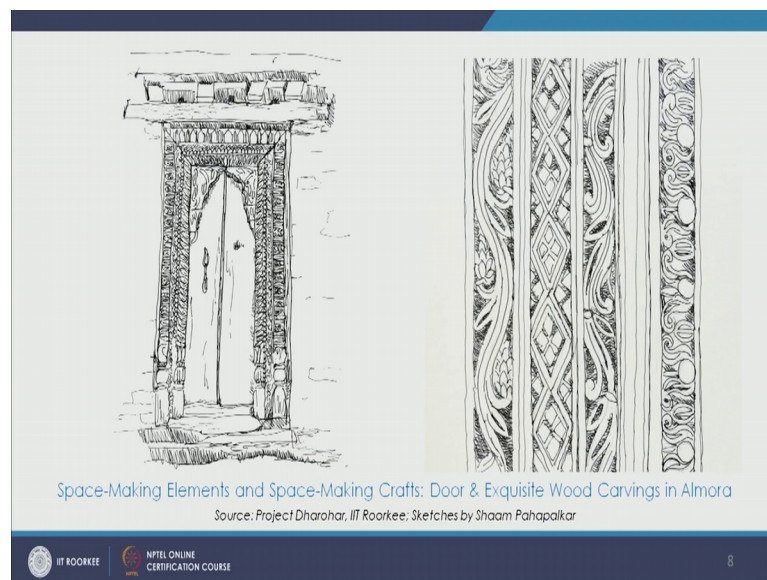
For Example:

- a) Bamboo crafts used not only for making utilitarian objects like baskets and mats, but also the entire structure of a building.
- b) Stone Crafts used not only to make decorative objects, but also *jalris* in a building (for thermal comfort, maintaining mass-void ratio, reducing weight, etc.)

Another example is stone crafts if they are not used only for decorative objects or some votive purposes. But for example, say jali in a building, like we see in very old buildings the monuments the stone jalis. So, if they are created for that then we might call them as space making craft. Now, jali is not something just very ornamental it has a great role for the climate purposes. For example, it contributes to thermal comfort maintaining mass void ratio also reducing the weight of the structure and the stone. So, again this could be termed as a space making craft.

Let us just go through few slides which discuss about space making elements and crafts. And there are lot of visuals and illustration so, that we can understand them more nicely.

(Refer Slide Time: 05:47)




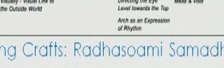


So, this is a door like we discussed in that chart, this is again like a space making element and the kind of this intricate exquisite carving over here that we see varied motives. Here there is the another door jump both of these examples are from Almora in Uttarakhand, and they have been done painstakingly by hand, by communities, by craft persons.

And this is a timber door there is lot of variety of timber in Uttarakhand. So, this space making element when there is role of a material, a craft, a skill then it has a very different vocabulary, it has a different experience altogether. So, this could be one space making element and this is wood carving could be termed as space making craft.

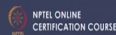
Here again there are few examples this is a building called Radha Swami Samadh in Agra.

(Refer Slide Time: 06:50)

Space-Making Element					
Arch					
Type	Stone Craft	Built Form	Construction	Semantics / Symbolism	Observations and Understanding
Load Bearing Decorated True False	Carved Inlay Gothic Islamic One-Centred Two-Centred Single Centred Two Centred Three Centred Cross Arch	Point Single One-Centred Two-Centred Three Centred Mullion and Tension joints	Arch, as a Space Making Element, not just creates punctures in the wall, but also creates the language of all forms to the 'Samadhi' of the vaults, by creating vertical link. Visual Link also with the Outside World		 Arch of Different Built Forms - Gothic Influence - Narratives of Space of Faith
Function	Embellishment	Variations with Time	Narratives	Shift in Messages	 Arch as a Space Making Element, with Narratives of Expression  Breaking the Mass Visually - Visual Link to the Outside World  Subdivision of Space Defining Formance Directing the Eye Level towards the Top Arch as an Expression of Rhythm

Space-Making Elements and Space-Making Crafts: Radhaswami Samadh Agra

Source: Course Coordinator (ongoing book)



I have done my research extensively on this building, when I was doing my masters of interior architecture accept it was done under the guidance of Doctor Seema Khan Walkar. So, these are some inventory is let me just try to explain. For example, if we take arch that is again a space making element. Here if we see this pictures we see lot of pictures of arches stone arches that have been done in this building. So, as a space making element how can I define varied functions of arch; so, here, it is breaking the mass visually there is a visual link to the outside world from inside.

Here the arch is actually acting as subdivision of space. Here if we see arch it is like very elaborate lot of details and it acts it helps in defining the entrance of this huge monument. Here if we see the arch there punctures in the plane there is mass and void. So, there are different examples and if we see over here there is lot of carving happening there is lot of inlay work happening.

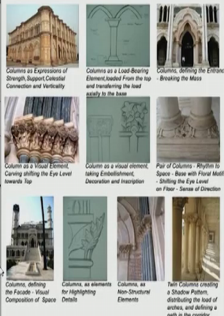
So, here this inventory explains this space making element along with the kind of craft that goes in the making of them. So, these arches are load bearing, few are decorated, few are true, few are false, the stone craft that we see over here is carving, there is some inlay work that is happening and we see lot of build forms, the arches are of different forms. We see the Hindu arch over here, the Gothic arch, Islamic arch, then we see the

type of construction few have two centers, few have four centers. So, it is a huge inventory I will not go into the details, but just to give an idea how do we understand interior architecture or a built form in terms of these crucial space making elements and how do they contribute in telling the story about that building.

So, the if we see narratives the stories the archers tell us the stories of function expression of visual aesthetics, also structural dexterity and lot of tenacity with which the craft persons have worked. Another element if we take is the column we know column is like very crucial and everybody is just talks about column in terms of structure and also in terms of lot of ornamentation.

So, here again we see lot of observations and images of the columns from this huge monument. Again columns have different roles to play, they have different functions few arch for visual aesthetics like here. This is the column capital and it immediately shapes my eye level and the cone of vision.







(Refer Slide Time: 09:36)


Space-Making Element: Column				
Type	Shape Craft	Built Form	Construction	Semantics / Symbolism
Load-Bearing Non-Load-Bearing Visually Appearing	Curving Less of Base Imperceptible Shaft entirety of Capital	Circular Square Rectangular Tapered Single Column Twin Columns Fluted Column Running across several floors	Bottom to Top Joints and Joints	Vertically - Celestial Connection Column with three Energy Zones (Base, Shaft, Capital) Below Metaphysics Inspiration from Trees and Mountains - Direct References from Nature Awakening and Ascending of Soul towards 'Clayed Death'
Function	Embellishment Highlight change in Floor level Directing towards higher eye level Visual Aesthetics (Establishment, Decor, Ornament) Hide Joints between Adding Elements Spatial Rules (Direction, Centre, Movement)	Final Molds Forms Starts Verses In Built Form Typological Variations (Column Fluted) In Molds In Marble Type	Narratives Of Function (Structural Spatial Rules, Defining Space) Of Expression (Strength, Rhythm, Of Universe (Celestial Connections) Of Visual Aesthetics (Non-Structural, Establishment, Decorative)	Shift in Messages From Highly Intricate to Simple Conveys a Shift in Narrative Establishing Faith to Established Form From Twin Columns to Single shaft from 'bearing' strength to celebrating abstraction
				

Space-Making Elements and Space-Making Crafts: Radhasoami Samadh Agra
Source: Course Coordinator (ongoing book)


So, if I am walking on a plane surface on a floor and there is so much carving immediately my cone of vision will change and I will start looking upward. So, that we columns helps us a visual element. It shifts are eyes it helps us in movement it is structural. So, it carries the load and transfers it to the ways.

So, we see the craft forms also there are different build forms few columns are circular, rectangular and different examples. Again there are lot of stories to tell. So, lot of experiences attach to this.

Space-Making Element					Outcome
Type	Stone Craft	Built Form	Construction	Semantics / Symbolism	Observations and Understanding
Structural	Filigree Work	Circular	Spiralities (Islamic Arch) Minare and Jann Jann	Senses of Enclosure Encompassing Universe	 <p>Spire of the minaret - is a dome structure</p>  <p>Look at the dome - is a dome from Hindu Architecture</p>  <p>Look on the Minaret</p>
Function	Embodiment Contour Communication of Minor (and) Internal	Ministry Plain Four Centage Filigree Work at Gate on the Tip most Dome and at Spire Base of the Tip dome (all under construction) has intricate jadhav work	Variations in Scale and Proportion with changing Eye Level (the line of construction progresses) as does the eye level)	Allegories Visual Narratives Spatial Narratives Narratives of Babel System Narratives of Election Internal Narratives of Samach Invisible Narratives	 <p>Palat Work at the base of the tip dome (all under construction)</p>  <p>The Proposed Minaret</p>  <p>Continuation of Majestic Dome at the Tip Internally - the dome - Narratives of Encompassing Universe</p>



IIII ROORKEE



NPTL ONLINE
CERTIFICATION COURSE

11







This is another element dome. So, here if we see dome here there are few examples few images some construction work was going on when I had documented the dome. Now, dome is here like in epitome. It is very grand it has an elaborate filigree work, filigree work is another craft may be we will see in one of the modules what it is about.

So, it has lot of semantics symbolism and meaning it connotes to the universe it implies convergence of people it has a Meta physics. And the way it is constructed, and we see the elements of Hindu dome and Muslim dome with lot of carvings, lot of details here if we see I do not know how much clear it is here there is a very elaborate carving which is

called as Pahari work that is happening at this base of the dome. So, that is very intricate it is very very deep like 4 to 5 inches and it is done with hands its beautiful very esthetic.

Now, if I talk about space making craft. We were talking about space making elements, now let us talk about space making craft.

(Refer Slide Time: 12:19)

Space-Making Craft					
Carving					
Type	Stone Craft	Built-Form	Construction	Semantics / Symbolism	Observations and Understanding
Visual (Form) Tactical Pictorial Continued		Varies	Plan Work Carving Pre-Erection Assembly Erection Polishing	Absorb the Esoteric influences like a Sutra Narrative Medium for the Samadhi Medium for Samadhi to make sense of identity	   Surfaces of Nature - Experience of a Stone Text Visual Rhetoric - Equivocal Carving on Column Capital Intricate Carving near Dome on the Top - Monogrammatic Narratives of Cosmos
Function	Embodiment	Variations with Time	Narratives	Shift in Messages	
Narrative Character of the Carving highlights the forms in stone Object in 3D - Close to Real Visual Aesthetics Narrative-Semantic Motifs-Hiding Joints Assembling Space Making Elements	Formal Motifs Sculpture Stylized Vases Monograms	Introduce and Detailed to Singular Variations from as deep as 5" to 1" Lesser Detailing More Plain Surfaces after 1st floor	Of Nature Of Esotericism Of Spatial Systems Spatial Narratives Visual Narratives Narratives of Incompleteness Narratives of Timelessness	Shift from Outside Influence to their own Established Faith Carving between the two Arches Shift in the Eye Level Aesthetic Process of Disengagement Esoteric Influence Detail of Vases and Flower in Frieze - Then Carved Done with Hands	   Carving in hole joints Radha Swami Monogram carved in the Samadhi Stone Motif Carved near the Spandrels Carving on the Brackets

Space-Making Elements and Space-Making Crafts: Radhasoami Samadh Agra

Source: Course Coordinator (ongoing book)

So, let us just say that we talk about carvings, here there are few other examples. We see very explicit stone carvings here this is a column capital again, we see over, here the spaces in between the archers here like what I showed in the previous slide the base of the dome the Pahari work, then we have it on the plinth. So, many details, so many motives lot of floral motives connection with nature, we have the Radha Swami building monograms over here which are also stone carved. So, all the space making elements they are very much enhanced by the crafts, at few places they are defined by these crafts at some instances they are generated by these crafts.

So, there is this very crucial interrelationship between space making elements in crafts which help them to define each other. Here if we just have a look here. So, all the elements that are constructed on the side and there is a process involved this first plane work, then the carving or inlay the craft form, then there is pre erection, then the assembly happens, then erection happens finally, the polishing happens. So, these are all space making element space making crafts and they contribute in creating such wonderful interior architecture.

(Refer Slide Time: 13:37)

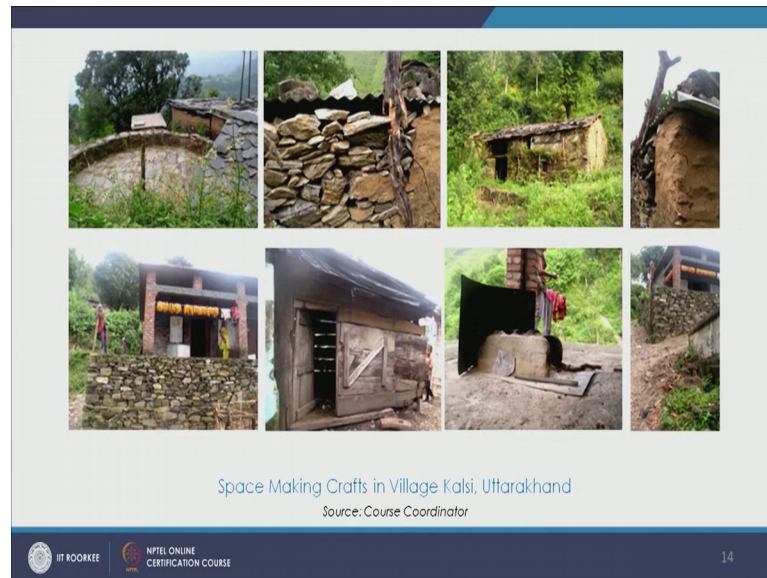


Another example if you move forward this is the Mysore palace here if we see the space making elements and the crafts. So, here this is like the onion dome the space making element these are the domed kiosks. Third one here, the balconies. Here we see the miniature arches. So, these are all elements.

And this is again a very aesthetic and a very monumental building. Here we see there are stained glass in the interiors again that is a glass craft which helps in accentuating the interior architecture. We have some rosewood inlay here that is again seen in the interiors. So, this is one example there are some examples from the amber palace Jaipur. We see lot of stone crafts over here, stone jalis the kind of views and vistas which are created by these space making elements and these are all experiences also. They have lot of stories to tell the create lot of memories for us.

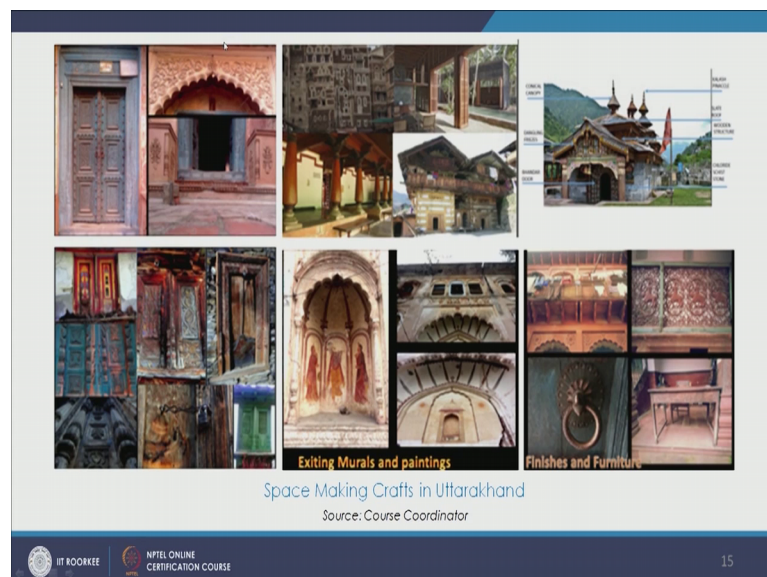
This slide talks about some space making crafts and space making elements of a village Kalsi, Uttarakhand.

(Refer Slide Time: 14:54)



This is inhabited by a tribal community and they do all the construction or the making very indigenously using the local material which is primarily stone.

(Refer Slide Time: 15:01)



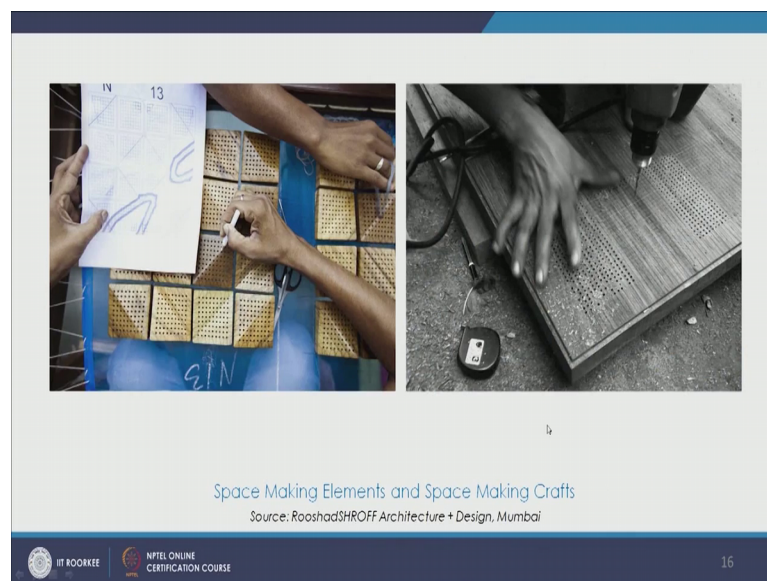
These are few other examples from Uttarakhand also see there are some examples of hardware. There are some examples of paintings of frescoes the like we were talking about the surface finishes, we see railings, we see some temples, we see some example of Koti banal architecture. These are some examples from old Havelis of Roorkee. So, all

of these again tells us lot about space making elements and space making crafts and how do they contribute in creating interior architecture, beautiful spaces.

Again there are few examples which are contemporary and I will run through them. Now, I have deliberately put some contemporary examples because if we talk about space making crafts I just want all of us to understand that it is not just about nostalgia, being very romantic about the past and just talking about the craft forms which are very traditional.

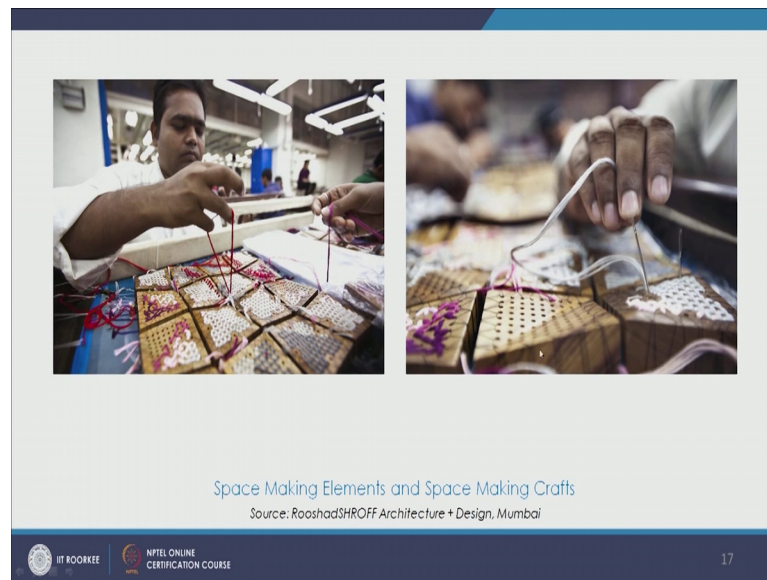
But it is also to talk about continuity. So, tradition and continuity, how do we apply these craft forms well maybe not apply integrate, application is also fine, but how do we apply and integrate these scrap forms in our contemporary interior architecture practices. So, there are some examples.

(Refer Slide Time: 16:23)



This is work done by an architect or the end designer Rooshad Shroff, he belongs to Mumbai he has a studio. This is a project that I really like, here in this project the carpenters and the weavers they have worked hand in hand to create some fascinating furniture, pieces.

(Refer Slide Time: 16:53)



And if you just see the process here, the drawings in then how the carpenters are working here we see the embroiders and the weavers how they contribute. So, here we see the weaving patterns, they come on the timber which are created through the punctures of the drilling machine and then by inserting the yarn and the fabric.

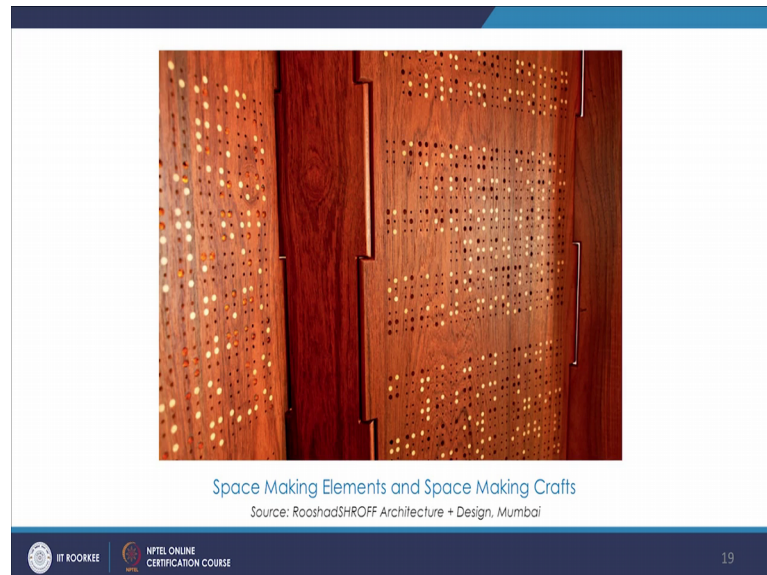
(Refer Slide Time: 17:11)



Here we see this is the result we have these beautiful surfaces and furniture pieces which are done by the marriage of these two craft forms furniture craft and weaving craft. And we have to communities working on them they are giving respect to the craft persons

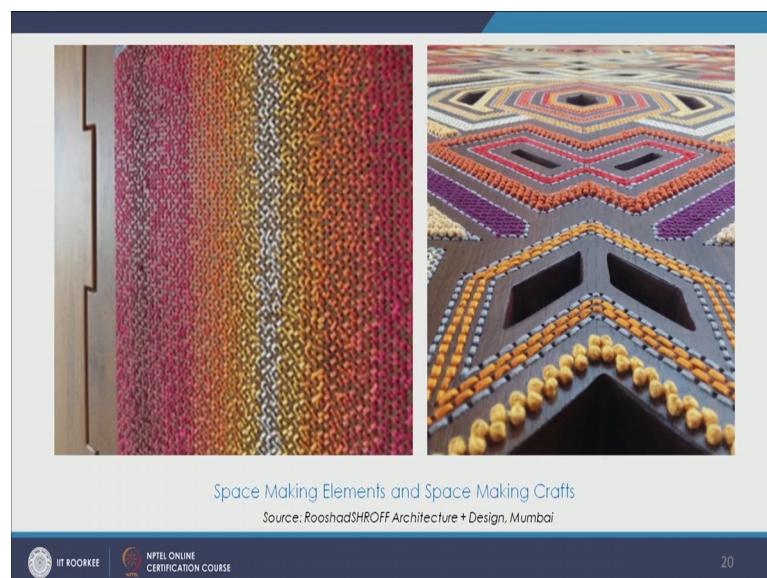
projects like this, they also bring economy for them they are very contemporary and they are still hands on. So, it is a very nice project and I appreciate the work done here.

(Refer Slide Time: 17:43)



Here also not just the furniture like door, we discuss about door as an interior space making element.

(Refer Slide Time: 17:50)



So here, this is the door which is again created through the same process, this is a tabletop which is created through the same process very fascinating, very interesting, visually appealing also functional, so very interesting example.

This is another example from the same studio. They had designed the signage for the Lodha group.

(Refer Slide Time: 18:08)



Now, if we look at this in the first instance lot of us would think that these are just bulbs and they are just lit from behind through electric wiring, but that is not. So, these are actually stone bulbs. So, there is a turning machine a turning lathe on which wood turning also happens and then there is a turning machine for stone. So, these are turning machines have been used here to create these stone bulbs and then of course, there are lit.

So, it creates a very interesting signage and again it gives lot of credibility to the craft persons who are working on stone and who are using these lathe machines, they usually work on temples using this machine and for other objects which are decorative. So, this craft here is recognized and it is here they have utilize the skills of the community and created this beautiful signage.

There are few examples again of furniture this I have taken from the works of Sarthak Sahil and they are based in Delhi.

(Refer Slide Time: 19:22)



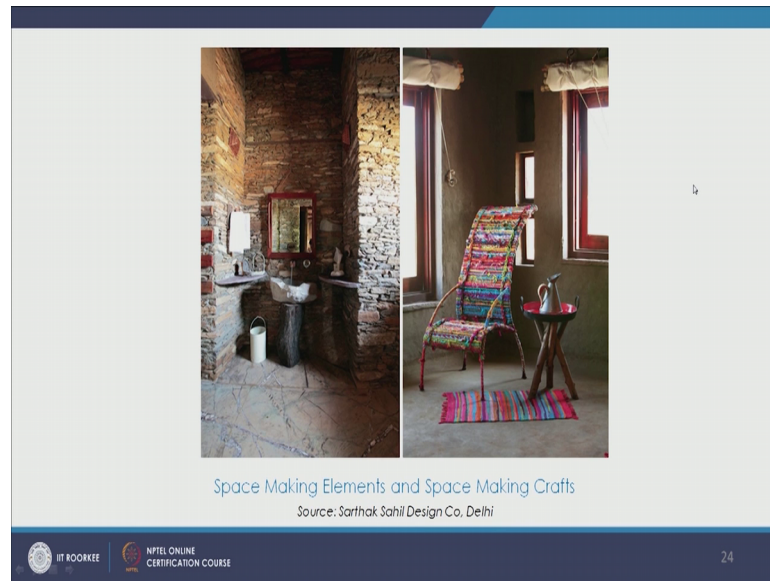
So, if we see this furniture there is a whole range and this is created by the leftover pieces of rugs and fabrics. So, it is called Katherine collection. So, there is a metal frame work and there is this lot of Katherine and then they have created this explicit furniture range which is very vibrant, functional, aesthetic.

(Refer Slide Time: 19:48)



This was a news article on their work which is very very fascinating to me.

(Refer Slide Time: 19:56)



They also work on some interior architecture projects not just at the furniture level, but the space creation.

(Refer Slide Time: 20:07)



This is very interesting I like this work a lot. So, we have bangles over here, there is a simple metal hanger and there is a light fixture which is created out of it. So, this is again very interesting.


(Refer Slide Time: 20:19)



Here we have chandeliers and lamps, there is a lot over here, there is some lighting, there is some metal frame work. So, there is a synthesis of different materials different skills different craft forms and this is a lot of sensibility, you know what kind of experience is getting created in the space when one is situated, like the kind of reflections over here that we see and the kind of color scheme that is used. So, that is very interesting.

This is a furniture piece again that is a table. So, there is timber, then we have some copper craft, we are situated here in Uttarakhand and here the tampta the copper craft which is called as tampta work is very famous. So, again there is a synthesis of two craft forms, but in a very contemporary way.

(Refer Slide Time: 21:07)



"The Image existed before the word, and man's first recorded attempts to define reality were drawings on the walls of rocks or caves; scratches, hammered or painted pictures."

- Herbert Read ("The Image Precedes the Idea")

Surface Craft - Ritual Designs in the caves of Lascaux in Southern France
Source: <http://journalofcosmology.com/Consciousness155.html>, accessed through Google, 16th Feb 17

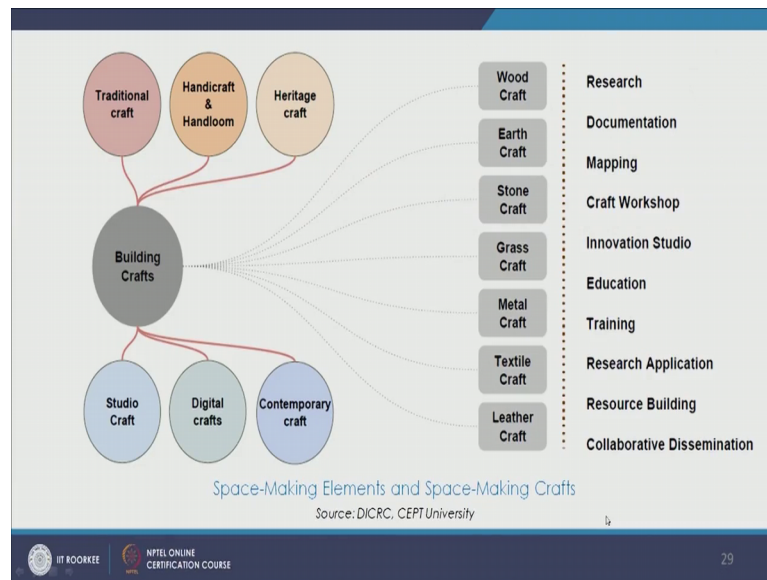
IIT ROORKEE
NITEL ONLINE
CERTIFICATION COURSE

27

So, we were discussing that the craft also happens at the surface level in the form of surface finish is in the form of paintings. So, many of us would have already seen this their very famous ritual designs which have been found in the caves in Southern France, and this is all about communication, all about surface treatment, about paintings, about stories. I would like to read a quote, "The image existed before the word, and man's first recorded attempts to define reality were drawings on the walls of rocks or caves; scratches, hammered or painted pictures."

So, this is actually how a journey started about communication and this is how we have now graduated towards paintings and surface finished and whole lot of explorations from companies like Asian paints where they make, lot of motives the design different kinds of finishes for surfaces and so on. So, I will just give you the overview of the today's module.

(Refer Slide Time: 22:16)

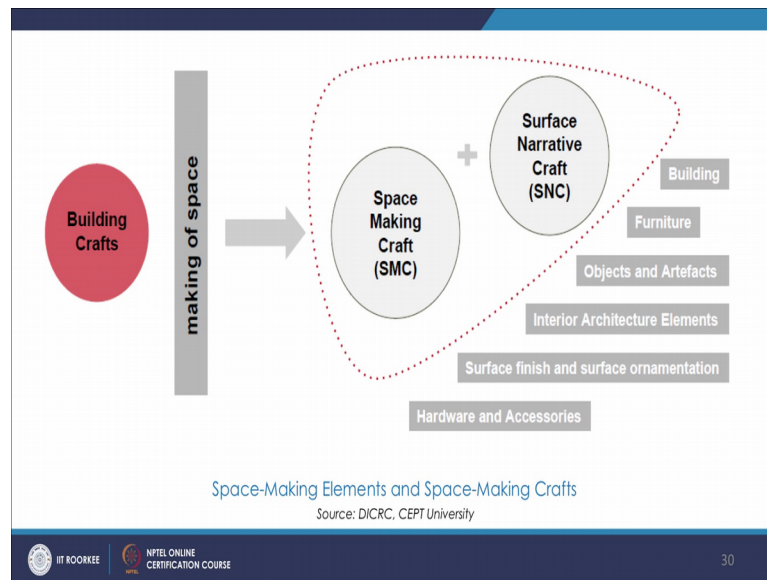


This is again one diagram or an infographic which is borrowed from DICRC, CEPT. So, different kinds of crafts, traditional crafts, handicrafts, handlooms, heritage crafts, studio crafts, digital crafts, contemporary crafts all of them actually contribute to this largest factor of building crafts.

And these building crafts then contribute in creation of interior architecture which are defined through materials different materials. So, wood craft, earth craft, stone craft, there is even grass craft, metal craft, textile craft, leather craft and it is very important that we recognize this sector we recognize this works and involve them in our pedagogy and interior architecture practices, through there is research, documentation, mapping, workshops, innovative studios which are collaborative, we have training then there is collaborative dissemination.

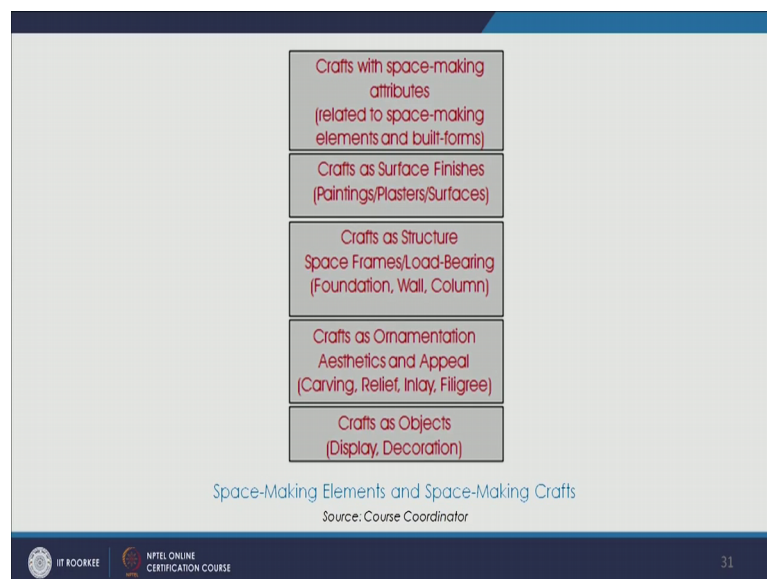
And I am very proud that DICRC is doing all of this extensively and it feels nice that I have been a part of them in their initial years and we still collaborate for varied activities. They have a website all of you can go and see that.

(Refer Slide Time: 23:33)



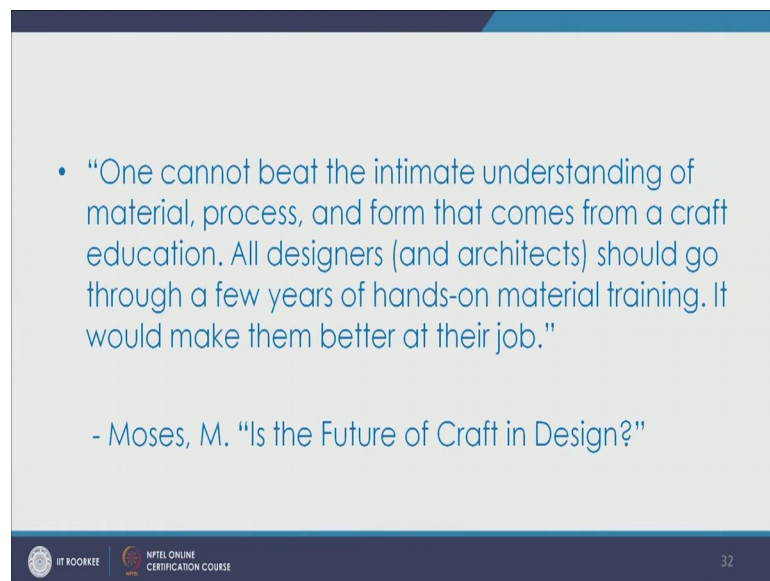
So, when we talk about this larger sector of building crafts or space making crafts, they contribute in making of space and that happens in two ways. It is happening either structurally or through surface development. And it happens at varied levels like at the level of building, at the level of furniture, at the level of objects and artefacts, interior architecture elements that we just saw surface finishes, surface ornamentation, even hardware and accessories. So, all of it we saw in the previous slides. So, this one like is the best infographic to sum up everything and give you an overview.

(Refer Slide Time: 24:17)



So, again just a summary, the crafts which have space making attributes they are called space making crafts or building crafts or architectural crafts. We can see these craft forms as surface finishes like painting, plasters, surfaces we can see them a structure load bearing foundation, wall, column we can also see craft is ornamentation. So, there is carving, relief, inlay, filigree work and we also see craft is objects. So, display, decoration, products for utility.

(Refer Slide Time: 24:57)



I would just like to end with this quote. “One cannot be the intimate understanding of material, process and form that comes from a craft education. All designers and architects should go through a few years of hands-on material training it would make them better at their jobs.”

So, I would urge all of you who are seeing this course please indulge more in hands-on, try to understand the material around you, speak to the material, just see what are their properties, how do they speak back to you and it will improve your process and the outcomes.

(Refer Slide Time: 25:32)

- Alfoldy, Sandra (ed.). **"Neocraft: Modernity and the Crafts"**, The Press of the Nova Scotia College of Art and Design, NSCAD University, 2007
- Sennett, Richard. **"Craftsman"**, Penguin Books Ltd., England, 2008
- Risatti, Howard. **"A Theory of Craft: Function and aesthetic Expression"**, The University of North Carolina Press, USA, 2007
- Patel, Kireet; Shah, Reena and Agarwal, Reenal. **"Space Making Craft Vol. 1 Arayish: Wall Paintings of Shekhawati"**, School of Interior Design Research Cell, 2006
- Thakkar, Jay and Morrison Skye. **"Space Making Craft Vol. 2 Matra: Ways of Measuring Vernacular Built forms of Himachal Pradesh"**, School of Interior Design Research Cell, 2008
- Thakkar, Jay. **"Naqsh: The art of wood carving of traditional houses of Gujarat, focus on Ornamentation"**, School of Interior Design Research Cell, 2004
- Abbott, H.Porter. **"Cambridge Introduction to Narrative"**, Univ. Press, Cambridge, U.K., 2002
- Bruno, Giuliana. **"Atlas of Emotion: journeys in Art, architecture and Film"**, London, New York, 2002
- Chhiber, Neelam. **"Stone Craft of India"**, vol.1 & vol.2, Crafts Council of India, Chennai, with assistance from Department of Culture and Development Commissioner, Handicrafts, Govt. of India, 2002
- Cobley, Paul. **"Narrative"**, Routledge, London, 2001
- Collins, Peter. **"Changing Ideals in Modern Architecture (1750-1950)"**, Faber and Faber, London, 1965, pp 117-127
- Jaitly, Jaya. **"The Craft Traditions of India"**, Lustre Press Pvt.Ltd, New Delhi, 1990
- Lyndon, Dornyn and Moore, Charles W. **"Chambers for a Memory Palace"**, the MIT Press, Cambridge, Massachusetts, London, England, 1994
- Mehrotra, Lakhna and Vajpayee, Raghvendra (ed.) **"Communication Through The Ages – An Indian Perspective"**, Aryan Books International, new Delhi in association with Media Centre for Research and Development, Gurgaon, 2009

IIT ROORKEE NPTEL ONLINE CERTIFICATION COURSE 34

These are few references. They are very miscellaneous and they are going to help us understand this subject at large.

Thank you.