PROJECT 3 : 6x6x6 CUBES

Cargo Collective Cube Models, Em Yang.

**Project 3** is based on drawing and modeling (physical and digital) stuff in relation to other stuff – working iteratively. Operations are scale-less, but defined by the relationship between two materials, wood and museum board. This project defines spatial sequences as architectural program.

a. The stair(s) as an **object** used to make spatial **sequence(s)**.
b. An event has a limited duration and an unlimited extension. Events cannot take up the whole of time, but could take up the whole of space, and there must be room in time for many events, which may or not overlap spatially. (Achilles Varzi)
c. How does the stair(s) define a sequence of spaces through material relationships?

**Project 3** considers “the cube” as an **object with limited extension** – a **generic site for a spatial sequence with unlimited duration**. Doubling the physical extension of the cube (6”x6”x6”) and increasing the intensity between material relationships and spatial sequencing is the focus of Project 3.

**GOALS & OUTCOMES**

1. Use solid/void material conditions to define space.
2. Develop spatial sequences in relation to the space of the stairs.
3. Understand assembly of material and difference between mass and plane.
4. Write and imagine events associated with stairs.
5. Develop methods of translation between digital and physical models.
PROCEDURES

The procedures listed below outline the minimum amount of work necessary to complete Project 3. Read all the procedures before beginning your work. Additional criteria will be explained and added during studio. The procedures and scope of work outlined for Project 3 are directly linked to the procedures and work from Project 2. Project 3 will begin like Project 2. Each student will start from a predetermined number of material elements, in this case wood and chipboard. Modeling in Revit will be used as a means of enlarging and translating the foam and museum board models from Project 2 into wood and museum board models for Project 3. Each student is expected to work on their digital models independently. Digital modeling requires practice, testing, and multiple failures.

A. INSTALL (DUE: TUESDAY, OCT. 17)
Install Autodesk Revit 2017, Educational Version.

B. READ (DUE: THURSDAY, OCT. 19)
Download, print, and read, Bernard Tschumi’s “Spaces and Events”. Each student should be prepared to discuss this reading in class.

C. REVIT MASSING MODELS (DUE: TUESDAY, OCT. 24)
The Revit template you have been given has been customized for this studio. The template was made to enable a method of production - fast output - that is analogous to producing foam and chipboard massing models.
Model (1) one of your last foam and chipboard cubes as a Revit Mass.
Print (4) four 8.5”x11” sheets corresponding to different parallel projection (axonometric) views from Revit. Consider how working in Revit may change or alter the spatial sequencing and material relationships in your cube. Modeling in Revit introduces a method of translation that each of you should critically examine.

D. REVIT MASSING MODELS REVISION (DUE: THURSDAY, OCT. 26)
Revise your cube model in Revit.
Print (4) four 8.5”x11” sheets corresponding to different parallel projection (axonometric) views from Revit.

E. "BLOW-UP" REVIT MODEL (DUE: TUESDAY, OCT. 31)
Revise and “Blow-up” your Revit cube by doubling its size to 6”x6”x6”.
Print (4) four 11”x17” sheets with different parallel projection (axonometric) views from Revit. Consider how “blowing up” your cube affects the spatial sequencing and material relationships you have been exploring. What type of changes and adjustments should happen when the cube doubles in size. Carefully consider and design the spatial hierarchy and adjacencies in your cube.

F. 6”X6”X6” REVIT MODEL (DUE: THURSDAY NOV. 2)
Translate the Blow-up cube you have been working on using the following criteria. This criteria will correspond to the wood cube you will be working on for next week.
Model one (1) Revit cube comprised of eight (8) layers of 3/4” thick wood and white museum board.
The cube is SCALELESS, but not direction-less. Each cube has a top T, bottom B, and sides S.
The SIZE of the cube is 6” x 6” x 6”.
There must be a minimum of nine (9) stairs.
At least one spatial sequence must follow a trajectory from the bottom to the top of the cube.
Each stair must have a landing at the start and end of the stair. The minimum length of each landing must be equal to the width of the stair.

G. 6”X6”X6” WOOD/MUSEUM BOARD CUBE (DUE: TUESDAY, NOV. 7)
Translate your Revit cube into a 6”x6”x6” wood/museum board cube.
Each cube must start, but certainly not finish, with eight (8) layers of 3/4” thick wood, 6”x6”.
Layers can be stacked vertically or horizontally.
No OSB (oriented strand board) or other “high-figured woods”.
Plywood and other recycled woods are acceptable. Consider using discarded pieces of wood found in the shop.
Use wood that can be sanded and worked on with the tools in the wood shop.
Only one wood type per model.
Only wood glue can be used as a method of attachment, no screws, nails, etc. Models must use museum board. In order to test spatial ideas use temporary banding before gluing your models together.

**NO STUDENT WORK CAN BE LEFT IN THE SHOP. YOU CAN WORK IN THE SHOP, BUT ALL YOUR WORK MUST COME BACK TO YOUR STUDIO DESK. IF YOU DO NOT CLEAN UP AFTER YOURSELF AND BEHAVE RESPONSIBLY YOU WILL LOSE YOUR SHOP PRIVILEGES.**

**THERE WILL BE ANOTHER SHOP SAFETY AND TOOL DEMONSTRATION BEFORE YOU BEGIN TO WORK.**

**H. REVISED REVIT MODEL (DUE: THURSDAY, NOV. 9)**
All revisions need to be printed out, modeled and/or drawn and pinned up for review.

**I. REVISED WOOD/CHIPBOARD CUBE & REVIT MODEL (DUE: TUESDAY, NOV. 14)**
All revisions need to be printed out, modeled and/or drawn and pinned up for review.

**J. REVISED REVIT MODEL & PLAN + SECTION OBLIQUE DRAWING (DUE: THURSDAY, NOV. 16)**
All revisions need to be printed out, modeled and/or drawn and pinned up for review.

**K. REVISED WOOD/CHIPBOARD CUBE & REVIT MODEL (DUE: TUESDAY, NOV. 21)**
All revisions need to be printed out, modeled and/or drawn and pinned up for review.

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**L. MOCK REVIEW (DUE: TUESDAY, NOV. 28)**
Review criteria and deliverables will be explained in class.

**M. FINAL REVIEW (DUE: THURSDAY, NOV. 30)**
Review criteria and deliverables will be explained in class.

**QUESTIONS**
What is the type and grain of wood you are using?
How is the wood cut?
How does the wood and museum board come together?
What is the structural logic of the cube?
How is the structural logic tied to the spatial sequencing of the cube?
What is the spatial hierarchy inside the cube?
What types of spatial adjacencies and separations are you making?
What is the sequence that takes you from the bottom to the top of the cube and vice-versa.

**PLAN YOUR WORKFLOW REVIT ACCORDING TO SHOP HOURS.**

**THE SPATIAL SEQUENCE YOU CONSTRUCT WILL NEED TO RESPOND TO THE INTRODUCTION OF A NEW MATERIAL AND THE RELATIONSHIP BETWEEN MASSES AND PLANES.**

**YOU WILL MODEL IN WOOD, MUSEUM BOARD, AND REVIT FOR THE REMAINDER OF THE SEMESTER.**

**YOU WILL REVISE YOUR CUBES ACCORDING TO STUDIO CRITIQUES AND SELF-REFLECTION.**

**EACH STUDENT WILL HAVE A MINIMUM OF THREE WOOD/MUSEUM BOARD CUBES AT THE FINAL REVIEW.**