Architectural Design 1

Prof. Baldwin, Daelo, Watters, Princivil, Talbert Project 1: The Cubic Construct

Assignment 1.0
Due at the beginning of next class
Materials: corrugated cardboard
Dimensions: 6"x 6"x 6" (IMPLIED! The model need not be an impenetrable box, but should be open and dynamic).

You will elect to be part of one of the following groups for this short assignment only. (Everyone will switch groups later for part 2).

Group A: This group is expected to be elegant and thorough in following a set of rules:

Each student in this group must construct **TWO** models of 6"x6"x6". Both of your cubes are to be based on a three-dimensional grid of 2-inch squares (each side of the cube will be broken down into 9 squares or 2 inches each, like a tic-tac-toe game). The 9-square grid need not be actually drawn on the cube, but should be subtly perceptible in the masses, volumes and planes within and throughout the cube.

The Stereotomic model:

This cube should seem like it was originally a solid mass that has now been carved to make space flow into, around, and through it. You don't literally have to carve it, but should make solid-looking volumes with cardboard. You decide how much mass and how much void, but try to have a nice balance (not all solid with only a small void and not all void with only a small solid). Masses and voids should follow the proportions of the 9-square grid (i.e.: masses can not be 1"x3"x4.5" but should be multiples of two inches and should fall on the lines of the grid)!

The Tectonic model:

An assemblage of rectangular cardboard planes interlocking and intersecting. Again, you decide the size and number of planes while following the proportions of the 9-square grid. You may use as few as three planes to define the cube or as many as 30! Planes should not just be on the surface of the cube, but should penetrate it. No curves and no angle other than 90 degrees.

Note: The models should have more than one orientation. For example, it should not have a base, but rather it should be multi-sided, and able to sit in more than one position.

Group B: This group has fewer rules, but will be challenged by conceptual complexity:

Group B model may consist of planes, masses, volumes, and grids.

Please choose ONE of the following cube 'programmes' and construct ONE model that demonstrates some or all of the given vocabulary:

1. Weave a cubic tapestry: **tension, folding, layering, seam, bind.**

2. Construct a cubic constellation: **trajectory/vector/axis; join, align, anchor, intersect.**

3. Compose a cubic symphony: **rhythm, sequence, repetition, pause, shift.**

4. Choreograph a cubic dance: **balance, foreshadow, suspension, extension, contraction.**

Note: The model should have more than one orientation. For example, it should not have a base, but rather it should be multi-sided, and able to sit in more than one position.

Model Assignment 1.2:
Due at the beginning of next class
Materials: corrugated cardboard
Dimensions: 6"x 6"x 6" (IMPLIED)

You will stay in your original group for this next part. (Everyone will switch groups next week for part 2).

Group A: This group is expected to be INCREASINGLY elegant and thorough in following the original set of rules AS WELL AS INCORPORATING AN ADDITIONAL LAYER OF REQUIREMENTS:

Each student in this group must **REBUILD BOTH OF THEIR ORIGINAL models** of 6"x6"x6". Both are still based on an "invisible" three-dimensional grid of 2-inch squares (the grid need not be actually drawn on the cube, but should be subtly perceptible in the masses, volumes and planes within and throughout the cube, sort of like a "ghost grid".

GROUP A MODEL ASSIGNMENT:

The Stereotomic model:

This model should continue to read as a solid mass that has now been carved to make space flow into, around, and through it. However, you must transform the original masses so that **TWO DISTINCT MASSING SYSTEMS ARE CLEARLY IDENTIFIABLE AS**:

1. The Corrugated (or textured) Massing System.
2. The Smooth Massing System.

AIM TO RESOLVE AND EXPRESS THE INTERLOCKING RELATIONSHIP BETWEEN THE TWO MASSING SYSTEMS.

The Tectonic model:

This model should continue to read as an assemblage of rectangular cardboard planes interlocking and intersecting. However, now you must incorporate the following **new layer of information**:

1. **Express the joints between all planes using three strategies for joining:**
    a. Flush joint
    b. Extended joint (1/4" extension)
    c. Partial or incomplete joint (can be a hybrid of the above two types or a type that you invent).

2. **Vary the thickness of all of the planes so that there are three types:**
    a. blocky planes (3 or 4 ply)
    b. standard planes (1 ply exactly)
    c. micro planes (you may use chipboard or you may peel the corrugated to a thinner layer).

Note for both models of group A: No curves and no angle other than 90 degrees. Remember, the models should have more than one orientation.

GROUP A DRAWING ASSIGNMENT:

Don't panic, these types of drawings "make themselves." Place your model directly on a Xerox machine and press the green button! Xerox each of 6 sides of BOTH models, so that you have a total of 12 xerographic drawings. CUT THE XEROGRAPHS DOWN TO SIX-INCH SQUARES (i.e.: cut off the excess white space on the paper).

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Model Assignment 1.2 (cont.)

Group B: This group has fewer rules, but will CONTINUE TO BE challenged by INCREASING conceptual complexity **AND INCREASING CLARITY OF INTENTIONS**:

GROUP B MODEL ASSIGNMENT:

Group B will rebuild their model of planes, masses, volumes, and grids. Again, angles, but not curves, may be used. You may use the same programme as before or choose to start with a fresh one. Again, construct **ONLY ONE** model that demonstrates some or all of the given vocabulary:

1. Weave a cubic tapestry: **tension, folding, layering, seam, bind.**

2. Construct a cubic constellation: **trajectory/vector/axis; join, align, anchor, intersect.**

3. Compose a cubic symphony: **rhythm, sequence, repetition, pause, shift.**

4. Choreograph a cubic dance: **balance, foreshadow, suspension, extension, contraction.**

Note: The model should have more than one orientation.

GROUP B DRAWING ASSIGNMENT:

Don't panic, this "drawing" is a layer or "aspect" of the model itself. Using *courier or Ariel 11-point type font* copied onto sticky-back transparent paper, **tell a textural story within, around, and through your model.** The content of the text should be based on definitions of the vocabulary terms in your programme, and may be simple and direct, or more elaborate. The text should **READ IN MULTIPLE WAYS**: as a *narrative* to actually be *literally read* and as a *layer of visual information* that helps you *read the spatiality of the model*.

Assignment 1.3: Due at the beginning of next class

EXISTING MATERIALS: cardboard / media-board / text / and-or chipboard.

NEW MATERIALS: (to be integrated with existing) white museum board + micro lumber.

NEW DIMENSIONS: 9"x 9"x 9" (The existing 6" cube remains nested within the 9").

NEW PROGRAMMATIC LAYER:

1. cubic tapestry - WEAVING: (tension, folding, layering, seam, bind).
A 'cartoon' is a painting traditionally done as a study or a sketch for a tapestry work.
You should try to identify the essential structure and content of your tapestry through the 9" "cubic cartoon". You should research and reference a particular work of weaving.

2. cubic constellation - CONSTRUCTING: (trajectory/vector/axis; join, align, anchor, intersect).
The nebula is less overtly ordered than the constellation. It has a gaseous, transparent, shifting, elusive quality. Allow a 9" cubic nebula to cradle your constellation. You should research nebulae and use them as references in constructing the physical and metaphysical content of the 9" cubic nebula.

3. cubic symphony - COMPOSING: (rhythm, sequence, repetition, pause, shift).
An etude is a study or an experiment in short musical composition done for its own sake. Unlike the "cartoon", it is essentially an independent act. You should research and reference this form or a particular composers use of it in your cubic etude of implied 9" dimensions.

4. cubic dance - CHOREOGRAPHING: (balance, foreshadow, suspension, extension, contraction).
A dance leaves an invisible imprint in the ground plane on which it is performed. Try to reconstruct the echo, imprint, or trace of the 6" cubic dance onto a 9" cubic ground plane. You should research and reference a particular dance, dancer, or choreographer.

NOTES:

- Although the 9" cube now contains a new set of ideas, it is not a totally new entity. Rather it is an *extension of* the 6" cube.
- It can be made of heavier and denser planes that support, anchor, suspend, or cradle the smaller cube within, but it also must be *inhabitable, penetrable, and contain apertures, voids, and cuts of multiple scales.*
- It must have a careful way of *engaging spatially and materially* with the smaller cube.
- It must be very finely crafted.
- Museum board can be thin and floppy if used in large planes. Try laminating it, applying micro-lumber to it, and cutting it into smaller scale components as a way to make it *rigid, stable, and strong*.
- You should first make a few *quick mock-ups* with poster board or thick paper before constructing the final model; you should get feedback from a TA on your mock-ups by Saturday so you have plenty of time to build this complex final model.
- You may insert your 6" cube as-is (with minor changes to 'extend into' or 'receive' the 9" element) if it is successful and well crafted, or you may choose to rebuild your 6" cube.
  I recommend using it as-is with small changes.
- All of the previous lessons still apply to this final cube including but not limited to:
  - tectonic and stereotomic qualities.

- proportion and measure relating to the “invisible grid”.
- at least 3 distinct ‘scales’ of spaces.
- tw o or more distinct massing systems.
- three or more types of joints; three or more thicknesses of planes.
- distinct material systems or netw ork that could stand alone if necessary.
- clarity of organization of spaces.
- continuity of spaces.
- at least tw o orientations possible.