

VISUALIZING THE THIRD-DIMENSION

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A major portion of my efforts while teaching art in the public schools was spent helping students master a broad range of studio methods and concepts. During this time, I began to realize that many of the students were having a difficult time working with the full-round sculptural form. The success rate of achieving a successful product with relief sculpture was far greater. This may be due in part to the following:

- The manner of looking and execution of relief sculptural form is similar to visualizing for the purpose of painting and drawing. As with painting and drawing, sculpting in relief deals largely with linear concerns.
- Many of the students coming to my classes had some previous experience with drawing and painting and often felt considerably more comfortable working in a linear fashion.
- Unless the work was high-relief, the need for considering the sides and back of the sculpture was not of much concern.

The concerns when working with the three-dimensional form are similar, and yet in some aspects are significantly different than those when working within two-dimensions.

Through one-on-one discussions and observation of student progress during the making of three-dimensional art, I identified the following concerns:

- The continuation of line and form from one surface of the sculpture to other surfaces was often not considered and resulted in six unrelated relief sculptures—one for each side and the top and bottom of the block used for the sculpture.
- The ability to visualize negative and positive space relative to the form was a difficult task. This task is somewhat easier when working within two-dimensions (drawing) because of the comparative ease of delineating negative space on the paper.
- The students needed to become aware of the effect light, both natural and artificial, would have upon the form. This is a concern at the planning stage and upon completion of the sculpture.
- The visualization and treatment of contours and edges become a significant concern. Visualization of roundness and mass is examined in a different manner while working two-dimensionally.
- Students had to be introduced to the necessity of treating the surface in a definite and deliberate manner. I had to introduce the concept that if there was texture, it had to be deliberate and intentional or carefully controlled through use of random markings. Students had to be pushed to accomplish a flawless finished surface.
- The correct use of a patina and color as a factor for success was unfamiliar information with which the students struggled.
- The part that tactile sense played in the creation of a successful sculptural form was a new concept from what they would consider while drawing and painting or using other two-dimensional media. Having been told by so many people for so many years not to touch sculpture, or most art for that matter, may have affected their ability to identify with texture on a sculptural surface.

Method for Visualizing the Third-Dimension

Preparation and materials needed for using this method are as follows:

- **Materials**

- plaster with materials added to retard drying period
- container in which to pour plaster
- yarn
- tools for carving/scraping (spoons, plastic knives, etc.)
- soft charcoal
- pencils
- sandpaper (variety of grits from rough to very fine)
- materials of choice for patina of finished piece

- **Approach**

To minimize preoccupation with figural or realistic sculpture and in order to help the student focus on simplicity of form, subject matter was restricted to the non-objective form. I found that working with the non-objective form often contributes to greater student success.

- **Stages**

1. Plaster of Paris is poured into a container. When hardened, the container is removed.
2. Heavy yarn is soaked in water and excess liquid is removed by gently squeezing.
3. Using gravity and weight, the yarn is draped around all sides, top and bottom of the plaster block. This helps to achieve a flow to the curvilinear lines. The student is encouraged to create small and large spaces. Rectilinear lines may be established by tightly stretching the wet yarn across all surfaces of the plaster block.
4. A sharp pencil is used to line both sides of the yarn.
5. The lines should establish a continuity of design on all surfaces.
6. The negative spaces are filled in with soft charcoal. The student should repeatedly turn the sculpture block as this is done and carefully check to see relationships from one side of the block to the other. The charcoal helps the student follow the shapes around the block. This is similar to drawing in three-dimensions and utilizes a vocabulary with which the student is more comfortable.
7. The carving out of the negative spaces should begin. Deep cuts help the student visualize relationships of forms on all sides. If the student approaches too hesitantly, the results may appear too tentative. Aggressiveness should be encouraged.
8. After clearly establishing the form and sanding the surface, the final surface treatment is considered. The choice of a patina is practically limitless.

Three of the materials I have used are:

- milk ... especially on a smooth surface
- wood stains
- a commercial metallic product which is buffed when dry

The method I developed and employed to help students visualize the third-dimension is an alternate approach and is not meant to be exclusive. However, I found this method to be extremely successful and would recommend it to be tried with students of all ages and experience levels.

For general reading on design and the third-dimension as well as preparation of materials, the following would be two sources I recommend: Zelanski, P., & Fisher, M. (1995). *Shaping space, The dynamics of three-dimensional design*. Orlando, FL: Harcourt Brace College Publishers. Wigg, P. R., Hasselschwert, J., & Wankelman, W. F. (1997). *A Handbook of arts and crafts*. Dubuque, IA: Brown & Benchmark.