

10 Cube shading, Arts and Crafts Movement

Monday, February 8, 2021 2:45 PM

Today

Admin
Origami cube and shading
The Arts and Crafts Movement

clickers

After a certain high level of technical skill is achieved, science and art tend to coalesce in esthetics, plasticity, and form. The greatest scientists are always artists as well.

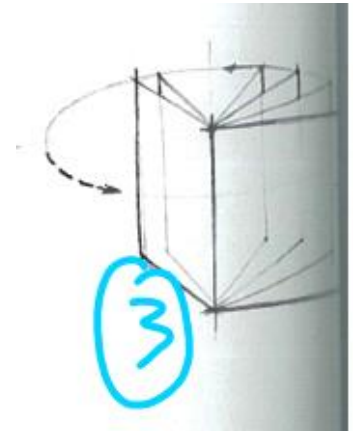
— Albert Einstein

Remark (1923) as recalled in Archibald Henderson, *Durham Morning Herald* (21 Aug 1955) in Einstein Archive 33-257. Quoted in Alice Calaprice, *The Quotable Einstein* (1996), 171.

From <https://todayinsci.com/E/Einstein_Albert/EinsteinAlbert-ScienceAndArt-Quotations.htm>

Pod Check-in 10 minute

Show your book perspective sketch
Prep your pod presentation if needed
Check in on your Upcycle project



Shading and Shadow of Cubes

To make a cube to use as a model, try this origami:

<https://www.youtube.com/watch?v=0oMf8L9ekys>

I like these instructions by Jo Nakashima. There is silence after the brief intro, and he uses an intuitive notation showing folds and creases.

CHAPTER IV.

THE CUBE, HEXAGONAL PRISM, AND CYLINDER.

The Cube.

We shall show fully each step to be taken in shading this model, for this solid is a representative of all prisms, and, indirectly, of the cylinder.

Place the cube on a sheet of light brown paper, and pin against the wall behind it a similar sheet to serve for background. Let the light fall from the right and from above the cube. The top face will be the brightest of those seen, and the darkest will necessarily be that next the cast-shadow.

Step 1. (Fig. 21).—Draw the cube *carefully and lightly* in charcoal. Incorrect lines may be removed by dusting with the tinner. Do not draw with black-lead, as it is greasy, and will afterwards appear white in your shading.

Now draw carefully the cast-shadow, noticing at the

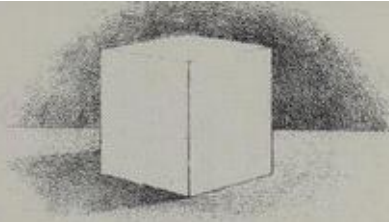


Fig. 21.

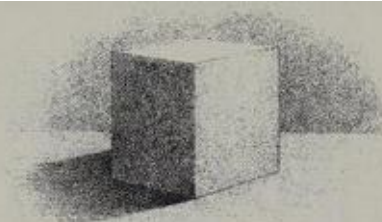


Fig. 22.

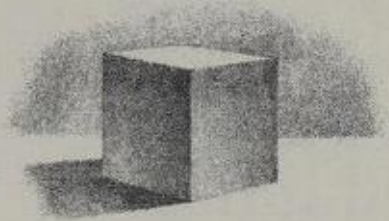


Fig. 23.

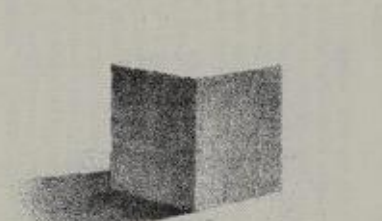


Fig. 24.

same time how much darker it appears than the background, and that (Fig. 4) it gradually decreases in depth of tone as it recedes from the cube. Shade this shadow as light as its *lightest part*. Put in the background and ground-plane rather lighter than they appear.

Step II. (Fig. 22).—The two perpendicular faces seen differ in depth of tone. Decide the tone of the darker in relation to the cast-shadow and the background, and of the lighter in relation to all three. Shade each of an *even tint*, equal in depth to the *lightest part* of each.

Step III. (Fig. 23).—Partly owing to reflected light from the ground-plane and partly to the effect of contrast,* a light gradation appears on each perpendicular face, working from the upper right-hand corner and along the right edge towards the left. Lay on each carefully (*see* Fig. 18), being careful not to get them too dark. (The *lowest part* of the side next the cast-shadow receives little reflected light, and should be slightly shaded.)

Step IV.—The cast-shadow is darkest nearest the cube, and its outline is most clear in the same part (Fig. 4). Add this gradation to the shadow.

The upper face, although light, is not white. A slight tone will be noticed gradating from the back edges to the front, where the effect of contrast with the darker perpendicular faces will help to make it lighter still. Lay this gradation very lightly. It may be necessary to free the stomp almost entirely of chalk.

The background may now be darkened along the edge of the top face (again the effect of contrast), and the drawing is complete.

Fig. 24 shows the same cube without a background. In this case it may be necessary to faintly mark with a crayon the further edges of the top face.

* The law of contrast runs thus:—If two tones of different depth stand side by side, the lighter of the two will appear still more light along the edge next to the darker tone, and the darker tone still more dark along the edge nearest the lighter tone. (*See* "Contrast," Chap. V.)

The brightest part is near the front edge.

You will notice that the brightest light and the deepest dark are small in quantity; this is so on every object.

"White should be regarded as the jewels of your picture, and used with great discretion. One diamond will attract—a cartload makes them common." (Hume Nisbet, "Life and Nature Studies.")

Recapitulation. (Method for all models.)

1. Draw carefully the model and its shadows.
2. Shade—of their lightest depth—the cast-shadow, background, and ground-plane.
3. Lay the *shades* on the model evenly, beginning with the darkest and proceeding to the next lighter—in all cases making them throughout equal in depth to their lightest part.
4. *Gradate* the tones on the model.
5. Darken the cast-shadow where required.
6. Add *slight* tones to the background near the edges of the model, to show the effect of contrast.

Leaving the cube as it stands, you would find it useful practice to alter your position, and make drawings from all points of view.

Arts and Crafts Movement 1850-1914 (WWI)

In pods, go online and find a few examples of Arts and Crafts artifacts. What design elements match this aesthetic? Make 3 minute presentation to class. Same artifacts, how are they different from your Gothic examples?

Make sure your examples are from the 1850 to 1914 Arts and Crafts design movement, not generic 'arts and crafts'.

Pod 1: chair

Pod 2: bed

Pod 3: wardrobe

Pod 4: flatware

Pod 5: light fixture

Pod 6: jewelry

When critiquing aesthetics discussions in blog posts, look for enough information to do this type of analysis on the proposed aesthetic. In other words, did the author describe what are the important style elements that will form their desired aesthetic? If not, can you ask helpful questions about where the aesthetic is headed? Or make suggestions about possible directions? You might also want to plan to include this in your report and presentation, knowing that folks will be looking for it.