



artist daily
presents

SHADING TECHNIQUES BEYOND CROSS- HATCHING:

Artist Daily Pencil
Shading Tutorial on
Modeling Gradations

Modeling Gradations

BY MODELING GRADATED VALUES ON SHAPES SUCH AS CYLINDERS, ARTISTS CAN DRAW REALISTIC FORMS THAT TURN IN SPACE.

by Jon deMartin

In order to draw convincing forms, an artist must become a master at modeling gradations. To acquire this skill, it is helpful to practice modeling value gradations on a curvilinear solid—a form with round surfaces that curve in one direction no matter what its orientation. (See Illustration 1.) The most basic of this type of form is a cylinder, and this lesson discusses how to model the cylinder when gradations run straight along its axis.

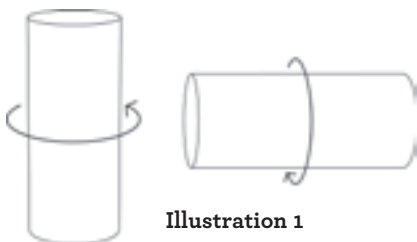


Illustration 1



Illustration 2



Illustration 3



Illustration 4

Making Gradations

Before modeling forms, it's important to understand the concept of gradations. Illustration 2 shows a swatch of gradated values running from black to the white of the paper and then to black again. To create gradated values, draw parallel

strokes next to one another and increase or decrease pressure with each succeeding stroke. Practice making smooth gradations running in a sequence from dark to light, then try reversing it and go from light to dark. This will help you when modeling the cylinder or any form

with rounded surfaces. As Illustration 2 shows, when you make a gradation going from dark to light to dark, you create the illusion of a cylinder.

Illustration 3 shows a value scale with the values “chopped” into clear units, enabling the artist to make better value



Illustration 5
by Jon deMartin,
2009, graphite, 18
x 14. Collection the
artist. Drawing after
the sculpture *The
Continuous Plane Man*
by Eliot Goldfinger.

comparisons. Illustration 4 demonstrates a sliding value scale, in which the values are continually changing, running from dark to light. These changes are observed in the drawing of the Continuous Plane Man sculpture in Illustration 5, which achieves an illusion of three dimensions. Again the gradations continually change, as they do with the sliding

value scale, but in this case they change according to how the surfaces relate to the light source. Surfaces that run toward the light get lighter, and the surfaces that turn away get darker. The surfaces on this sculpture run for the most part in one direction—from top to bottom—similar to a cylinder turned on its side.

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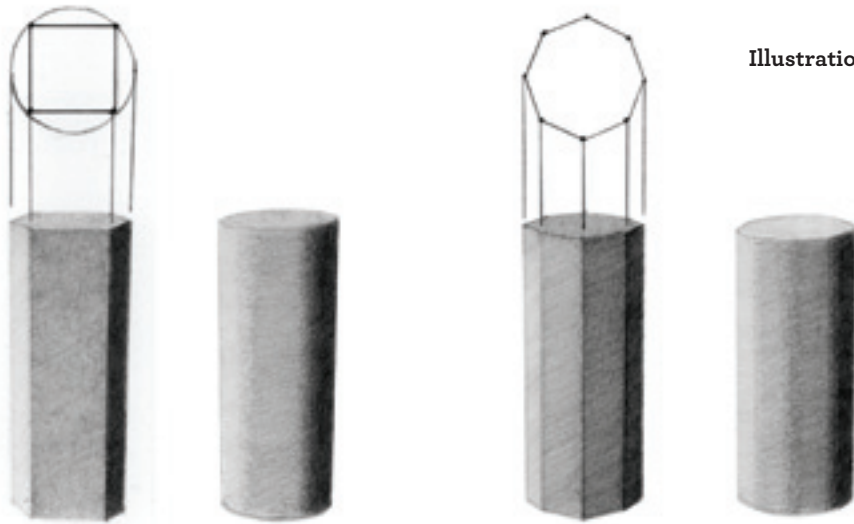


Illustration 6

Planes and the Cylinder

A rectilinear solid, such as a cube, has planes that are easy to identify because of their sharp edges. Although the cylinder is round, it's useful to break it down into its most basic planes if we want to effectively model it. The top drawing in Illustration 6 diagrams the most basic plane changes, which are the “side left,” “front,” and “side right” planes. The octagonal shape below in Illustration 6 has four visible plane changes—“side left,” “front side left,” “front side right,” and “side right.” The artist has the capability to “smooth out” the planes by using gradations, but as you can see in these examples, gradations are not enough to create the true curvature of the cylinder.

Illustration 7 shows a truer example of a cylinder because the planes relate to the angle of the light source. We can understand this concept better when we visualize the subject from a bird's-eye view. In a nutshell, the plane that faces the light most directly is always the brightest and most often the broadest. Facet A is lightest and widest because it's the plane nearest to the light. As the subsequent planes turn away from the light, the gradations darken and narrow. The light struggles to reach the parts of the form that turn away from the light. Generally, the planes that turn toward the light expand, and the planes that recede from the light contract.

The cylinder on the left in Illustration

7 demonstrates the correct “hard lay-in” of the modeling factors. Even though the planes are correctly juxtaposed, the cylinder still doesn't look exactly round. It's only when we gradate the values that the cylinder looks round, as in the right cylinder. It's important that the artist doesn't just smooth away edges without considering the form's surfaces in relation to the light source or the modeling will look unformed and amateurish. 19th-century academic painting practices emphasized the importance of laying in the planes like a mosaic before smoothing or blending them, forcing artists to be very thoughtful about where they juxtaposed planes and values.

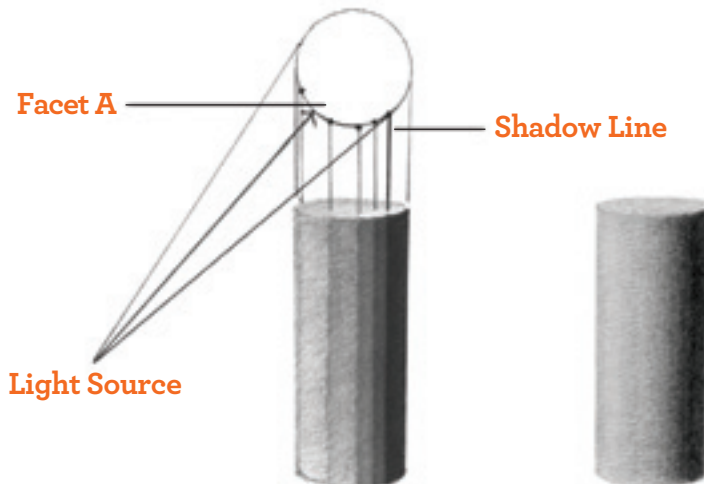


Illustration 7



Illustration 8

Modeling the Cylinder

Illustration 8 demonstrates the three basic stages of modeling form. At left is the first stage, the “poster” of the light and shadow, with intentionally lighter values. The term “poster” means a simple graphic representation of the light-and-shadow pattern without gradations, creating one flat value for the lights and one flat value for the shadows. Starting a drawing in this way enables an artist to make revisions early before advancing too far in the modeling.

The second stage begins with making the shadows a little darker than before but still not at full strength. The objective is not to finish but only to estimate the proper rate of curvature by using very light gradations to round the form, starting from the shadow and working out into the light. At this stage, we intentionally “bleach out” the gradations that face the light and leave the white of the paper. For the last phase, we use the same procedure to continually build the gradations in degrees, push the shadows

to their true darkness, and intensify the illusion of form.

Illustration 9 demonstrates that surfaces that run toward the top get lighter, as we noted before with the Continuous Plane Man. As you can see, the top cylinder that tips backward is receiving more light, so it’s lighter than the cylinder that’s upright. And as the bottom cylinder tips under, it gets darker. Notice how the size of the shadows increases as they turn under. Take a toilet paper roll and hold it in these different positions under a light to see this concept in real life.

All of these basic geometric shapes and principles are applicable to the figure—an arm that’s bent and facing directly at you resembles a cylinder. Illustration 10 shows a series of drawings of the Cylinder Man in which cylindrical masses are tipping, turning, and tilting in space, thus receiving varying intensities of light.

The illusion of form relies not only on an artist’s ability to make gradations but also on being cognizant of the form’s

Illustration 9



Illustration 10a



Illustration 10b

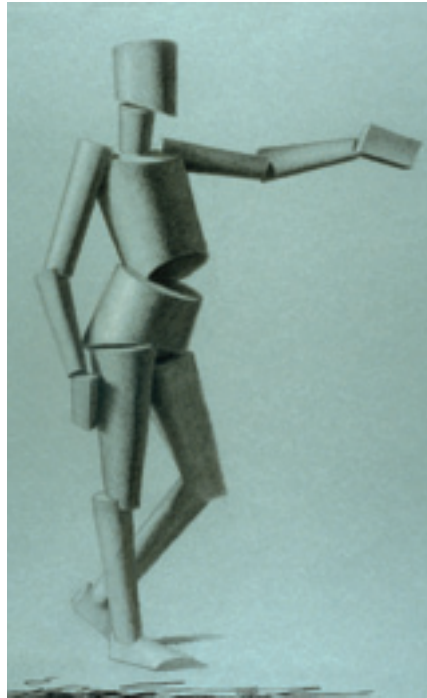


Illustration 10c

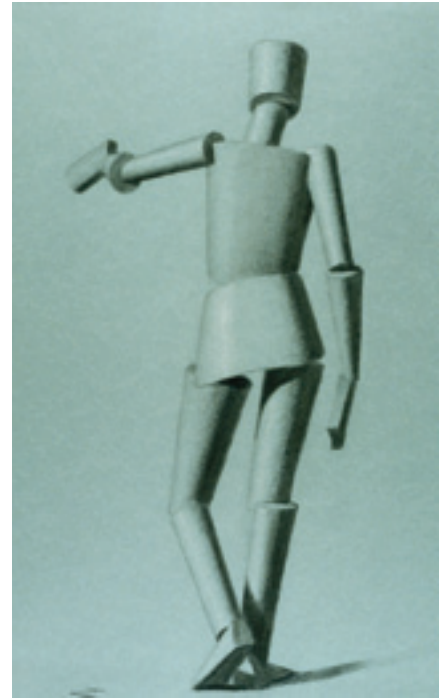


Illustration 10a, b, c

by Jon deMartin, 2009, graphite, 18 x 14. Collection the artist. Drawings after the sculpture *The Cylinder Man* by Eliot Goldfinger.



physical surface in relation to the light source. No matter what the object, if the proper amount of gradation is not understood, the illusion of form will suffer. The *Cylinder Man* in Illustration 10a is without gradations and has sharp edges that resemble boxes. The second phase of the same drawing (Illustration 10b) has gradations that reveal the true cylindrical character of the forms. This progress from 10a to 10b clearly shows the power and importance of proper gradations.

Let's end with a drawing that exemplifies modeled gradations. The drawing for the painting *Epiphany*, by artist Michael Aviano, shows his exquisite skill in modeling gradations in all of their variety. As a result, its three-dimensional illusion is completely realized. ■

Drawing for *Epiphany*
by Michael Aviano, 2009, charcoal,
39 x 32. Collection the artist.

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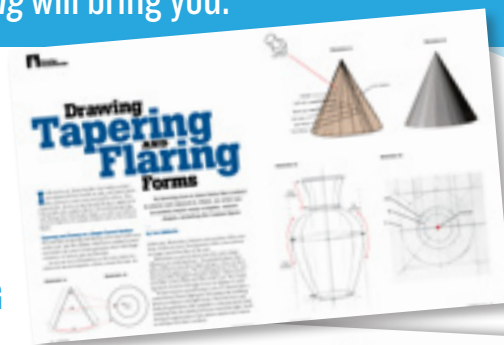
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