#### **Famous Artists Course**

Famous Artists Schools, Inc., Westport, Connecticut

# Form — the basis of drawing



Albert Dorne

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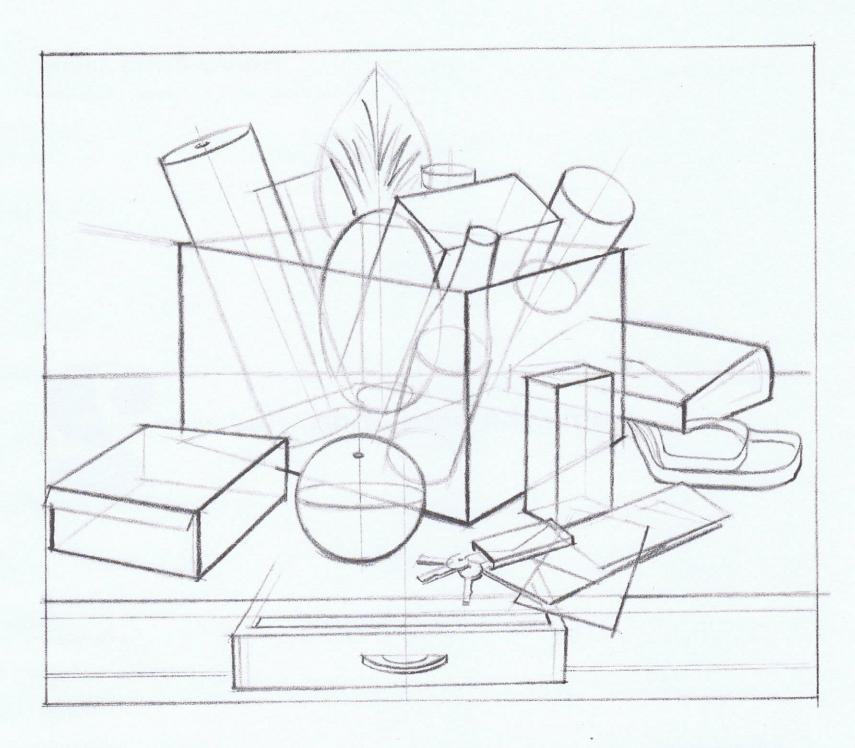
**Robert Fawcett** 

Peter Helck

George Giusti

**Austin Briggs** 

Harold Von Schmidt



#### Form is shape and structure

Stevan Dohanos' sense of form is apparent in everything he draws or

paints. It is strikingly evident in his still-life painting at the right.

Above you see the first and most basic stage of Dohanos' picture—
the form drawing. It shows clearly that his first concern is with the basic
forms of objects—not their color, texture or surface details. He knows
that if his form drawing is not right, then no matter how careful he is
with the final details the picture will not look right with the final details the picture will not look right.

In his pencil sketch Dohanos draws the complete form of each object, even though just a part of it shows in the final painting. Notice, too, that things rest squarely on the table or fit within the box. Because of the attention he paid to form, his painting is lifelike and convincing.



Form is the shape and structure of anything, as distinguished from the material of which it is made.

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#### Form

Every object that exists anywhere - from a mouse to a mountain - has form. This form has three dimensions - height, width, and depth. It has structure, and it occupies space. It is so apparent you can even "feel" it before you touch it. When you reach for an apple, you instinctively know your hand must go around its form in order to pick it up. You don't have to pick up a box, turn it this way or that, to know it has sides, a back, top and bottom. Form is something you see and you feel.

It is the same in pictures. Any picture you make of an object must be a convincing illusion of real form. You must draw an object so that the person looking at it senses that there is more there than meets the eye. He must, in fact, be given a feeling of true-to-life form even though he sees only one side of the object.

In the last lesson we started you out on the fundamentals of using the four basic mediums. It was a long lesson, but we did not expect you to master it all at once. Actually, it is a handbook on the mediums, and you should turn back to it again and again, all through your Course. Now, however, it is time to take the next big step - to learn how to draw form convincingly.

Starting with this lesson we are going to show you how to do this. We are going to teach you the principles of drawing objects so they look solid, as if they really existed. You will be shown how to make them look near and further away, and how to accentuate their forms by the proper use of light and shade. When you understand these principles of form drawing and are able to apply them you will have taken a giant step forward toward creating the illusion of lifelike objects on paper.

Before showing you how to draw form we want to give you a fresh point of view about objects in reality and objects in pictures. It will help you to acquire a sense of form - to fill your pictures with the feeling of three dimensions, particularly the dimension of depth.

#### Form in depth

Your drawing paper or illustration board is a flat, two-dimensional surface. It extends up and down and from side to side. However, the real things that you want to picture on your paper have another dimension - depth. They go back into space and must have room to exist in space. When you draw these objects, you have to draw their three dimensions on a two-dimensional surface - in other words, you have to show depth on a drawing surface that has no depth of its own.

To draw depth, you must feel depth. Suppose, for example, you want to make a drawing of a television set. The real set is a cube in form, of a certain depth and width. The form of the set occupies space - it has bulk and substance that you can feel. And so, when you draw the set, you must suggest this form extending back into the space of your picture. You don't draw a flat outline, but a convincing illusion of real form in depth.

Beneath the shading and texture of all good pictures lies this form in depth. True, it is sometimes hard to see because, when we are beginners, we tend to concentrate on the obvious. We respond too quickly to the surface appearances, the smoothness or roughness of things, the lights and the darks. But all of these

are only part of the final stages of picture making. Before these details can be put down on paper correctly, the basic form of the objects themselves must be felt and drawn in depth.

#### Four basic forms

Long ago, gifted and perceptive artists observed that every object can be reduced to one of four basic forms - or modifications and combinations of these. They found that any object, no matter how complicated it may seem at first glance, has a basic structure that is made up of a sphere, a cube, a cone, a cylinder, or some combination of these forms. If you can learn to draw these forms you can draw anything you can see or imagine.

You will find the four basic forms all around you, once you learn to look for them. Look closely at a Christmas tree or a carrot and you will see that it is basically a cone. A matchbox and a trailer truck are similar in their cubelike form. A drinking glass and can are cylinders. A ball and an orange are spheres.

We live among forms like these. We sit on them, drive them, and eat them. But we are usually more conscious of a house, for example, as a house than as a cube. The artist, who has learned to see everything as a form, thinks just the other way. To him the house is first a cube, one of the four basic forms. He is aware of the height, width, and depth of this form, of the space it occupies. He doesn't begin by drawing the surface appearance - the windows and the rest of the details - this procedure, in the end, would give him a house that looks thin and unreal. Instead, he first draws a cube to start, and then adds the many details that make it look like the actual building. His house is solid and convincing because he recognized and drew the solid basic form as the foundation of his house.

By now you have some idea of why it is so important that you learn to draw the basic forms well. In one shape or another, singly or in combination, you will be interpreting the sphere, the cube, the cone, and the cylinder in every drawing you make.

Because the principles of form drawing are the foundation of all art, this lesson is one of the cornerstones of your art training. From now on we will constantly remind you of the importance of form, and we hope you will always be conscious of it throughout your career as an artist. Naturally, we don't expect you to master these principles in one lesson. You won't appreciate their full value until you understand and feel them thoroughly. Then you will first realize how profoundly they are influencing your thinking and helping you to improve your drawing.

When sensing form becomes second nature to you, you will be thinking like an artist. We urge you, therefore, to keep the basic forms constantly in mind and apply them to every object you are going to put on a drawing surface. It is equally important that you always feel the solid form as you draw it. With sincere and constant practice you will develop a real sense of form - a kind of sixth sense that will prove invaluable to you because it will enable you to put things down convincingly on paper. And this, as all artists know well, is the one thing in your art that will give your pictures their greatest conviction, and you, the artist, your greatest satisfaction.



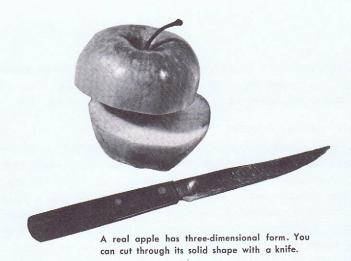


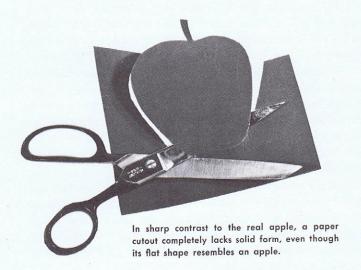


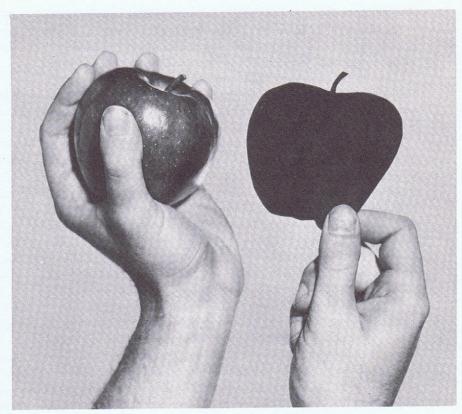


The Four Basic Forms:

Cube







This photograph illustrates the basic difference between solid form and flat shape. The real apple rests solidly in the palm, and the thumb and fingers fit around it. But the flat, paper-thin cutout lacks mass and depth—it can be pinched between the thumb and forefinger. When you draw objects, give them real shape and structure. Make them solid forms instead of flat outlines.

## How to draw the illusion of real form

The pictures above show dramatically how different the <u>real form</u> of an object is from a flat shape or outline. As you look at the large photograph, you know at once that the object in the left hand is a <u>real</u> apple because it occupies real space in the palm of the hand and the fingers wrap around and back of its sphere form. By contrast, the paper cutout is a thin shape pinched between the thumb and the forefinger. Although it may have the outline of a real apple, you cannot mistake it for one because it lacks form in depth.

To be able to draw a convincing illusion of form you must understand its structure in depth. Carefully study the three-dimensional form of everything you see, rather than just its outline.

The best way to make sure your pictures will look real and convincing is to use the method we call "drawing through." In "drawing through" you actually construct the object with your pencil—you draw its form inside and out.

Let's assume, for example, that you want to draw a box. From where you are sitting, you can see only the top and two sides of the actual box. However, you draw not only the top and these two sides, but you also sketch in the bottom, the front, the back and the other two sides — just as though the box were transparent and you could really see every part of it.

If your box is resting on a table, be sure that you draw it as though it is. It must not appear to be floating in the

air or sunk in a hole in the table. To make it rest solidly on the table top, first draw the bottom of the box in the correct position on the table, then draw the sides and top. Because you have actually constructed the box from the ground up, it will have three-dimensional form and will look as though it is really resting on the table.

Here's a practical idea that will help you study forms and draw them through accurately. Get some transparent or hollow objects and examine their structure. By taking the drawer out of a wooden matchbox, you can see what the inside of a cube looks like. A drinking glass will enable you to study the cylinder, a glass funnel the cone, a transparent ball the sphere.

No matter what you draw, make it a practice to first sketch in the basic form as though it were transparent. Even if one object is standing in front of another so that much of the object in back is hidden, you should draw both objects through completely. This enables you to "set" each article in its correct position on the table and make it look solid and convincing. If you disregard this rule, both objects may appear flat or lopsided, or seem to occupy the same space in your drawing.

Day by day, as you study and practice "drawing through" and constructing basic forms, it will become a less conscious act. Before you know it, you will be creating the illusion of real three-dimensional form. Until that time comes, always think of the construction of the forms and "draw them through."









# Every object has a basic form

Every object in existence can be reduced to either a sphere, a cube, a cone, a cylinder — or some combination of these simple basic forms. For proof of this principle, look at the pictures of common objects on these pages, and the basic forms they are made up of.

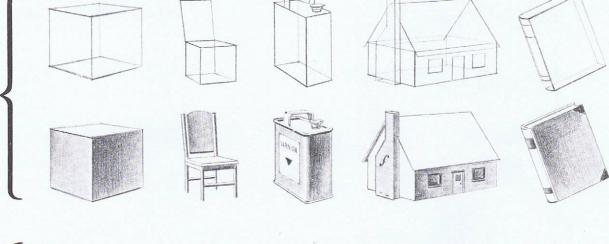
Not every one of the basic forms we see in an object is "perfect." The basic cone in one object may not have a tip, the

cylinder in another may curve or taper, the sphere may look more like an egg. But, broadly speaking, you can find these basic forms in everything if you look for them.

Reducing an object to its basic forms makes it easier to draw. Get its basic forms down on paper, and you have already drawn the greater part of it. All that remains to be done is make the form more accurate and add details, texture, or light and shade.

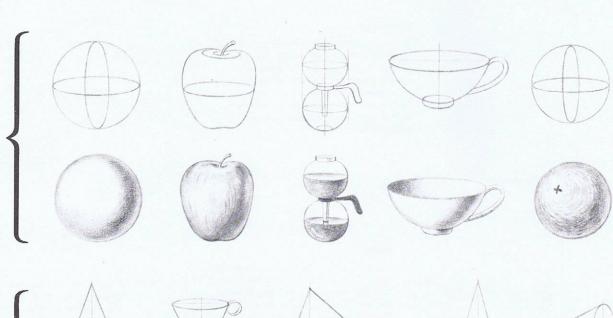
#### Cube

A chair, a varnish can, a house, a book—all can be reduced to a basic cube of varying size or shape. On the house, the upper section is part of a cube turned at an angle.



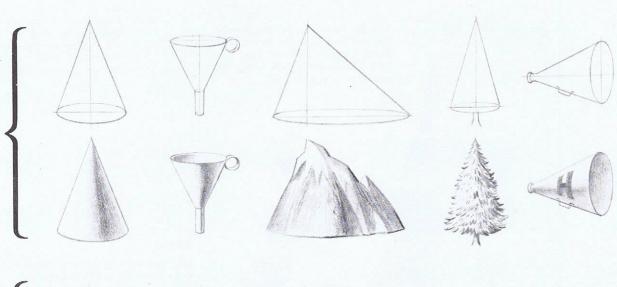
#### Sphere

The sphere shape is lengthened in the apple, doubled in the coffeemaker, halved in the cup, and virtually perfect in the orange. In all of these objects the basic form is easy to find and draw. Adding details makes the form drawings into convincing pictures.



#### Cone

To picture a funnel, we draw an upsidedown cone with a small cylinder in place of the tip. The irregular forms of mountain, pine tree and megaphone can be reduced to a simple cone, too.



#### Cylinder

A bottle is basically several short cylinders on top of a long one. Doorknob, birthday cake and glass are cylinders, also. In planning a picture, you can quickly sketch in the basic forms of objects to try out different arrangements, then add the details when you have found the best arrangement.



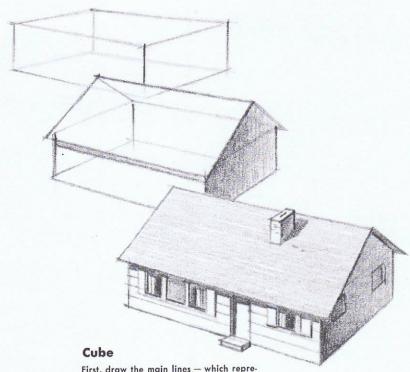
# Cylinder This jug is essentially a cylinder, so start by drawing one—and modify the top to form a cone. A vertical center line helps you position the neck of the jug. Next, create the effect of light coming from above and to the left by adding shadow as shown. The handle and open-

# The basic form of the pine tree is a cone. Draw a center line to locate the trunk. Then use shading or modeling to make the form look more solid. Finally, draw in the irregular branches, which add realism, but don't let them destroy the basic cone form of the tree.

ing in the neck are put in last.

### Drawing the basic forms

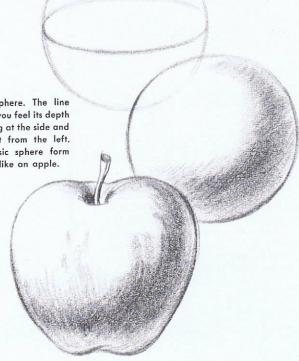
Below we show you a simple procedure for drawing forms so they will look solid and three dimensional. In each case the form is first "drawn through" so that it really appears to exist in space, and the details are put in last.

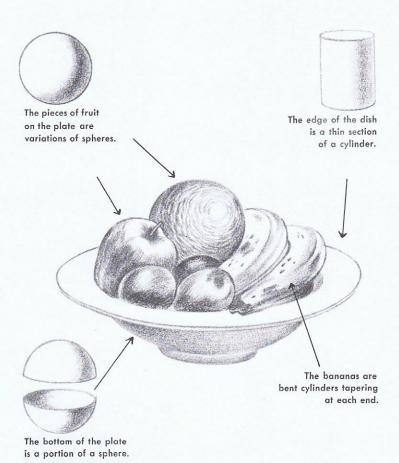


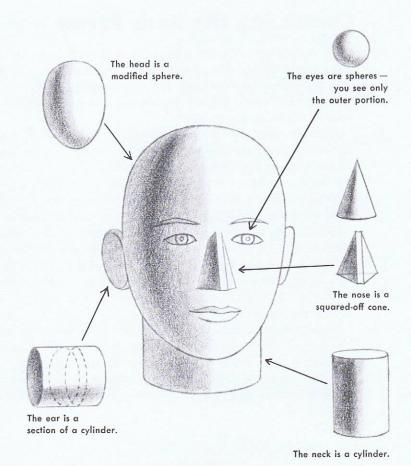
First, draw the main lines — which represent the floor and wall planes of the house. Next, add the roof part, a section of a cube turned at an angle. Large, broad areas of light and shade help emphasize the form. The details come last. Make it a habit to draw them in only after you have constructed the basic form and put in the shading.

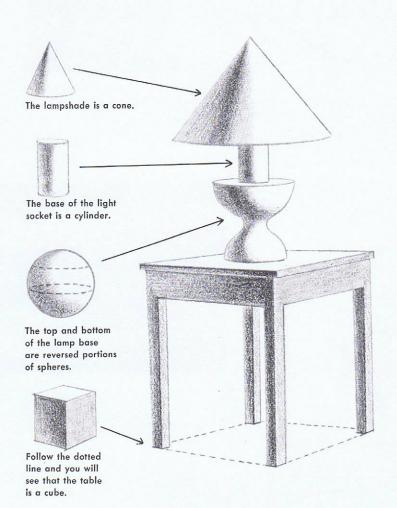
#### Sphere

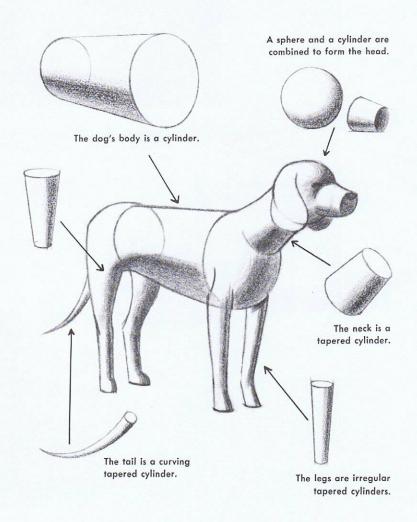
First, draw a simple sphere. The line around the center helps you feel its depth or thickness. Add shading at the side and bottom to suggest light from the left. Finally, modify the basic sphere form slightly to make it look like an apple.











#### Combining the basic forms

Look around you at home, work, or play to see for yourself that every object can be reduced to the four basic forms - cone, cube, cylinder and sphere. As these drawings clearly show, you will find the basic forms beneath the details and surface texture of even highly complicated objects.

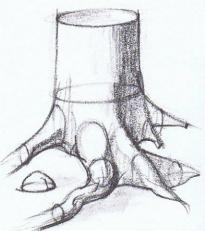
Actually, most objects are combinations of two or more basic forms. Such combinations are easy for you to see in barns, stoves, or trucks where the forms are fairly regular and simple. But they are not so easy to see in objects like clouds, hills, trees and elephants, where the forms are complicated and irregular. However, the forms are still there, although somewhat modified.

As an artist, you must learn to see through surface details or irregularities, recognize the basic form, and draw it. Begin today to train your eye to see the basic structure of the thing you are looking at. Fill the pages of your sketchbook with drawings, similar to these, of objects you see everywhere, stressing their basic form and structure.

Remember that these should be form drawings – keep them free and simple. Resist any temptation you may feel to concentrate on details. It will bog you down! First things must come first, and right now all of your interest should be aimed at learning how to draw basic form to the very best of your ability.



Cylinders, chiefly, make up the human figure. The head is a modified sphere.

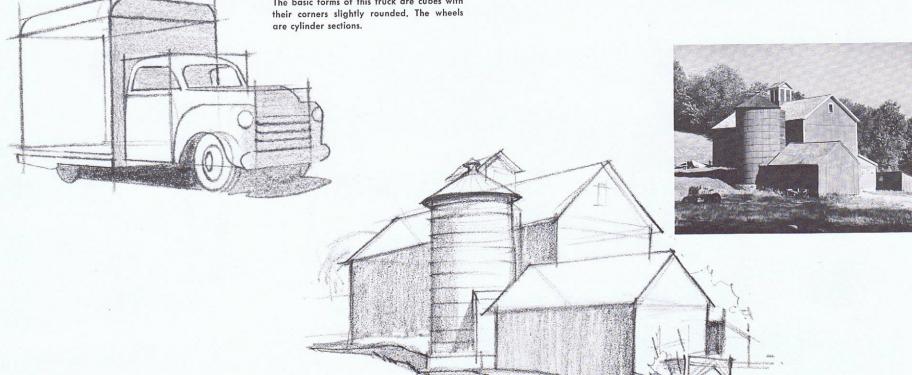




The tree stump is an obvious cylinder. Some of the roots are irregular cylinders, while others are sections of cones with their tips cut off.

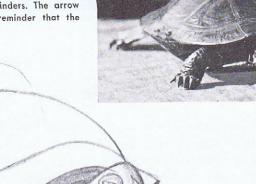


The basic forms of this truck are cubes with

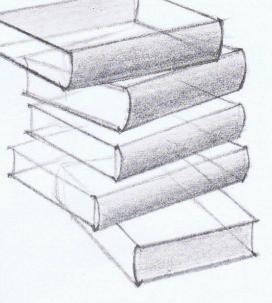


These barns are basic cubes. The roofs, too, are parts of cubes, but turned at an angle. The silo is a cylinder, its roof a squat cone.

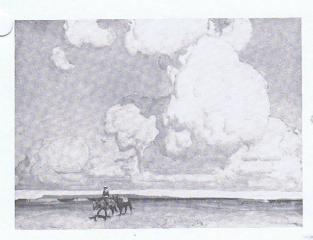
Think of the turtle's body as a half-sphere, its neck and legs as cylinders. The arrow around the shell is a reminder that the body is a solid form.

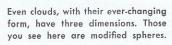




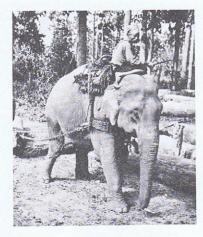


Books are cubes — draw them just as you would place them, each book resting solidly on top of the book underneath.



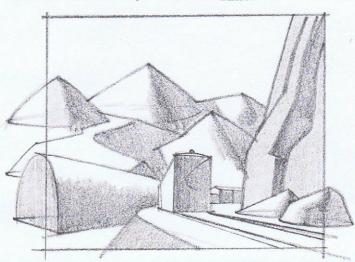


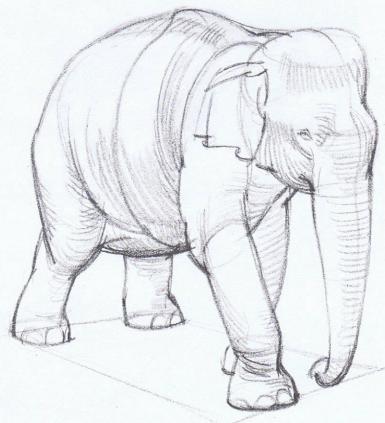




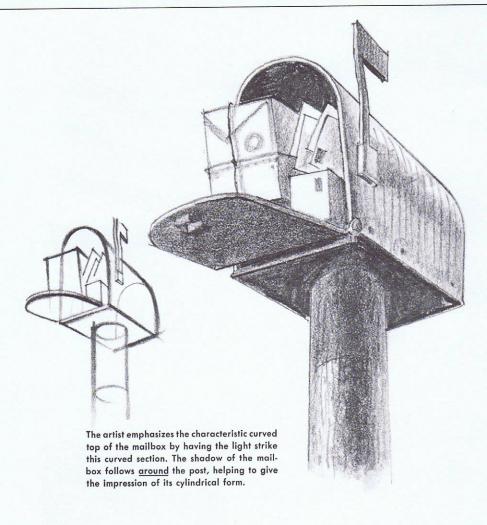


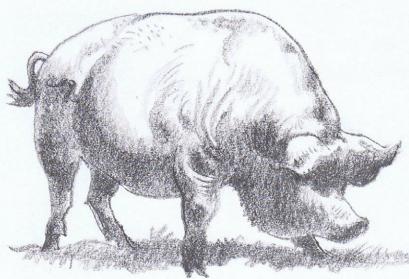
You can reduce a complex scene to its basic forms. The locomotive is a long cube, and the freight cars behind it are cubes, too. The mountains are wide, irregular cones.

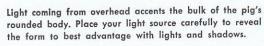




The huge bulk of the elephant's body is a modified sphere. So is his head. His trunk and legs are cylinders.







# Light and shade

The illustrations on these two pages show you ways to use light and shade on your drawings. After you have constructed the form soundly by drawing it through, you erase your construction lines and accentuate the form with lights and darks.

Frequently in this Course we will talk about light and shadow planes. By this we mean the sides or sections of a form that are individually struck by light or are in shade. These planes can be vertical or horizontal, diagonal or curved. There may be many or few.

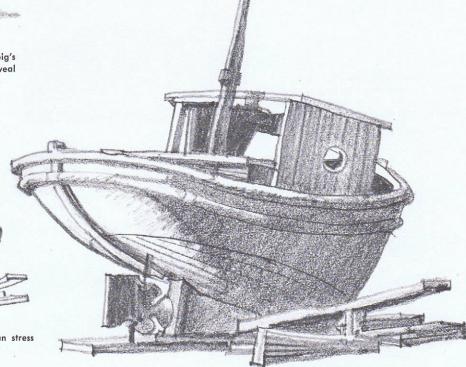
To get a solid grasp of light and shadow planes, you should study them on real objects. Set up on a table a few simple things — some books, a piece of fruit, and bowls or jugs — and light them with an ordinary floor or table lamp (the light source). Avoid using any objects with extremely shiny or dark surfaces because they will not demonstrate our point as successfully as objects with dull surfaces.

Move either the objects or the light around so that its rays illuminate them from different angles and directions. Each time you do this, there will be a different effect of light and shadow. Squint your eyes and notice the clear separation between the light planes and shadow planes.

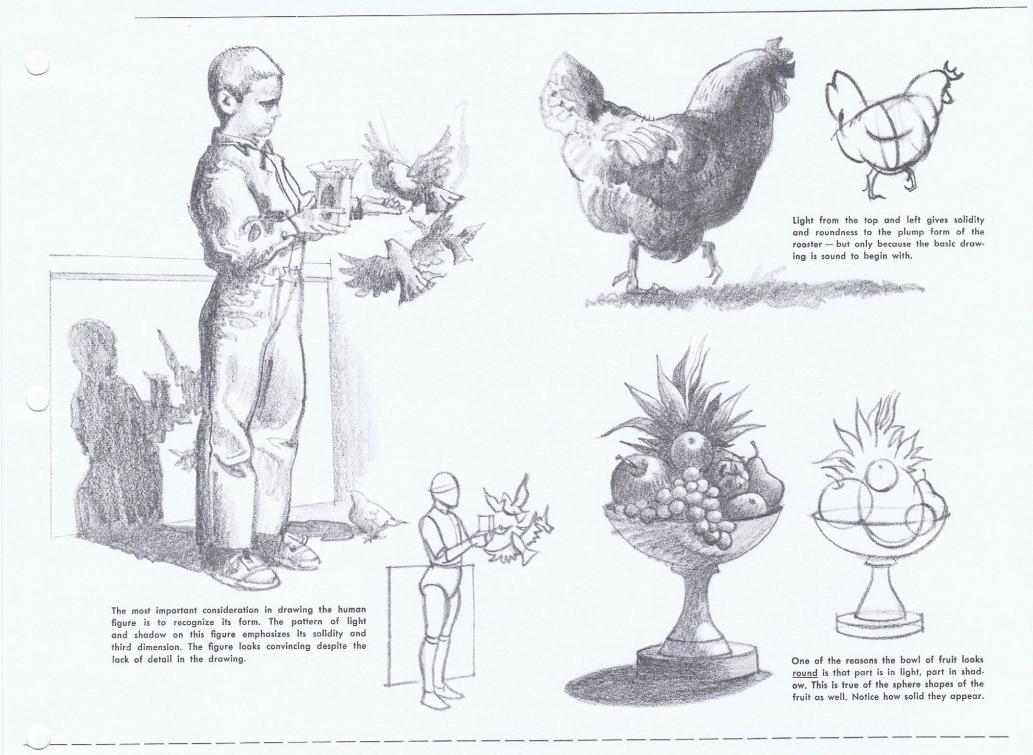
As you study such a setup, visualize yourself first drawing each of these forms through for accurate proportion and construction, then adding the tones for light and shadow to create a full effect of realism.

After this, turn your attention to the effect of bright lights on other things around you — figures, buildings, trees, animals, etc. You will see planes or patterns of light and shade that reveal the form as sharply as those illustrated here. On dull days or in subdued light the patterns of light and shade will not be so pronounced and you will have to look harder for them — but they will be there just the same.

In your drawings, you may use light and shade to reveal and emphasize form, as in the pictures on these pages. But, before you add your tones and shadows, make sure your basic drawing is correctly constructed. The use of light and shade will help make a good basic drawing more convincing, but it will not save a poor one. The basic drawing must be able to stand by itself as a sound form structure.



By lighting the boat from the back we can stress the basic <u>curved</u> structure of the hull.

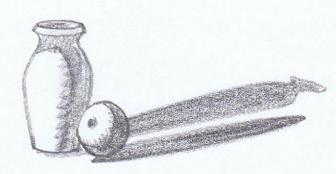


#### Avoid these errors

Use light and shadow to give form and structure to your pictures and make them more convincing. In almost every case it is the <u>object</u> that is important, not the shadows. Don't let accidental shadow effects destroy or camouflage the form. Here are some common errors you should avoid:



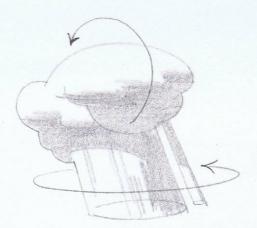
Inconsistent lighting: The light plane of the vase is on the right but that of the apple is on the left. With one light source, each object should be lighted on the same side and consistent in its shading.



**Distracting shadows:** Avoid awkward shadow shapes that distract the eye from the important objects in your picture. Here the shadows steal the show from the vase and apple.



Confusing shadows: The heavy shadows and the objects seem to be all one form. Shadows should help clarify forms, not confuse them.



The storm clouds in Harold Von Schmidt's painting are basic spheres, although he shows only their lower part. The torrent of rain forms two slanting cylinders, one huge, one narrow.

# Solid forms make good pictures

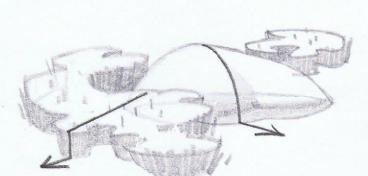
On these pages we show you how two great illustrators, Harold Von Schmidt and Peter Helck, apply the principles of drawing solid form in making professional pictures. They use these principles to draw not just the simple forms of a few man-made objects, but anything they want to put in their illustrations, from a car to a cloudburst, from a horse to a house.

In both illustrations the forms look solid and well constructed because in the preliminary stage each artist thought of the objects in terms of their basic form and "drew them through" to be sure they would look convincing. As each artist painted he instinctively stressed solid form because with experience and practice this has become second nature to him - just as someday it will become second nature to you.

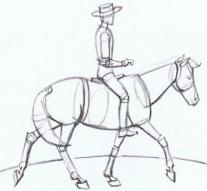


HAROLD VON SCHMIDT

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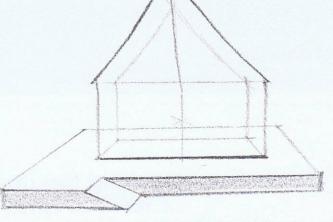
The sagebrush has definite top and side planes in contrast to the curving sphere form of the smooth rock.



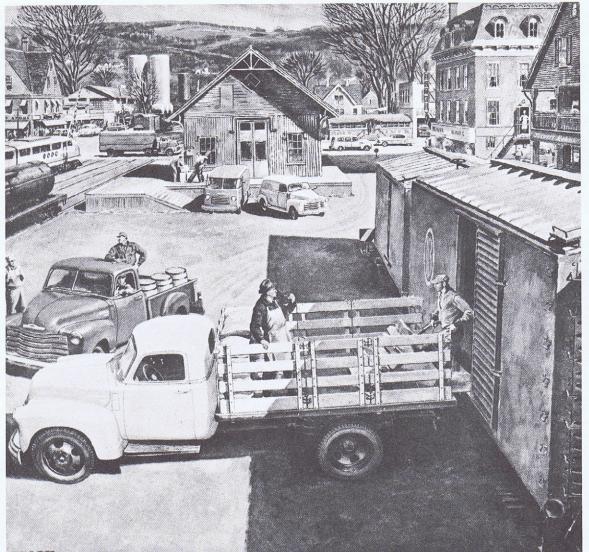
Cylinders are the basic forms of which both horse and rider are constructed.



The mesa, partly hidden by the cloudburst, is no flat background silhouette. It has solid three-dimensional structure.

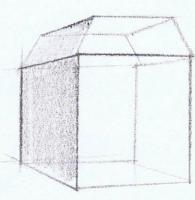


The freight station toward the back of the picture is made entirely of cube forms — including the roof, which is a cube turned at an angle. The ramp of the loading platform is the side of a tilted cube.

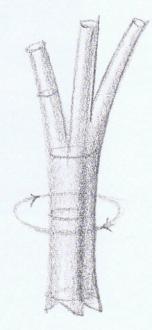


PETER HELCK

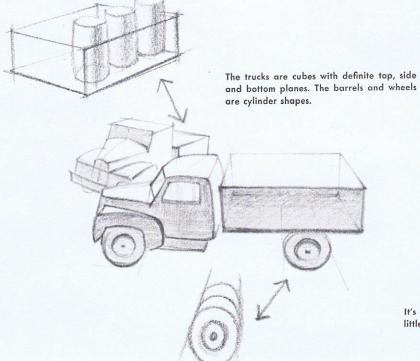
Courtesy Chevrolet



Cubes form the building at the upper right in the picture. The roof is constructed by cutting off the edges at a slight angle.

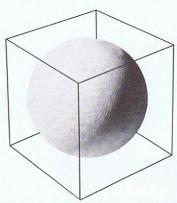


The lower part of each tree — trunk and main branches — consists of cylinder forms.

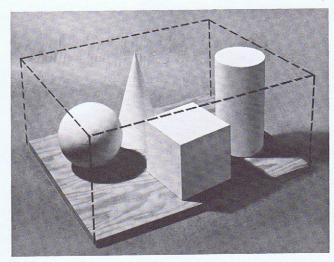


bottom planes. The barrels and wheels ylinder shapes.

It's easy to see the freight cars are cubes — modified a little at the top to form the low-pitched roof.



This sphere is not a flat outline — it extends up and down and back into space, as shown by the box drawn around it.



Here four basic forms have been placed on a flat surface to show that they occupy space and that space exists between and around them. Some forms are closer to you than others — and one part of each form is closer than the rest of it. The broken lines simply indicate that these objects have three dimensions in space.

# Creating the illusion of form in space

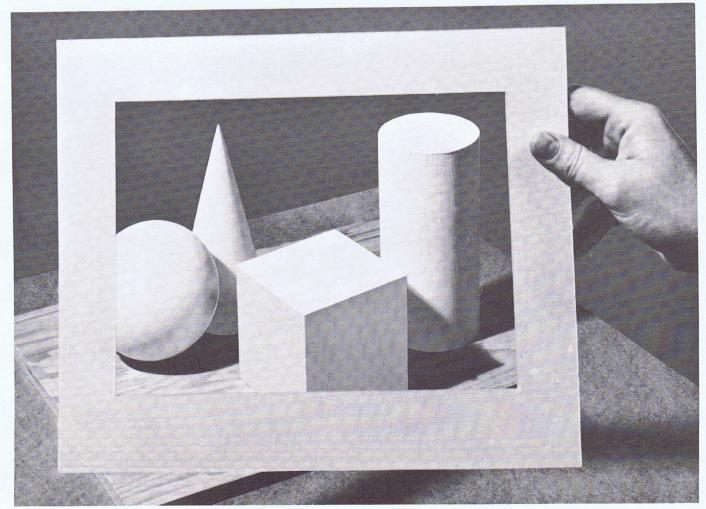
As an artist, you face an exciting challenge every time you take up your pencil, pen or brush. You have to create the illusion of solid form on a flat drawing surface. Real forms exist in three dimensions — but your drawing paper has only two.

Here is where the beginner often runs into trouble. Because his paper is flat, he is likely to draw his objects looking flat, like the apple silhouette we saw some pages back. Or, if he draws the objects solidly, one form may run into the next — it will not appear to be in back of or next to it, as the real things are.

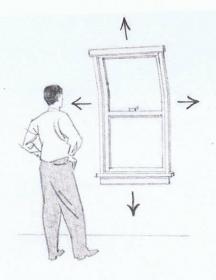
You will be able to avoid these mistakes if you realize that every form needs space in which to exist. A form takes up space and it is surrounded by space — and you must suggest this space, or the illusion of it, in every illustration you make.

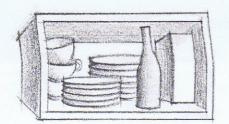
In your pictures, you must be able to show that a form extends backward and forward and up and down in space. Drawing the form through will help you do this. However, when there are several objects in the same picture, you have to do something more. You must not only draw the objects solidly—you must clearly show the relationships of one to the other. You have to show which forms are nearest, which are furthest, and how close together they are. Within your picture there must be room for each of the objects to exist just the way they do in reality. Furthermore, there has to be a sense of space extending around these objects and beyond them in every direction.

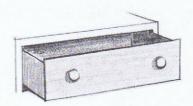
Carefully study the photographs and drawings on these two pages. They have been planned to sharpen your sensitivity to space — to make you keenly aware that every form, regardless of its size or shape, exists in and is surrounded by space. Then you will be ready for the instruction we are going to give you about how to capture the feeling of form in space in your pictures.

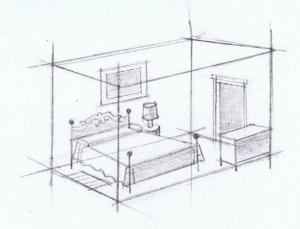


3 Now look at the same forms in a frame. This is how they should look when drawn on a flat surface. If they are correctly drawn, they will still appear to have three-dimensional form and exist in space and depth. Although the frame cuts off part of some objects, you feel that they still exist in space behind the frame.

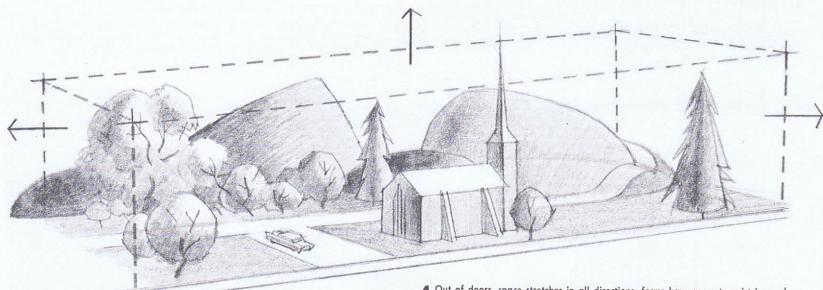




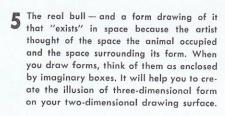


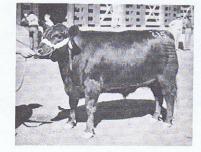


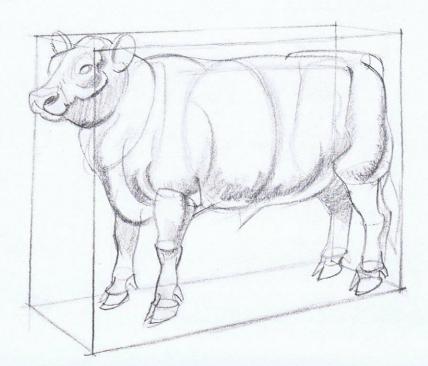
- You will have a keener understanding of what space means in pictures if you think of your drawing paper as a window. The window glass is flat and its frame limits what you can see, but you know that forms exist in real space behind and beyond both glass and frame. You must re-create this sense of depth and space in your pictures.
- 2 To strengthen your awareness of form in space, open a cupboard or pull out a drawer containing objects and look into it. Each object occupies some of the space inside—each is also surrounded by space—and there is a varying amount of space between the different objects. Just as these forms need real space to exist in, so the forms in your pictures need the illusion of real space.
- 3 Next, consider forms in space in the room where you are sitting. The space of the room is enclosed by walls, ceiling, floor. In this space are all the forms of the various pieces of furniture. They all have a space relationship to you and the room itself they are close or further away.

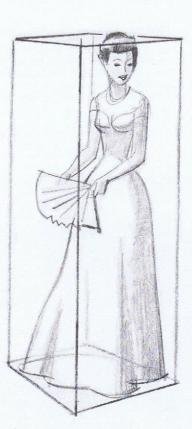


Qut of doors, space stretches in all directions, forms have room to exist in, and they exist in relation to each other. The road runs past the trees and the church and winds up along the hill and behind it. Hills, trees, and steeple all extend upward in space and there is space between these forms. Although this is only a simple drawing, the illusion of forms in space is convincing; the broken-line box fits over the forms like a real box over a miniature landscape.





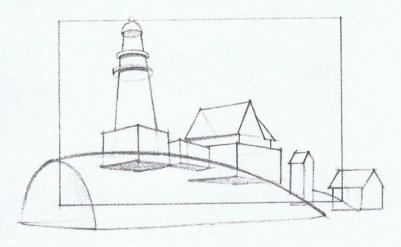




6 Much of your work will involve the human figure. When you draw it, consider its form and the space it occupies. This attitude will help you avoid drawing figures that look flat — will strengthen the feeling of solid three-dimensional form in your work.

Collection of Mr. and Mrs. Samuel A. Tucker



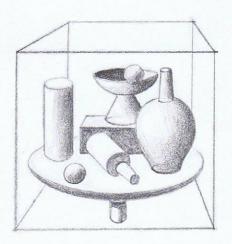


#### EDWARD HOPPER Lighthouse at Two Lights

The land in the foreground hides the lower part of these lighthouse buildings. However, we feel that they rest firmly on the ground because the artist thought of them as complete, solid forms existing in depth as he painted them.

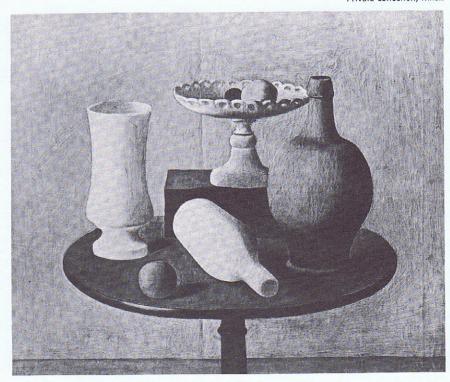
Private collection, Milan

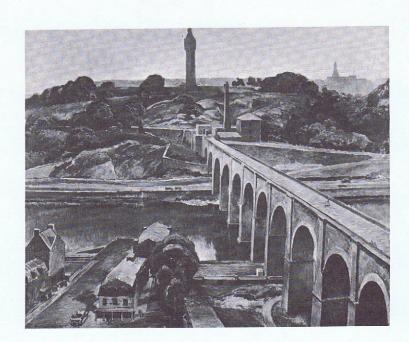
#### Solid form adds conviction

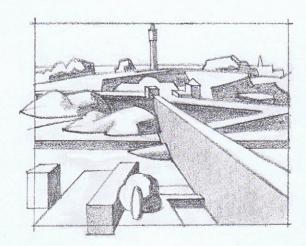


#### GIORGIO MORANDI Metaphysical Still Life, 1920

Here is a fine painting with a design based on a sound knowledge of form. Although the round table top is well filled with objects, each one has sufficient space to exist. Light and shade emphasize the solidity of the construction in this picture by a famous contemporary Italian artist.



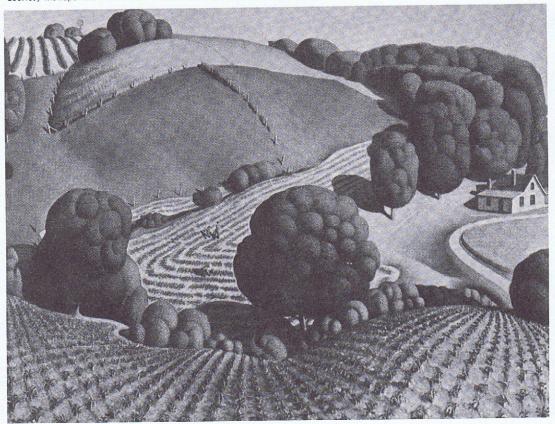




#### PETER HELCK High Bridge

In this picture Peter Helck gives us a convincing illusion of solid form in the outdoors. Notice the gradual reduction in the size of the arches and the width of the bridge as it stretches into the distance. Notice, too, the feeling of space between the houses on this side of the river and those on the far bank. The artist has used his knowledge of space and perspective to create a feeling of great depth in his picture.

Courtesy Metropolitan Museum of Art and Associated American Artists Galleries

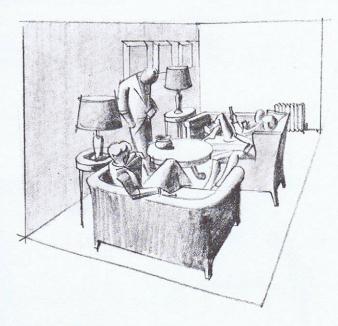


#### GRANT WOOD Young Corn

Grant Wood, noted American artist, built a whole style of painting around the basic form of the subjects in his pictures. Partial spheres are the basis of this rolling landscape — whole spheres are clustered together to make the foliage of the trees. This picture is its own form diagram.

© The Curtis Publishing Co.





#### AUSTIN BRIGGS

The design of this illustration is based on the arrangement of figures and furnishings within the three-dimensional space of a living room. Briggs placed his forms carefully, one overlapping another, to create a real sense of depth in the picture. As he drew the figures, sofas, chairs and tables, he was aware of both their form and the space around them.

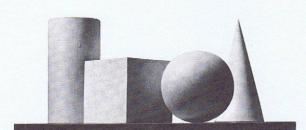
# Objects look different from different positions

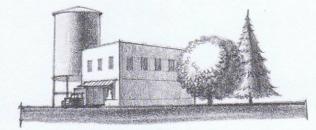
Every object looks different when you view it from a different position or viewpoint. Therefore, to draw forms accurately, you have to take your viewpoint into account. You must draw forms as you actually see them from where you stand or sit.

Drawing objects on a flat surface as they actually appear to the eye is known as drawing in perspective. In a typical perspective drawing these objects appear to recede in the distance and give the effect of depth. Here we are going to show you the basic rules of perspective, and how to apply them in your drawings.

Let us start by seeing exactly what happens to the appearance of objects when we look at them from different positions. We call these positions eye levels or viewpoints. We use models of the four basic forms for our demonstration but you can get the same effect with any simple object you have at hand.



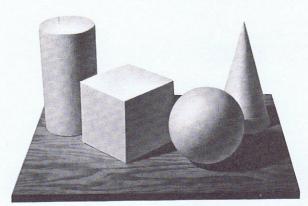


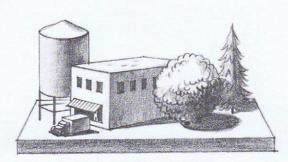


**EYE-LEVEL VIEW:** Set a few simple objects on a table, and squat down until your eyes are level with them, as in the diagram at the left. From this viewpoint or <u>eye level</u>, notice that the bases of the objects are all on the same level line. The two top lines of

the cube slant slightly down toward the table top as they recede from the corner, and the top plane of the cube and cylinder cannot be seen. Now imagine this same view and these objects in terms of a drawing of an actual scene, as at the right.



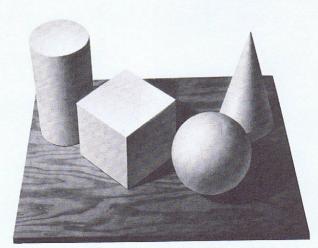


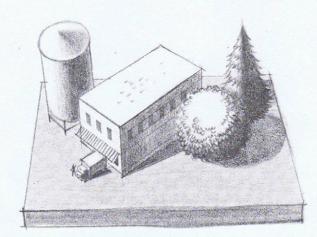


HILLTOP VIEW: Now raise the level of your eyes about a foot or so above the table. From this viewpoint you will see the table top and the space between the four objects resting on it. Notice that the top front lines of the cube point upward instead of down-

ward. You can see the top plane of both the cube and the cylinder. The drawing at the right shows you how these objects would look if they were made into an actual scene. The view is the kind you would get if you were standing on a hill.







AIRPLANE VIEW: If you stand up straight and look down on the table from a still higher eye level, you see even more of the top planes of each form. You also see more of the space between them. Notice that the top front lines of the cube point upward

even more, while the height of the cylinder and cube appears to have decreased. Translate this arrangement into a scene and you get an airplane view like the one at the right. Always remember: Forms change in appearance as you change your eye level.



Objects of the same size appear to become smaller as they are further from your eyes.

#### From Ewing Galloway, N. Y.

#### Form in perspective

On the last page you learned that forms look different depending upon the position or viewpoint from which you see them. As you change your eye level, you change your view of objects. This is one of the basic principles of perspective.

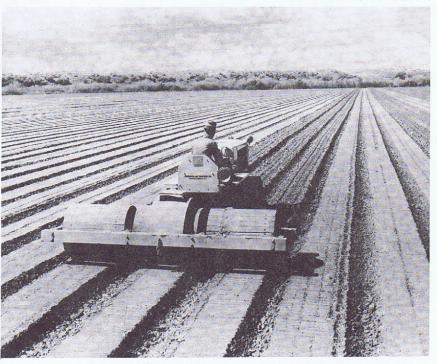
The next few pages contain photographs and drawings which clearly demonstrate the few other basic principles of perspective which you should know. These principles, like the first one, are easy to understand. There is nothing complicated about them. Just apply the points illustrated by these pictures to the objects you see around you and you will soon learn the important things you need to know to draw pictures that have a real sense of form and depth.

All of the rules of perspective are based on one simple observation: The further an object or part of an object is from your eyes, the smaller it appears. Everything conforms to this principle. We could replace the bales of hay in the photograph with people or houses and they, too, would appear to diminish in exactly the same way. Since the whole object appears smaller as it gets further from the eye, any part of the object also seems smaller. The height, width, and thickness of each form decrease proportionately.

You can see this effect of distance for yourself by looking down a street lined with houses, trees and telephone poles. Each part of each house seems smaller as the house is further away. With distance, the poles decrease in height and thickness, too. The trunks of the trees and their branches also become smaller.

As these objects and their parts appear to decrease, the distance or space between them also seems smaller. Now, as you see this apparent decrease of size with distance, you become aware that the objects diminish in an obvious direction toward a definite level or height in the picture. This level is known as the horizon.

In these pictures the horizon can be seen where the sky meets the ground. This level at which sky and earth meet is the most common form of natural horizon but it is not always the level of the <u>true</u> horizon. The true horizon is always the level of your <u>own eyes</u> and will change each time you move to a higher or lower position. The true horizon is straight out in front of your eyes and on a level with them if you look straight ahead without moving your head up or down. Wherever sky and water meet, you see a true horizon.



Level or horizontal parallel lines all appear to meet at a definite point. This point is called a vanishing point.

If you stand in a room and your eyes are 5½ feet from the floor, that height is your eye level, and the horizon for the room. Even though your view of a natural horizon is partly or completely blocked by a hill or building, you should still be aware of the horizon in front of you and beyond these objects.

The photograph of the plowed field demonstrates one other point. Parallel lines that are horizontal or level all appear to converge toward and meet at a definite point in the distance. This point is called the vanishing point. It is on the horizon or eye level, though it may be at any point on that horizon.

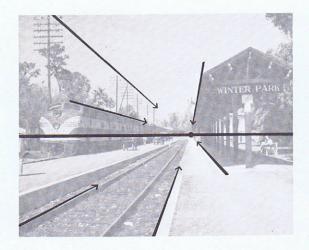
Stand at one end of a long table and look toward the other end and you will observe that the lines that form each side converge toward and come together at a vanishing point. You see the same effect by looking down a street, a hall, a rug, coffee table or a bowling alley. This convergence is easier to see in long lines, but it takes place with all level parallel lines regardless of their length. Take a look about you to prove this.

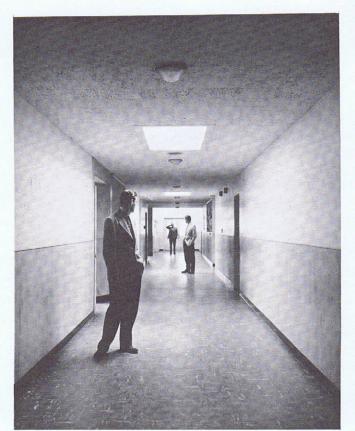
#### Perspective with one vanishing point

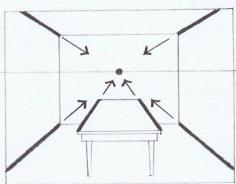
On the last page we learned that level parallel lines which go back into depth all appear to converge toward a single vanishing point on the horizon or eye level. We call this effect perspective with one vanishing point, or one-point perspective. Whether we are looking down a stretch of railroad track or a corridor, or along any other rectangular object, the effect is the same. The lines along the sides seem to converge.

The other lines, along the front or back, which are actually at right angles to the sides, do not converge. They remain parallel to each other and to the top and bottom borders of the picture.

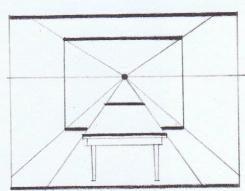
Exterior View: In the photograph at right the tracks, platform roof (and its shadow), train and line of telephone poles are all actually parallel to each other. If we follow each line back into the distance (see diagram below) they all appear to converge toward one vanishing point on the horizon.



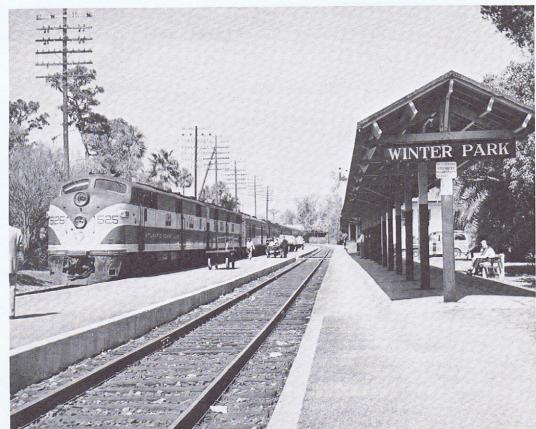




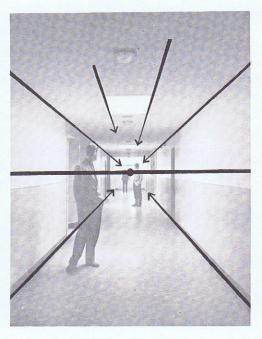
This simple view of a table in an empty room demonstrates the principle of perspective with one vanishing point. The level parallel lines which go back into depth are shown by the heavier lines. These lines all converge toward a single vanishing point on the horizon.



2 The heavy lines, at right angles to our line of vision, are parallel to each other and the top and bottom of the picture. They do not converge.

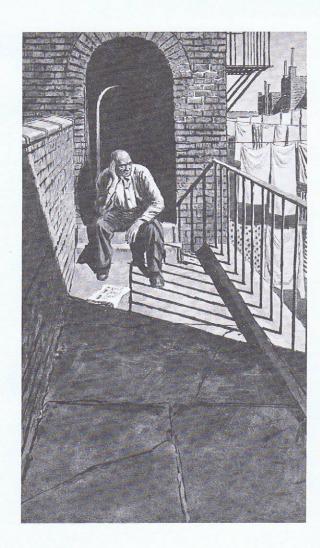


From Ewing Galloway, N. Y.



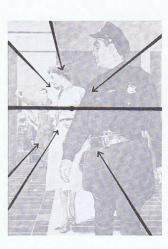
Interior View: This view looking directly toward the end of the corridor shows how the lines of walls, floor and ceiling appear to converge toward a point on the horizon line just to the right of the figure which is furthest away. The figures as well as the hallway appear to get smaller with distance.

Here are three pictures by members of your Faculty. As the diagrams point out, each picture is based on sound observation of the principle of one-point perspective.



PETER HELCK

The lines along the edges of the walk, the rail and top of the wall all converge toward a point above the man's head.

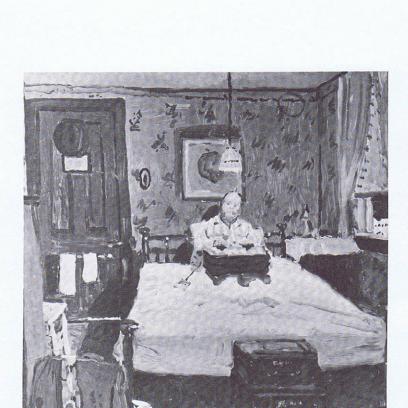


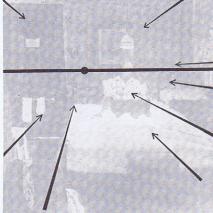
#### AUSTIN BRIGGS

AUSTIN BRIGGS
The lines along the walls, ceiling and floor of the hallway converge toward a point on the horizon directly behind the girl. Note the great difference in the size of the figures. The policeman appears largest, the girl and the men in the background are progressively smaller as they are further back in depth.



Courtesy of Good Housekeeping





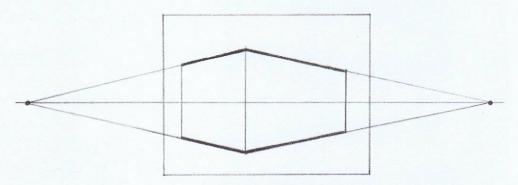
#### NORMAN ROCKWELL

In this picture the most obvious converging lines are those along the sides of the bed. If extended, they would meet at a vanishing point to the left of the man's head. The lines of the window shade, sill, table and chair also pass through this same point.

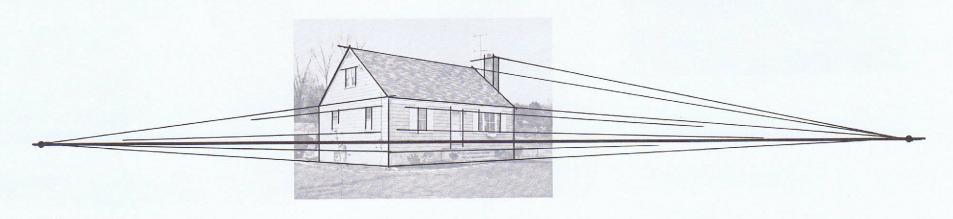
#### Perspective with two vanishing points

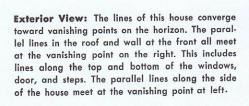
Now, instead of looking directly down the railroad tracks or straight ahead at the far end of a room or corridor, let's do our viewing at an angle — look at the corner of a house or a room. From this viewpoint we see that all the parallel lines appear to come together as they go back into space. The lines which were parallel to the top and bottom borders of the picture now converge toward a second vanishing point. Both vanishing points are on the horizon or eye level. A drawing made from this viewpoint is called a two-point perspective drawing.

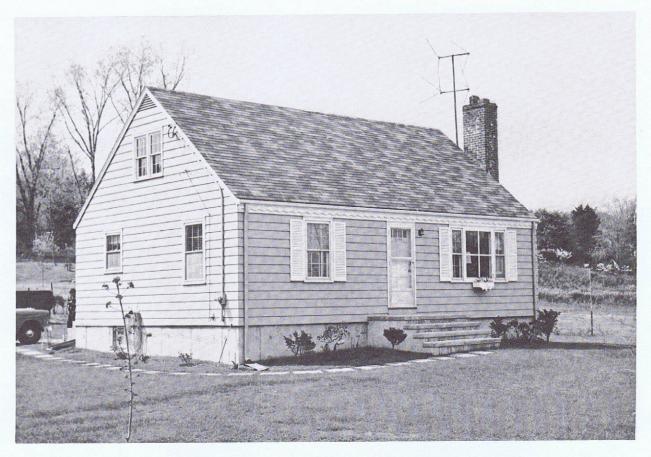
Usually, when we draw a direct view of a corner, both vanishing points will be outside the picture area, as they are in the examples on these pages. However, in a less direct view of a corner, one of the vanishing points may be inside the picture area.

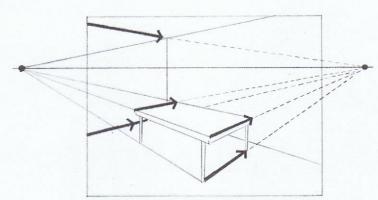


In a two-point perspective drawing there are two sets of parallel lines which appear to converge—each toward its own vanishing point.









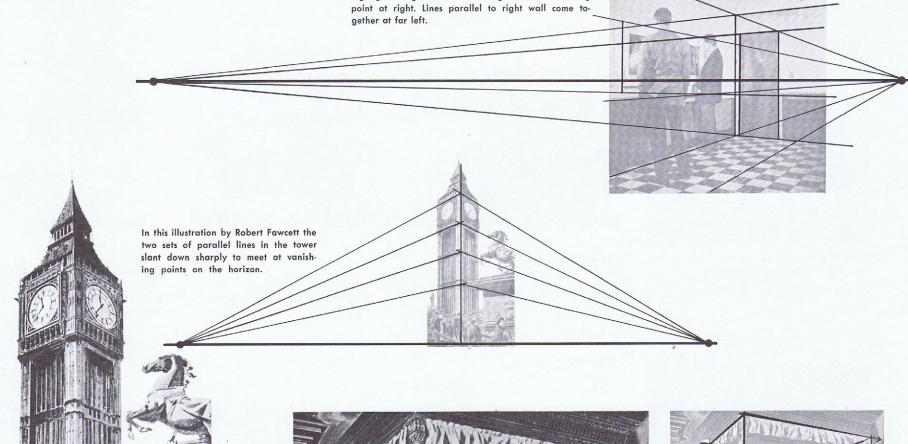
Parallel lines in left wall converge toward vanishing point at right. Parallel lines in right wall converge toward vanishing point at left, Sides of table are parallel to walls and converge toward same points.

#### Interior view

A view of an interior corner follows the same principle of two-point perspective that we observe in objects outdoors. Both walls recede and the parallel lines of each converge toward separate vanishing points. All lines in the floor and ceiling or furniture parallel to a wall also converge toward these same points.



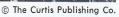
All lines parallel to left wall — including ceiling, ceiling light, ledge, floor — converge toward vanishing point at right. Lines parallel to right wall come together at far left.

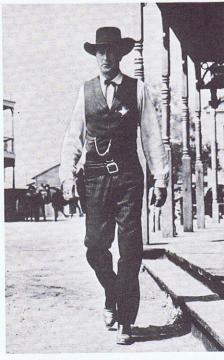


Courtesy of The Anaconda Company



In this picture, also by Fawcett, the eye level is almost on the floor. We look <u>up</u> at the scene. The parallel lines of the bed converge toward left and right.

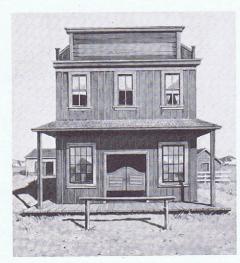




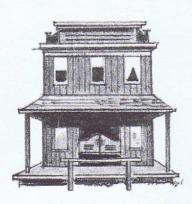
The problem here is to make a well-proportioned drawing of <u>this</u> particular figure — not of someone taller and thinner or shorter and stouter.



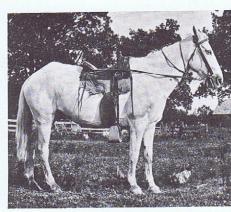
This drawing accurately reflects the measurements of the figure in the photo. The height is in proportion to the width, and all parts of the body are in scale.



In drawing this old western saloon, look first for the over-all shape, then the details.



This drawing is a correctly proportioned version of the saloon.



Drawing this horse in proportion requires even more study than the saloon does. Weak proportion will be much more obvious on the animal than on the building, since horses are more "standard."



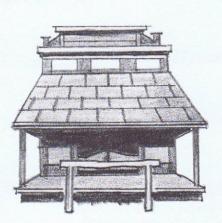
This drawing faithfully pictures the horse in the photo to the left. Each part of the animal is in proportion to the rest.



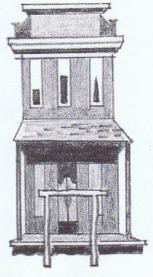
This figure is far too wide for his height. Head and feet are too large, legs too short for the rest of the body. This is more a monster than a man.



This figure looks emaciated. Every part of his body is too long and thin. Such distortion can be avoided by a little careful observation before drawing.



In this distorted drawing, things are too wide — notice the hitching post, doors, and shingles. The porch roof is so large it does not allow room for the windows.



Here we see the opposite mistake: things are too <u>narrow</u> and <u>high.</u> Note the shape of the hitching post, doors, and windows, as well as the height of the porch.



The upper part of this horse's body is fairly well proportioned but the lower part is so heavy he looks like some other animal.

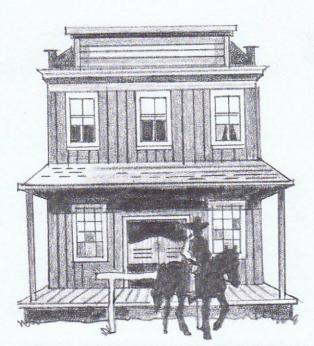


The body and legs in this drawing are too thin. The legs are so long that they remind us of a giraffe rather than a horse.

### **Proportion**

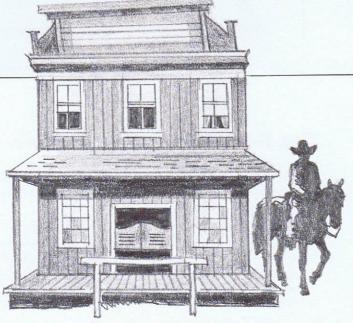
One of the first things you will become aware of in your drawings is the need to control the <u>proportions</u> of your forms. You may understand very clearly that these objects have a solid structure and that they exist in depth, but even with this understanding you may still find it hard to make them look real or convincing. One of the biggest reasons for this is a weakness in drawing proportions accurately.

To improve your control of proportions, take a very close look at the things you are drawing before you actually put pencil to paper. For example, if you are drawing a building, study it carefully. Ask yourself: What are its over-all proportions? Is it higher than it is wide? Does it seem square? How much roof area can I see, in comparison to the walls? When you have decided on these major proportions, turn your attention to the size and shape of doors, windows, etc. First, establish the proportion of the largest masses, then the next largest and so on. Save your decisions on the details till last. You will find that the details fall easily into place once you have drawn the basic structure of the object and given it the right proportions.

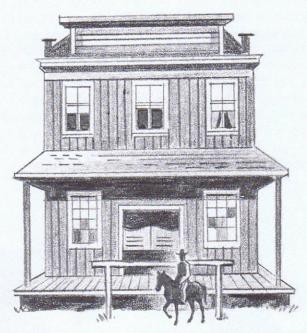


In this drawing the proportions of the three things in the picture — rider, horse, and saloon — are correctly related to each other.

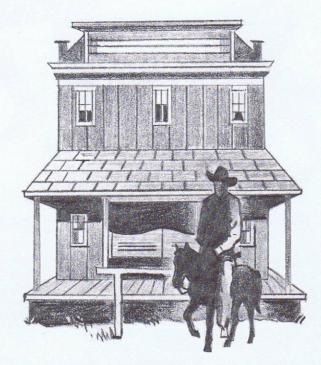




The horse and rider appear much too large for the saloon. The rider's head is on a level with the second story.



This error in proportion is the reverse of the one above. Here the rider and horse look like toy figures. The horse could walk under the hitching post without bending his neck.



In this one the horse is the only thing in correct proportion. The man is obviously much too large for the horse. We see too much of the porch roof and its huge shingles. The bar doors are big enough to drive a truck through and all of the windows are too small.

## The flat shape helps to show form

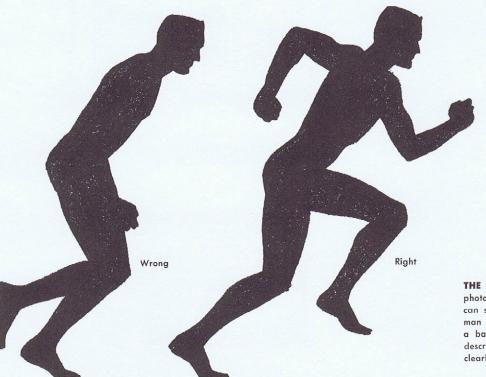
A good commercial illustration should communicate quickly. It should tell the viewer at once what it is all about. He shouldn't have to think about it or puzzle it out.

To make your pictures deliver their message fast, you must present an identifying view of your subjects, so that their forms are easy to recognize. As a rule, this will be a view that shows their most characteristic features clearly and sharply — often in outline or silhouette.

To understand this more fully, take in your hand some simple object like a cream pitcher. Slowly turn it so you see it from every angle. Observe from which view you can best see its shape. It will undoubtedly be the view that shows the pitcher's most typical features — the pouring lip and the handle — in silhouette. This will be the best view for making a good, clear drawing of the pitcher.

With any other object, you will find the best view by studying the object from every angle until you see its most characteristic features in outline or silhouette. It will often help to look at the object through half-closed eyes. This eliminates the details and solid form and allows you to see the two-dimensional shape. If this flat shape is interesting and quickly tells what the object is, then the form can be even more interesting when drawn in its full three dimensions.

It isn't necessary to show all of an object to identify it. Sometimes this is neither desirable nor possible. But the part you do show should be a typical and characteristic part. It should enable the viewer's mind to fill in the missing parts — the parts he does not see.



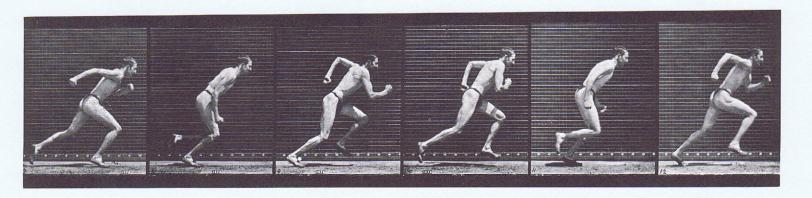


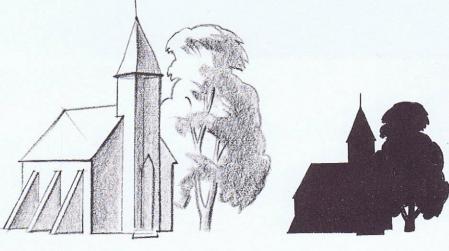
GOOD VIEW: It is easy for us to recognize these two objects because we can see the typical features of each. The obvious pouring lip and handle tell us that the object on the left is a pitcher; the top with its knob identifies the sugar bowl for us.



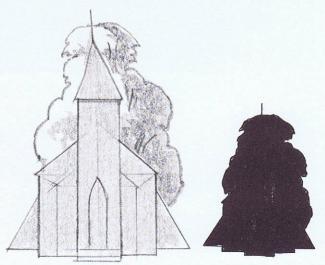
**POOR VIEW:** This picture is confusing. The handle of the pitcher sticks up and looks a bit like the knob on the sugar bowl; the pouring lip is hard to see. This photograph and the one above demonstrate how important it is to show forms in a view that identifies them quickly and correctly.

THE SILHOUETTE TELLS THE STORY: Below is a sequence of photos of a man running. The second and fifth of them, as you can see from the silhouette at the far left, hardly tell us the man is running; he might just as readily be catching or throwing a ball underhand. Notice how much better the other pictures describe the action. The second silhouette, with its arms and legs clearly outlined in typical movement, definitely says "running."





**CLEAR:** This view of a church and tree is as easy to recognize in the silhouette as it is in the drawing. One corner of the church overlaps the tree, but not enough to destroy its form.



**CONFUSED:** The same objects again, but confusingly overlapped — the forms are lost. Who could tell, from the silhouette, that this is a view of a church and a tree?



**CLEAR:** A cowboy is thrown by a horse — and we know it at once because Fred Ludekens chose a good view. The small silhouette shows how Ludekens makes the cowboy stand out by placing him against the sky.



**CONFUSED:** This is just as accurate and well drawn a view of the subject, but it is not nearly so easy to understand at a glance. The silhouette reveals that the shape of the cowboy is lost against the shape of the horse.







**CONFUSED:** In this side view, the twodimensional silhouette gives us a picture that is much less clear. The hands come out of the head, the arms obscure the face.

# How to draw form step by step

Professional artists all follow much the same procedure in drawing form. They work on the big shapes first and add the details last.

On these pages we show you this procedure step by step with some simple drawings. Each step is based on one of the principles of form drawing we have stressed throughout this lesson.

The first step always is to select the right point of view — to begin with an outline or silhouette that helps identify the forms.

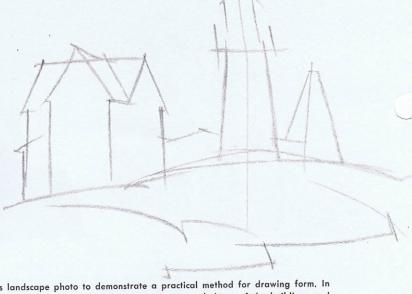
Next, establish the correct proportions of the largest objects — then the smaller ones. At this early stage, don't try to draw solid form — just sketch in the big general shapes.

Now, study the objects and break them down to their basic forms — the cylinders, cubes, spheres and cones they are made of. Draw the forms through to the other side so they appear to exist in space. Also, be sure you leave the correct space between the different objects.

Finally, add your light and shadow tones to accentuate the forms and thus strengthen the illusion of three-dimensional solid form. Then, and only then, add the details. It's intriguing to draw details, and you may be tempted to skip ahead and work on them at an earlier stage. Resist that temptation. Your picture will turn out much better if you do first things first and save the details for last.

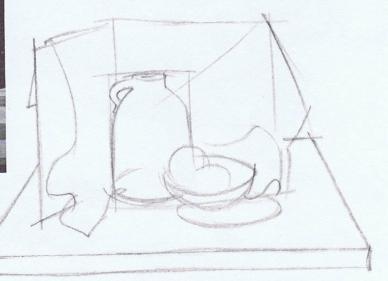
You learn
to draw
by drawing



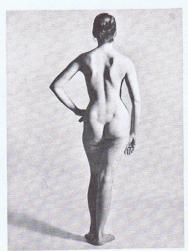


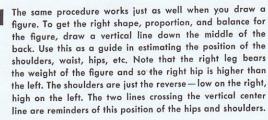
Let's use this landscape photo to demonstrate a practical method for drawing form. In this first step, focus your attention on drawing the general shape of the buildings and rocks. As you sketch in these first few lines, compare the height of the buildings. Use your lines to suggest only the biggest forms.

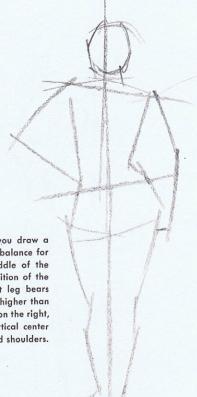




We can use the same method when we draw a group of still-life objects. With your first few lines, put in the over-all shapes of the drape and table top — the biggest shapes in the picture. Then indicate the position of the jug and bowl of oranges. Notice that these objects overlap each other.









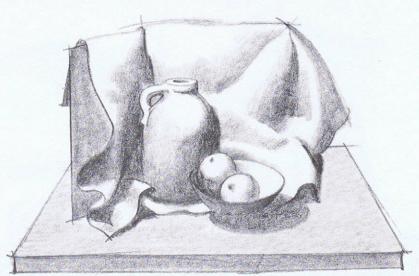
After checking the proportions of the large shapes, you're ready to construct each object — sketch it through to the other side. As you draw, remember you're creating the illusion of solid form. Keep your eye level in mind, and use the perspective principles you learned on pages 18 through 23. Be sure to start with big simple forms like the cubes of the building and the cylindrical lighthouse. Remember that the land, too, is a solid shape, and draw it so that it will appear to exist in three dimensions.



3 In this last step, add the details and the shading that complete the illusion of solid form. Keep your shading consistent. Use the dark pencil tones for the shadow planes that face away from the light. Use the white of the paper for the light planes of the buildings. Note in this drawing, as in the others below, that the artist has not copied his subjects in photographic detail. He has rearranged forms — here, making the buildings more dominant than the land — wherever he felt it would help his composition.



When you have established the right shapes and proportions, draw the forms through. The table top is a flat plane extending into space — be sure that the jug and bowl of oranges rest firmly on this plane. The drapery is made up of folds and wrinkles with definite form. Notice the cylinder forms in the folds of cloth.



3 Before you begin shading, erase the "drawing through" sketch lines which should not show in the final drawing. Note the direction from which the light is falling — from above and to the left. Keep your darkest shading on the planes which face away from the light. Use the white paper for the light planes.



Now you refine the cylinders slightly to get the actual shape, and add light and shade. Notice that none of the solidity is lost despite the addition of some realistic anatomy. The important thing is that the figure remains a solid form which occupies space. (This demonstration of figure drawing is concerned only with working method — the details of drawing the human form are explained at length in later lessons devoted to anatomy and figure drawing.)



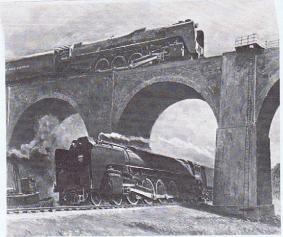
2 Next, draw the forms of the body — the arms, legs, torso — as basic cylinders. At this stage do not worry about anatomy or detail. You may want to modify the cylinders slightly, make them wider at the thigh and narrower at the knees, etc. However, concentrate on drawing these as cylinders in perspective. For example, when you draw the left thigh, think of it as going forward. When drawing the right leg, remember that it is thrust back.

# PETER HELCK — Form in perspective

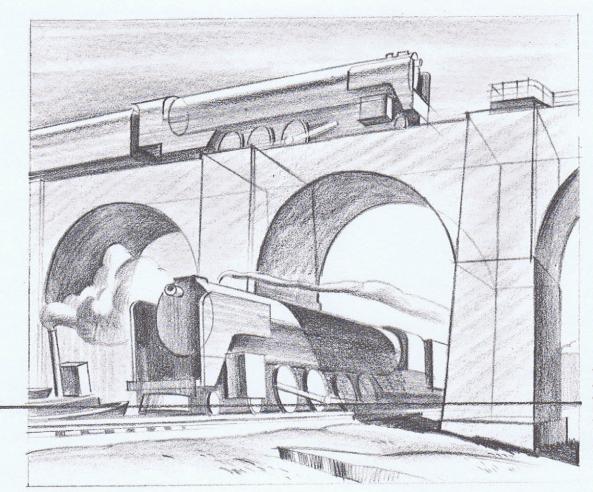
Here is a painting in which the design or composition is built around the very things we have been discussing - form and space. The two trains crossing at right angles are solid forms moving through space - one locomotive traveling across the space of the bridge, the other through the space of the massive arch.

Helck makes dramatic use of the laws of perspective in this picture. The lower train seems to rush out of the distance and into the foreground, its form getting larger as it comes closer. The arches of the bridge loom larger, too, as they approach the right. The monumental feeling of the picture is strengthened by the low eye level. From this level we look up at almost everything in the picture.

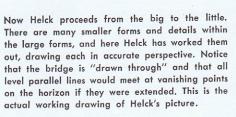
To make a painting like this, Helck first worked out the size, placement and proportion of the big forms, then proceeded to a careful form drawing of the details.

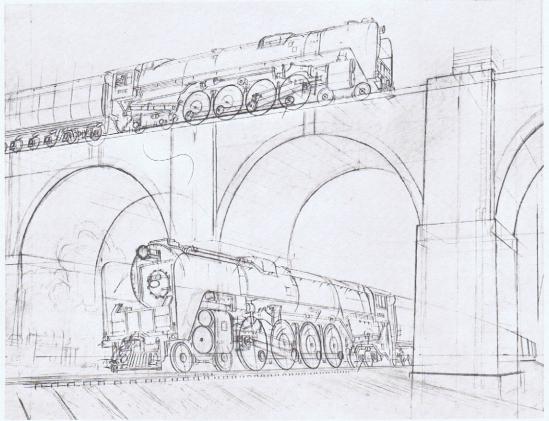


The finished painting



This simple form drawing shows the basic structure of the picture. In it, Helck establishes the big forms and the space around them; at this stage he does not concern himself with the small forms, the details. Each object — the two trains, the bridge, tugboat, rail bed, even the smoke — is thought of as a form which exists in space.



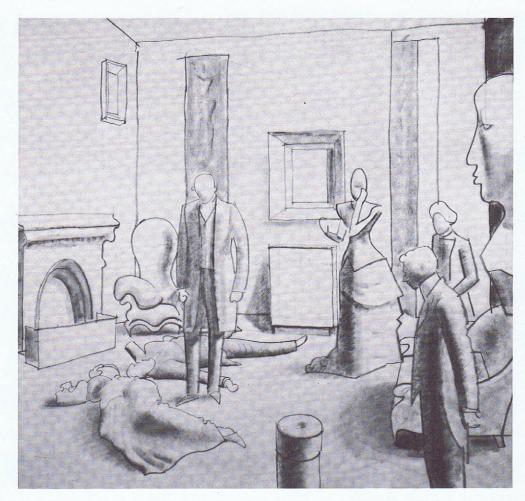




The finished painting.

# Arranging forms in space — (Robert Fawcett)

Space, forms and perspective also contribute to the strong dramatic impact of the picture at the left, made by Robert Fawcett to illustrate a Sherlock Holmes story. The sketches below show two of the stages through which Fawcett took his picture. Although the artist planned to put many objects and a great richness of detail in the scene, he thought of first things first — he established the big forms within the space of the room before he turned his attention to the details.



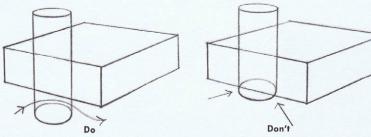
Here the artist tackles his big problem — arranging the four standing forms and the two reclining ones within the large space of the room. Acting like a stage director, he moves the figures around until he has them in the best and most interesting relationship. Only then does he begin to work out the details. Note the variety in the three-dimensional depth between the figures, and the way the bodies on the floor form a line carrying our eye in a curve back around the standing man and to the woman.

With the main forms established, Fawcett now adds the smaller ones necessary to complete the setting. Notice that these added forms — rug, chairs, pictures, bric-a-brac, each with its own tonal pattern — support the basic idea shown in the picture above, and do not confuse it. The lines and pattern of the rug strengthen the illusion of depth, and so does the placement of the large head of the statue and the pieces of furniture in the foreground. The overhead lighting strengthens and defines the solid forms of the figures and furnishings.

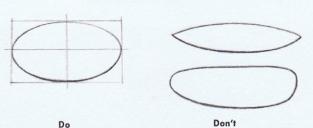


# Common drawing errors and how to avoid them

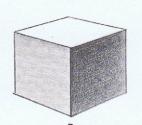
Study this page of "do's and don'ts" carefully. It shows you some typical student mistakes in form drawing and how you can avoid them. Keep these points in mind whenever you plan or draw a picture. Construct your forms accurately and solidly—so they actually seem to exist in space. Remember: The better your form drawing is, the more convincing your finished picture will be.

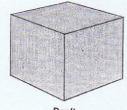


When one object is placed in <u>front</u> of another, be sure to allow the first object room to stand in front of the second. Drawing both objects through will help you see whether they are placed too close together.



Learn to make accurate ellipses by drawing them inside rectangles. By dividing the area in this way, you can see where each part of the ellipse should touch the rectangle, and it will be easy to draw four similar sections. Avoid drawing ellipses with pinched or flattened ends.



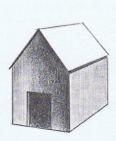


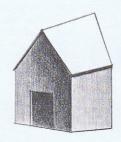
When you are shading or modeling objects, remember to show a light plane, a plane in middle tone, and a dark plane. If you indicate all planes in one tone, you will have a flat silhouette, not a solid form.



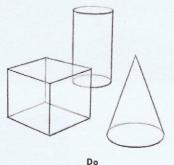


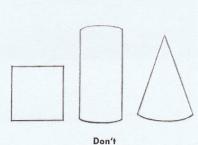
To be sure a form is solidly constructed, draw it through to the other side at the very start. Don't stop midway and start to add shading or details. Your first job is to get the whole form down on paper.



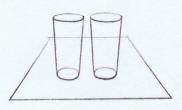


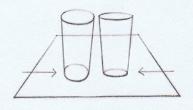
Do Don't
When you draw an object in perspective, horizontal lines that recede in depth will appear to converge. Be sure to make the nearer side of the object larger than the side which is further away.





If you are drawing two or more forms, try to arrange them so they make an interesting composition. Don't line them up like cans on a grocer's shelf. If you overlap them, make sure each form has space to exist.





When you draw two objects resting on the same plane, draw them from the same viewpoint or eye level. The drawing at the right is bad because each of the glasses is viewed at a different eye level.





Do Don't
When drawing any object, select a view that makes the form easy to recognize. Usually this will be a view that silhouettes the form, showing its most typical features to best advantage.

# FAMOUS ARTISTS COURSE Student Work Lesson 2 Form--the basis of drawing

#### HOW TO PRACTICE AND PREPARE FOR THIS LESSON

The purpose of this lesson is (1) to point out to you that everything has form, and (2) to show you how to create the illusion of this form in your drawings. To be sure you understand how to draw form try these practice suggestions:

- l. Begin by sketching in pencil many simple, familiar objects -- your furniture, kitchen utensils, nearby buildings, trees, etc. Be sure you "draw through" and reduce each object to its <u>basic</u> form. Remember, you are looking for the big simple forms -- so skip the details for now.
- 2. Light and shade is essential to emphasize form in drawing. Study pages 10 and 11 and be sure to follow the practice suggestions described on page 10.
- 3. Your drawings should be correctly proportioned as well as solidly constructed. Check the height, width and thickness of each thing you draw. When you have several objects in one drawing, compare

them carefully and be sure the size of each one looks right in relation to the others. Pages 24 and 25 show you what to do and what to avoid.

- 4. You should be able to create the illusion of three-dimensional space or depth -- make the solid forms in your pictures appear to have room in which to exist. You can learn to do this by studying pages 14 and 15 and making drawings like those you see on page 15.
- 5. Study pages 18 through 23 and make perspective drawings of various subjects, interiors and exteriors with one and two vanishing points.
- 6. The right choice of shape or silhouette is important because the subject of your drawings must be quickly recognizable. Take some familiar objects and study them from different positions. Then select a view that seems both clear and interesting to draw. Make other drawings in which you put two or three objects together in such a way that each one is recognizable even though they form a single unified shape like the church and tree on page 27.

#### THE ASSIGNMENTS YOU ARE TO SEND IN FOR CRITICISM

ASSIGNMENT 1. Make a pencil drawing of a barn and silo. Make this drawing in a space 8 inches high by 11 inches wide on a piece of white 11 x 14-inch visualizing paper. Make the barn and silo quite large, as if you were viewing them from near by rather than far away. Draw the barn so that two sides are visible. Both barn and silo should appear to be in a good state of repair. Do not draw old buildings which are falling apart or have sagging or broken roofs or walls. You may include haystacks, trees, or other forms appropriate to the setting.

Your first step should be to make a careful construction drawing in pencil. Model all forms so that they appear solid. Separate the light and shadow planes. Avoid direct, front flat lighting or light from behind the objects. A good light direction for this picture would be from above and slightly to one side. Include as much detail as you feel necessary, but remember that too much detail will tend to destroy the appearance of solidity. Your drawing should be carried to about the same degree of finish as Step 3 on page 29.

Mark this drawing -- ASSIGNMENT 1.

ASSIGNMENT 2. Make a rendering of the same subject in wash or opaque.

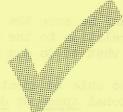
Trace your pencil drawings of the barn and silo onto a sheet of ll x l4-inch illustration board, using the method described in the assignment for Lesson 1. You need just the essentials of your pencil drawing -- enough to guide you in your rendering. Then go ahead and render the picture in the medium of your choice.

Before you begin your rendering, review the section on wash or opaque in Lesson 1, depending on which medium you select. Be sure that you use contrasting light and shadow tones to show up the planes and forms. You will have the most success with this painting if you've carefully worked out your construction and lighting in your previous pencil drawing.

Mark this drawing -- ASSIGNMENT 2.

In criticizing this lesson, your instructor will be looking for these things in your work:

- --How well you understand the principles of "drawing through" to create the illusion of solid form in space.
- -- How well you can control the proportions of the things in your picture.
- --How effectively you use light and shade to strengthen the feeling of form in your objects.
- --How well you understand and apply the principles of perspective to your drawing.
- -- How well you have used the medium.



Check before mailing IMPORTANT: Be sure to letter your name, address and student number neatly at the lower left-hand corner of each assignment. In the lower right corner, place the lesson number and assignment number. (You should do this with each of the assignments you send in.)

Your lesson carton should contain:

Assignment 1
Assignment 2
1 Return shipping label filled out completely

Mail this carton to: FAMOUS ARTISTS COURSE, WESTPORT, CONN.