

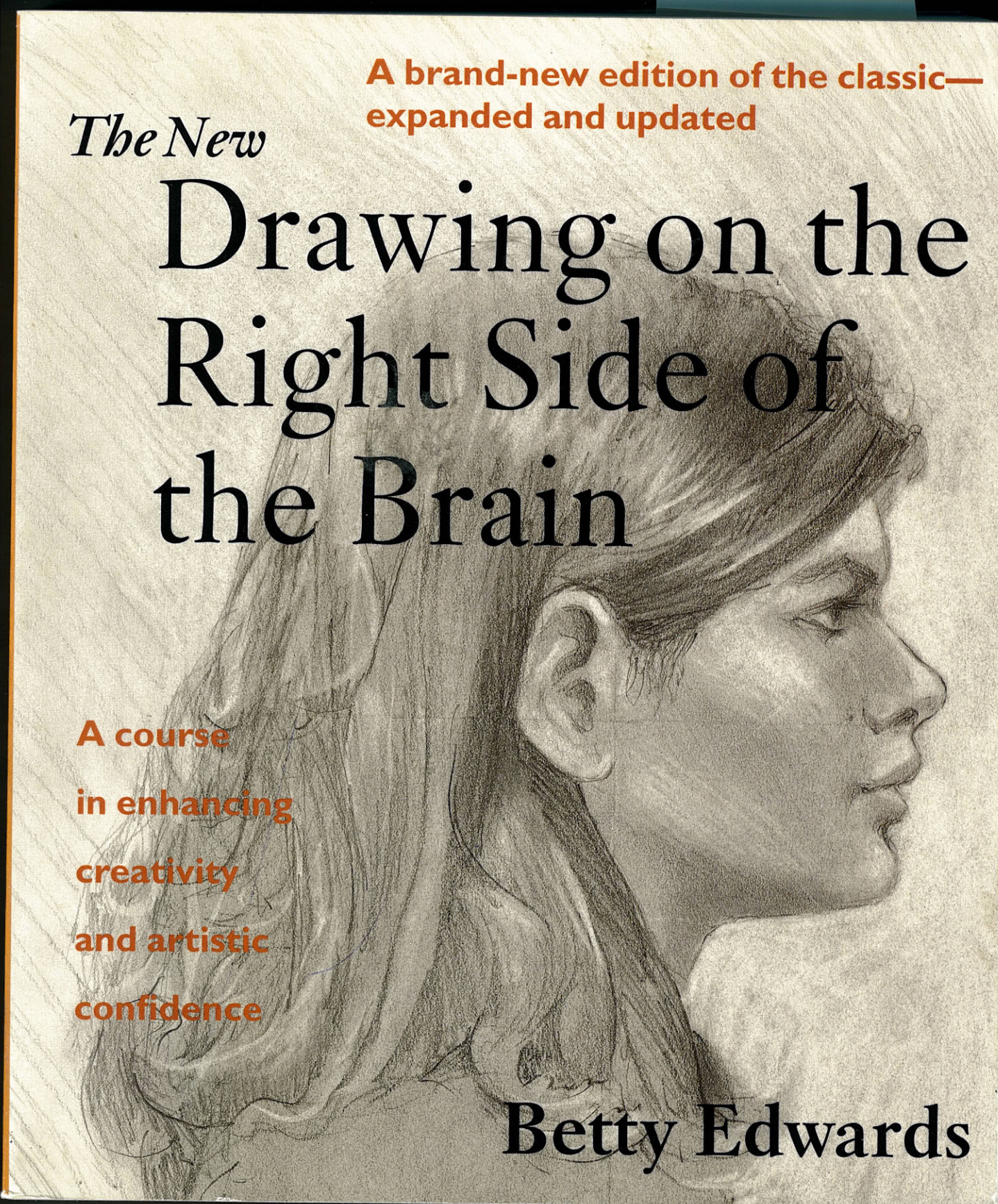
**A brand-new edition of the classic—  
expanded and updated**

*The New*

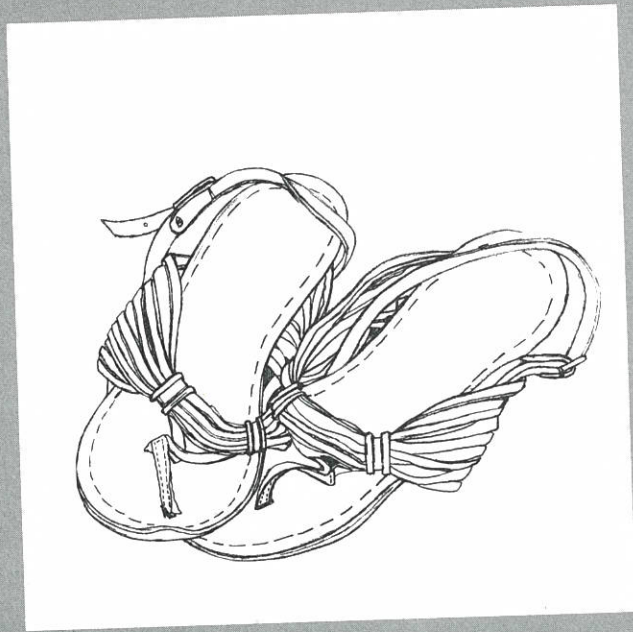
# Drawing on the Right Side of the Brain

**A course  
in enhancing  
creativity  
and artistic  
confidence**

**Betty Edwards**



# 6 Getting Around Your Symbol System: Meeting Edges and Contours



“To empty one’s mind of all thought and refill the void with a spirit greater than oneself is to extend the mind into a realm not accessible by conventional processes of reason.”

— Edward Hill  
*The Language of Drawing*,  
1966

**W**E HAVE REVIEWED YOUR CHILDHOOD ART and the development of the set of symbols that formed your childhood language of drawing. This process paralleled the development of other symbol systems: speech, reading, writing, and arithmetic. Whereas these other symbol systems formed useful foundations for later development of verbal and computational skills, childhood drawing symbols seem to interfere with later stages of art.

Thus, the central problem of teaching realistic drawing to individuals from age ten or so onward is the persistence of memorized, stored drawing symbols when they are no longer appropriate to the task. In a sense, L-mode unfortunately continues to “think” it can draw long after the ability to process spatial, relational information has been lateralized to the right brain. When confronted with a drawing task, the language mode comes rushing in with its verbally linked symbols. Then afterward, ironically, the left brain is all too ready to supply derogatory words of judgment if the drawing looks childlike or naive.

In the last chapter I said that an effective way to “set aside” the dominant left verbal hemisphere and to “bring forward” your nondominant right brain, with its visual, spatial, relational style, is to present your brain with a task that the left brain either can’t or won’t work at. We have used the Vase/Faces drawings and upside-down drawings to illustrate this process. Now we’ll try another, more drastic strategy that will force a stronger cognitive shift and set aside your L-mode more completely.

### Nicolaides’s contour drawing

I’ve called the method of the next exercise “Pure Contour Drawing,” and your left hemisphere is probably not going to enjoy it. Introduced by a revered art teacher, Kimon Nicolaides, in his 1941 book, *The Natural Way to Draw*, the method has been widely used by art teachers. I believe that our new knowledge about how the brain divides its workload provides a conceptual basis for understanding why Pure Contour Drawing is effective as a teaching method. At the time of writing his book, Nicolaides apparently

felt that the reason the contour method improved students' drawing was that it caused students to use both senses of sight and touch. Nicolaides recommended that students imagine that they were touching the form as they drew. I suggest an alternate possibility: L-mode rejects the meticulous, complex perceptions of spatial, relational information, thus allowing access to R-mode processing. In short, Pure Contour Drawing doesn't suit the left brain's style. It suits the style of the right brain—again, just what we want.

### Using Pure Contour Drawing to bypass your symbol system

In my classes, I demonstrate Pure Contour Drawing, describing how to use the method as I draw—if I can manage to keep talking (an L-mode function) while I'm drawing. Usually, I start out all right but begin trailing off in mid-sentence after a minute or so. By that time, however, my students have the idea.

Following the demonstration, I show examples of previous students' Pure Contour Drawings. See examples of students' drawings on page 95.

#### *What you'll need:*

- Several pieces of drawing paper. You will draw on the top sheet and use two or three additional sheets to pad the drawing.
- Your #2 writing pencil, sharpened
- Masking tape to tape your drawing paper to your drawing board
- An alarm clock or kitchen timer
- About thirty minutes of uninterrupted time

#### *What you'll do:*

Please read through the following instructions before you begin your drawing.

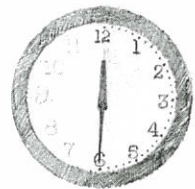
1. Look at the palm of your hand—the left hand if you are



*Woman in a Hat, Kimon Nicolaides.*  
Collection of the author.

“Merely to see, therefore, is not enough. It is necessary to have a fresh, vivid, physical contact with the object you draw through as many of the senses as possible—and especially through the sense of touch.”

— Kimon Nicolaides  
*The Natural Way to Draw,*  
1941



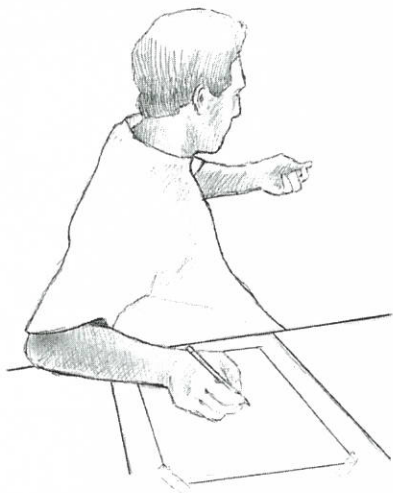


Fig. 6-1.

- right-handed and the right if you are left-handed. Bring your fingers and thumb together to create a mass of wrinkles in your palm. Those wrinkles are what you are going to draw—all of them. I can almost hear you saying, “Are you joking?” or “Forget that!”
2. Sit in a comfortable position with your drawing hand on the drawing paper, holding the pencil and ready to draw. Then, put the pencil down and tape the paper in that prearranged position so it won't shift around while you are drawing.
  3. Set the timer for 5 minutes. In this way, you won't have to keep track of time, an L-mode function.
  4. Then, face all the way around in the opposite direction, keeping your hand with the pencil on the drawing paper, and gaze at the palm of the other hand. Be sure to rest that hand on some support—the back of a chair or perhaps on your knee—because you will be holding this rather awkward position for the allotted 5 minutes. Remember, once you start to draw, you will not turn to look at the drawing until the timer goes off. See figure 6-1.
  5. Gaze at a single wrinkle in your palm. Place your pencil on the paper and begin to draw just that edge. As your eyes track the direction of the edge very slowly, one millimeter at a time, your pencil will record your perceptions. If the edge changes direction, so does your pencil. If the edge intersects with another edge, follow that new information slowly with your eyes, while your pencil simultaneously records every detail. An important point: Your pencil can record only what you see—nothing more, nothing less—at the moment of seeing. Your hand and pencil function like a seismograph, responding only to your actual perceptions.

The temptation to turn and look at the drawing will be very strong. Resist the impulse! Don't do it! Keep your eyes focussed on your hand.

Match the movement of the pencil exactly with your eye movement. One or the other may begin to speed up, but don't let that happen. You must record everything at the very instant that

you see each point on the contour. Do not pause in the drawing, but continue at a slow, even pace. At first you may feel uneasy or uncomfortable: Some students even report sudden headaches or a sense of panic.

6. Do not turn around to see what the drawing looks like until your timer signals the end of 5 minutes.
7. Most important, you must continue to draw until the timer signals you to stop.
8. If you experience painful objections from your verbal mode ("What am I doing this for? This is really stupid! It won't even be a good drawing because I can't see what I'm doing," and so forth), try your best to keep on drawing. The protests from the left will fade out and your mind will become quiet. You will find yourself becoming fascinated with the wondrous complexity of what you are seeing, and you will feel that you could go deeper and deeper into the complexity. Allow this to happen. You have nothing to fear or be uneasy about. Your drawing will be a beautiful record of your deep perception. We are not concerned about whether the drawing looks like a hand. We want the record of your perceptions.
9. Soon, this mental chatter will cease, and you will find yourself becoming intensely interested in the complexity of the edges you see in your palm and intensely aware of the beauty of that complex perception. When that change takes place, you will have shifted to the visual mode and again you will be "really drawing."
10. When the timer signals the allotted time, turn and look at your drawing.

*After you have finished:*

Think back now on how you felt at the beginning of the Pure Contour Drawing compared to how you felt later, when you were deeply into the drawing. What did that later state feel like? Did you lose awareness of time passing? Like Max Ernst, did you become enamored of what you saw? When you return to the alternative state you were in, will you recognize it?

"Blind swimmer, I have made myself see. I have seen. And I was surprised and enamored of what I saw, wishing to identify myself with it. . . ."

— Max Ernst, 1948



Pure Contour Drawing is so effective at producing this strong shift that many artists routinely begin drawing with at least a short session of the method, in order to start the process of shifting to R-mode.



Looking at your drawing, a tangled mass of pencil marks, perhaps you will say, "What a mess!" But look more closely and you will see that these marks are strangely beautiful. Of course, they do not represent the hand, only its details, and details within details. You have drawn complex edges from actual perceptions. These are not quick, abstract, symbolic representations of the wrinkles in your palm. They are painstakingly accurate, excruciatingly intricate, entangled, descriptive, and specific marks—just what we want at this point. I believe that these drawings are visual records of the R-mode state of consciousness. As a witty friend of mine, writer Judi Marks, remarked on viewing a Pure Contour Drawing for the first time, "No one in their left mind would do a drawing like that!"

#### *Why you did this exercise*

The most important reason for this exercise is that Pure Contour Drawing apparently causes L-mode to "reject the task," enabling you to shift to R-mode. Perhaps the lengthy, minute observation of severely limited, "non-useful," and "boring" information—information that defies verbal description—is incompatible with L-mode's thinking style.

Note that:

- Your verbal mode may object and object, but eventually will "bow out," leaving you "free" to draw. This is why I asked you to continue drawing until the timer sounds.
- The marks you make in R-mode are different from and often more beautiful than marks made in your more usual L-mode state of consciousness.
- Anything can be a subject for a Pure Contour drawing: a feather, a piece of shredded bark, a lock of hair. Once you have shifted to R-mode, the most ordinary things become inordinately beautiful and interesting. Can you remember the sense of wonder you had as a child, poring over some tiny insect or a dandelion?

## The paradox of the Pure Contour Drawing exercise

For reasons that are still unclear, Pure Contour Drawing is one of the key exercises in learning to draw. But it's a paradox: Pure Contour Drawing, which doesn't produce a "good" drawing (in students' estimations), is the best exercise for effectively and efficiently causing students later to achieve good drawing. Even more important, though, this is the exercise that revives our childhood wonder and the sense of beauty found in ordinary things.

### *A possible explanation*

Apparently, in our habitual use of brain modes, L-mode seeks quickly to recognize (and name and categorize) by picking out details, while R-mode wordlessly perceives whole configurations and seeks how the parts fit together—or perhaps whether the parts fit together.

In regarding a hand, for example, the nails, the wrinkles and creases are details and the hand itself is the whole configuration. This "division of labor" works fine in ordinary life. In drawing a hand, however, one must give equal attention—visual attention—to both the configuration and the details and how they fit together into the whole. Pure Contour Drawing may function as a sort of "shock treatment" for the brain, forcing it to do things differently.

Pure Contour Drawing, I believe, causes L-mode to "drop out," perhaps, as I mentioned before, through simple boredom. ("I've already named it—it's a wrinkle, I tell you. They're all alike. Why bother with all this looking.") Once L-mode has "dropped out," it seems possible that R-mode then perceives each wrinkle—normally regarded as a detail—as a whole configuration, made up of even smaller details. Then each detail of each wrinkle becomes a further whole, made up of ever-smaller parts, and so on, going deeper and deeper into ever expanding complexity. There is some similarity, I believe, to the phenomenon of fractals, in which whole patterns are constructed of smaller detailed whole patterns, which are constructed of ever smaller, detailed whole patterns.

"In prose, the worst thing one can do with words is to surrender to them. When you think of a concrete object, you think wordlessly, and then, if you want to describe the thing you have been visualizing, you probably hunt about till you find the exact words that seem to fit it. When you think of something abstract you are more inclined to use words from the start, and unless you make a conscious effort to prevent it, the existing dialect will come rushing in and do the job for you, at the expense of blurring or even changing your meaning. Probably it is better to put off using words as long as possible and get one's meaning clear as one can through pictures or sensations."

— George Orwell  
"Politics and the English Language," 1968



If perhaps you did not attain a shift to R-mode in your first Pure Contour Drawing, please be patient with yourself. You may have a very determined verbal system. I suggest that you try again. You might try using a crumpled piece of paper, a flower, or any complex object that appeals to you. My students sometimes have to make two or even three tries in order to “win out” against their strong verbal modes.

Set a timer, perhaps for eight or even ten minutes. In the beginning, it takes time to cause a shift to R-mode. Later on, as American artist Robert Henri proposed in the sidebar quotation on page 5, the shift “to the higher state” will occur just by starting to draw.



These strange marks on the wall of a cave were made by Paleolithic humans. In their intensity, the marks seem to resemble Pure Contour Drawing.

— *Shamans of Prehistory*,  
J. Clottes and D. Lewis-Williams. New York:  
Harry N. Abrams, Inc.,  
1996

### *Why Pure Contour Drawing is important*

Whatever the actual reason may be, I can assure you that Pure Contour Drawing will permanently change your ability to perceive. From this point onward, you will start to see in the way an artist sees and your skills in seeing and drawing will progress rapidly.

Look at the Pure Contour Drawing of your hand one more time and appreciate the quality of the marks you made in R-mode. Again, these are not the quick, glib, stereotypic marks of symbolic L-mode. These marks are true records of perception.

The next exercise will pull together everything learned so far and you will be doing a wonderful “real” drawing.

### **Student showing: A record of an alternative state**

Following is a Student Showing of some Pure Contour Drawings. What strange and marvelous markings are these! Never mind that the drawings don’t resemble greatly the overall configuration of a hand—that’s to be expected. We will attend to the overall configuration in the next exercise, “Modified Contour Drawing.”

In Pure Contour Drawing, it is the quality of the marks and their character that we care about. The marks, these living hieroglyphs, are records of perceptions. To be found nowhere in the drawings are the thin, glib, stereotypic marks of casual, rapid L-mode symbolic processing. Instead, we see rich, deep, intuitive marks made in response to the thing-as-it-is, the thing as it exists out there, marks that delineate the is-ness of the object. Blind swimmers have seen! And seeing, they have drawn.

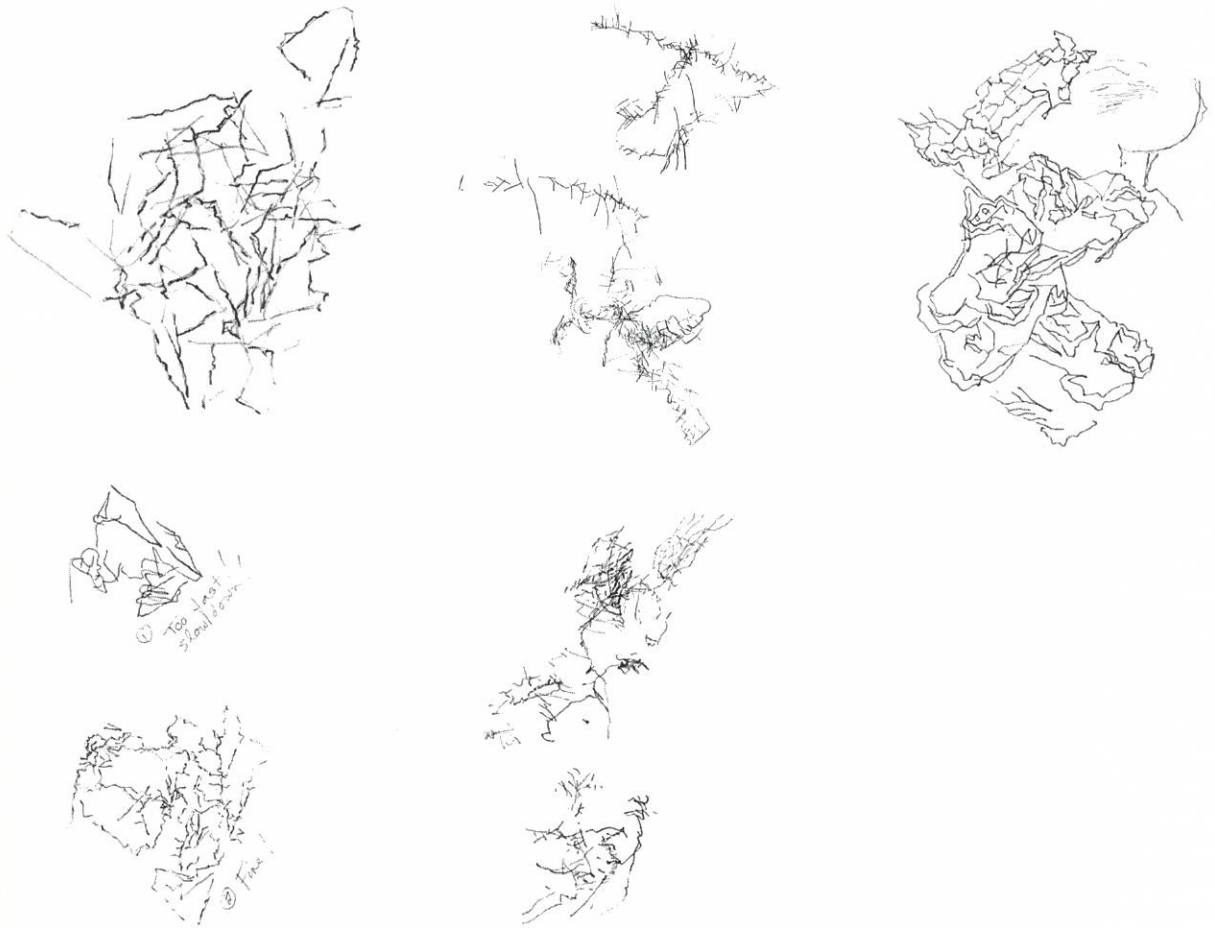
Before moving on to the next step, Modified Contour Drawing, let’s review the important concept of edges in art.

### **The first component skill: The perception of edges**

Pure Contour Drawing has introduced you to the first component skill of drawing: the perception of edges. In drawing, the term *edge* has a special meaning, different from its ordinary definition as a *border* or *outline*.

In drawing, an edge is where two things come together. In the Pure Contour Drawing you just finished, for example, the edge you drew was the place (the wrinkle) where two parts of the flesh of your palm came together to form a single boundary for both parts. That shared boundary, in drawing, is described by a line that is called a contour line. In drawing, therefore, a line (a contour line or, more simply, a contour) is always the border of two things simultaneously—that is, a shared edge. The Vase/Faces exercise illustrates this concept. The line you drew was simultaneously the edge of the profile and the edge of the vase.

To sum up this concept: In drawing, an edge is always a shared boundary.



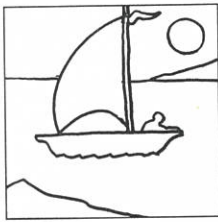


Fig. 6-2.

A good definition of “picture plane” from *The Art Pack, Key Definitions/Key Styles*, 1992.

“Picture plane: Often used—erroneously—to describe the physical surface of a painting, the picture plane is in fact a mental construct—like an imaginary plane of glass . . . Alberti (the Italian Renaissance artist) called it a ‘window’ separating the viewer from the picture itself . . .”

John Elsum, in his 1704 book *The Art of Painting After the Italian Manner*, gave instructions for making “a handy device”:

“Take a Square Frame of Wood about one foot large, and on this make a little grate [grid] of Threads, so that crossing one another they may fall into perfect Squares about a Dozen at least, then place [it] between your Eye and the Object, and by this grate imitate upon your Table [drawing surface] the true Posture it keeps, and this will prevent you from running into Errors. The more Work is to be [fore]shortened the smaller are to be the Squares.”

Quoted in *A Miscellany of Artists’ Wisdom*, compiled by Diana Craig, Philadelphia: Running Press, 1993, p. 79.

The child’s jigsaw puzzle, Figure 6-2, illustrates this important point. The edge of the boat is shared with the water. The edge of the sail is shared with the sky and the water. Put another way, the water stop where the boat begins—a shared edge. The water and the sky stop where the sail begins—shared edges.

Note also that the outer edge of the puzzle—its frame or *format*, meaning the bounding edge of the composition—is also the outer edge of the sky-shape, the land-shapes, and the water-shape.

## A quick review of the five perceptual skills of drawing

In this lesson, we are working on the perception of edges as one of the component skills of drawing. Recall that there are four others and together these five components make up the whole skill of drawing:

1. The perception of edges (the “shared” edges of contour drawing).
2. The perception of spaces (in drawing called *negative* spaces).
3. The perception of relationships (known as perspective and proportion).
4. The perception of lights and shadows (often called “shading”).
5. The perception of the whole (the gestalt, the “thingness” of the thing).

## Modified Contour Drawing: First, drawing on the picture plane

### *What you’ll need:*

- Your clear plastic Picture Plane
- Your felt-tip marker
- Both of your viewfinders

Before you begin: Please read through all of the instructions before starting your drawing. In the next section I will define and fully explain the Picture Plane. For now, you will be simply using it. Just follow the instructions.

*What you'll do:*

1. Rest your hand on a desk or table in front of you (the left hand if you are right-handed, and the right, if you are left-handed) with the fingers and thumb curved upward, pointing toward your face. This is a foreshortened view of your hand. Imagine now that you are about to draw that foreshortened form.

If you are like most of my students, you would simply not know how to go about doing that. It seems far too difficult to draw this three-dimensional form, with its parts moving toward you in space. You would hardly know where to start. The viewfinders and plastic Picture Plane will help you get started.

2. Try out each of the Viewfinders to decide which size fits most comfortably over your hand, which you should be holding in a foreshortened position with the fingers coming toward you. Men often need the larger, women the smaller-sized Viewfinder. Choose one or the other.
3. Clip the Viewfinder you have chosen on top of your clear-plastic Picture Plane.
4. Use your felt-tip marker to draw a "format" line on the plastic Picture Plane, running your marker around the inside of the opening of the Viewfinder. A format line forms the outer boundary of your drawing. See Figure 6-4.
5. Now, holding your hand in the same foreshortened position as before, balance the Viewfinder/plastic Picture Plane on the tips of your fingers and thumb. Move it about a bit until the picture-plane seems balanced comfortably.
6. Pick up your uncapped marking pen, gaze at the hand under the plastic Picture Plane and close one eye. (I'll explain in the next segment why it is necessary to close one eye. For now, please just do it.) See Figure 6-5.
7. Choose an edge to start your drawing. Any edge will do. With the marking pen, begin to draw on the plastic Picture Plane the edges of the shapes just as you see them. Don't try to "second guess" any of the edges. Do not name the parts. Do not wonder why the edges are the way they are. Your job, just as in



Fig. 6-3.

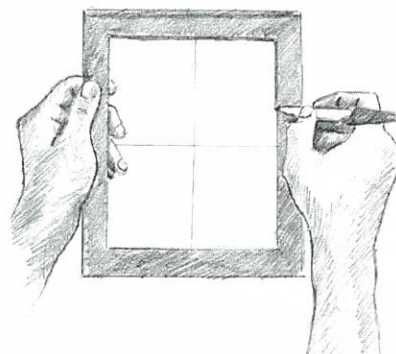


Fig. 6-4.

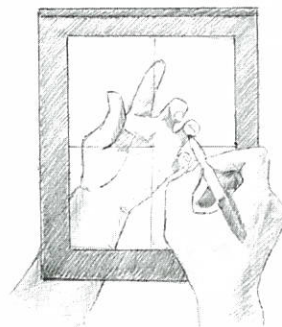


Fig. 6-5.



Fig. 6-6. Albrecht Dürer (1471-1528), *Hands in Adoration*. Black and white tempera on blue paper. Albertina Museum, Vienna.

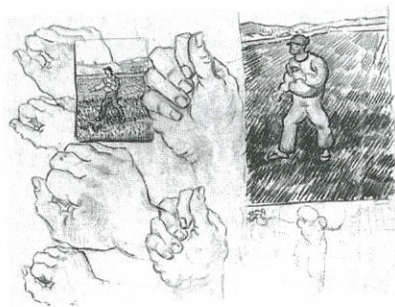


Fig. 6-7. Vincent Van Gogh, *Sketches with Two Sowers*. St. Remy, 1890.

Upside-Down Drawing and in Pure Contour Drawing, is to draw exactly what you see, with as much detail as you can manage with the marking pen (which is not as precise as a pencil).

8. Be sure to keep your head in the same place and keep one eye closed. Don't move your head to try to "see around" the form. Keep it still. (Again, I'll explain why in the next segment.)
9. Correct any lines you wish by just wiping them off with a moistened tissue on your forefinger. It is very easy to redraw them more precisely.

*After you have finished:*

Place the plastic Picture Plane on a plain sheet of paper so that you can clearly see what you have drawn. I can predict with confidence that you will be amazed. With relatively little effort you have accomplished one of the truly difficult tasks in drawing—drawing the human hand in foreshortened view. Great artists in the past have practiced drawing hands over and over. Observe the examples by Albrecht Dürer and Vincent Van Gogh. Figures 6-6 and 6-7.

How did you accomplish this so easily? The answer, of course, is that you did what a trained artist does: You "copied" what you saw on the picture-plane—in this instance, an actual plastic plane. I fully define and explain the Picture Plane in the next section. For now, you are simply using it. I have found that the explanation makes more sense after students have used the plastic plane.

For further practice: I suggest that you erase your felt-tip pen drawing from the Picture Plane with a damp tissue and do several more, with your hand in a different position each time. Try the really "hard" views—the more complicated the better. Odd enough, the flat hand is the hardest to draw; a complex position is actually easier. Therefore, arrange your hand with the fingers curved, entwined, crossed, fist clenched, whatever. Try to include some foreshortening. Remember, the more you practice each of these exercises, the faster you will progress. Save your last

best) drawing for the next exercise.

This brings us to a crucial question—that is, an all-important question in terms of your understanding: What is drawing?

The quick answer: Drawing is “copying” what you see on the picture-plane. In the drawing you did just now, your own hand in foreshortened view, you “copied” the “flattened” image of your hand that you “saw” on the plastic Picture Plane.

And now, a more complete answer to the question, “What is drawing?”

In art, the concept of “the picture plane” is extremely abstract and difficult to explain, and even more difficult to comprehend. But this concept is one of the most important keys to learning to draw, so stay with me. I’ll try to be clear.

The picture plane is a mental concept. See this in your “mind’s eye”: the picture plane is an imaginary transparent plane, like a framed window, that is always hanging out in front of the artist’s face, always parallel to the “plane” of the artist’s two eyes. If the artist turns, the plane also turns. What the artist sees “on the plane” actually extends back into the distance. But the plane enables the artist to “see” the scene as though it were magically smashed flat on the back of the clear glass plane—like a photograph, in a sense. Put another way, the 3-D image behind the framed “window” is converted to a 2-D (flat) image. The artist then “copies” what is seen “on the plane” onto the flat drawing paper.

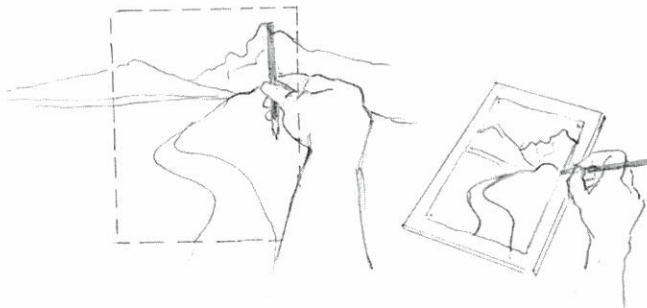
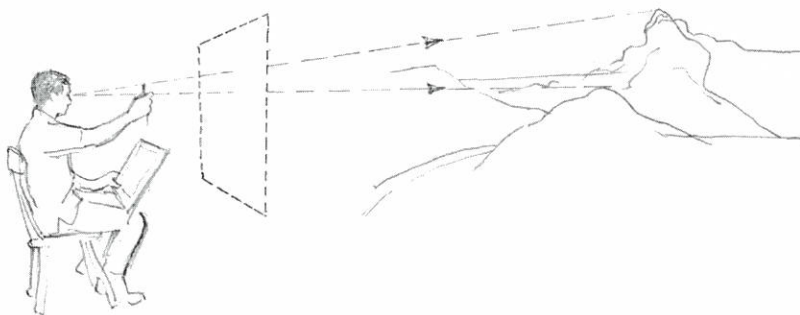
This trick of the artist’s mind, so difficult to describe, is even more difficult for beginning students to discover on their own. In this course, therefore, you need an actual picture plane (your plastic Picture Plane) and actual window frames (the Viewfinders).

These devices seem to work like magic in causing students to “get” what drawing is—that is, to understand the fundamental nature of drawing perceived objects or persons.

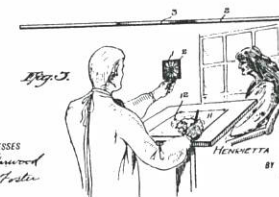
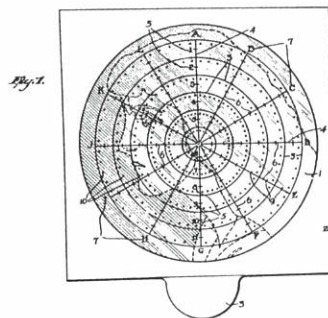
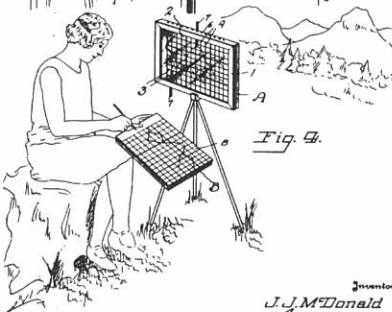
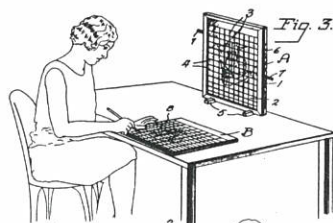
To further help beginners in drawing, I asked you to draw crosshairs on your sheet of plastic (the plastic Picture Plane). These two “grid” lines represent vertical and horizontal, the two constants that the artist absolutely depends on to assess relation-

It might help your understanding of the picture plane to realize that photography grew out of drawing. In the years before photography was invented, artists generally understood and used the concept of the picture-plane. You can imagine the artists’ excitement (and, perhaps, dismay) to see that a photograph could, in an instant, capture the image on the picture-plane—an image that would have taken an artist hours, days, or even weeks to render in a drawing. Artists, deposed from realistic depiction, began exploring other aspects of perception, such as the effects of light (Impressionism). After photography became common, the concept of the picture plane was less necessary and began to fade away.

The picture plane is an imaginary vertical surface, like a window, through which you look at your subject. In this way, you copy your three-dimensional view of the world to your two-dimensional surface onto your drawing paper.



Dozens of picture planes and perspective devices are recorded in the U.S. Patent Office. Here are two examples.



Inventor  
**J.J. McDonald**  
 By *J. Turie*  
 Attorney

WITNESSES  
*H. F. Howard*  
*J. G. Foster*  
 INVENTOR  
**HENNETTA GIOIARDINO**  
 BY *McDonald & Co.*  
 ATTORNEYS

ships. Early on in my classes, I used a grid of many lines, but I found that students were counting up—"two spaces over and three down." This is just the kind of L-mode activity we didn't want. I then reduced the "grid" lines to one vertical and one horizontal and found that was sufficient.

Later on, you will need neither the plastic Picture Plane with its gridlines nor the Viewfinders. You will replace these technical devices with the imaginary, internalized mental picture-plane that every artist uses, whether consciously or subconsciously. The actual plane (your plastic Picture Plane) and the actual Viewfinders are simply very effective aids during the time you are learning how to draw.

Try this: Fasten your Viewfinder, the one with the largest opening, on top of the Picture Plane, using your clips. Close one eye and hold the Picture Plane/Viewfinder together up in front of your face. See Figure 6-8.

Look at the "framed" image, whatever is in front of your eye (singular). You can change the "composition" by bringing the Viewfinder closer to or farther away from your face, much as a camera viewfinder works. Check out the angles of the edges of the ceiling, or perhaps of a table, relative to the crosshairs—that is, relative to vertical and horizontal. These angles may surprise you. Next, imagine that you are drawing with your felt-tip marker what you see on the plane, just as you did in drawing your hand. See Figure 6-9.

Then turn to see another view, and then another, always keeping the picture-plane parallel to the front of your face. Don't slant it in any direction! One way to practice not slanting the plane is to bring the plastic Picture Plane right up to your face, then quickly extend your arms straight out together.

Next, choose a view that you like, framed by your Viewfinder on the plastic Picture Plane. Imagine that you are "copying" what you see on the plane onto a piece of drawing paper. Remember, all of the angles, sizes, spaces, and relationships will be just what you see on the plane. See Figure 6-10.

These two images, your (imagined) drawing on the paper and the image on the plastic Picture Plane will be (approximately)

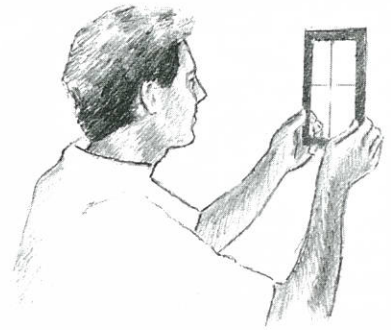


Fig. 6-8.

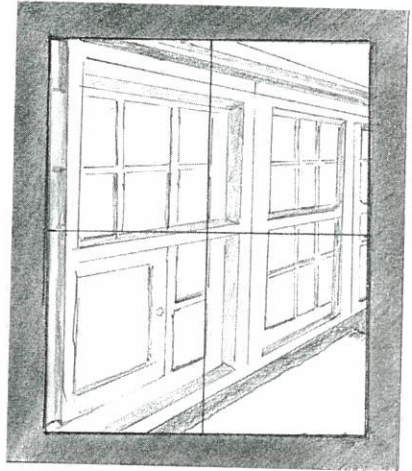


Fig. 6-9.

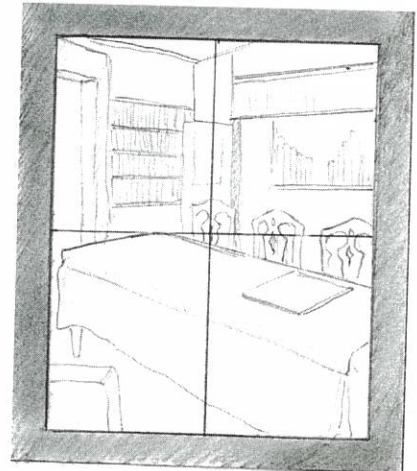


Fig. 6-10.



“Dear Theo,  
In my last letter you will have found a little sketch of that perspective frame I mentioned. I just came back from the blacksmith, who made iron points for the sticks and iron corners for the frame. It consists of two long stakes; the frame can be attached to them either way with strong wooden pegs.

“So on the shore or in the meadows or in the fields one can look through it *like a window* [the artist’s emphasis]. The vertical lines and the horizontal line of the frame and the diagonal lines and the intersection, or else the division in squares, certainly give a few pointers which help one make a solid drawing and which indicate the main lines and proportion . . . of why and how the perspective causes an apparent change of direction in the lines and change of size in the planes and in the whole mass.

“Long and continuous practice with it enables one to draw quick as lightning—and once the drawing is done firmly, to paint quick as lightning, too.”

From Letter 223, *The Complete Letters of Vincent Van Gogh*, Greenwich, Conn.: The New York Graphic Society, 1954, p. 432–33.

the same. If perfectly drawn—very hard to do!—they will be identical. At its most basic level, that is what drawing is. To reiterate, basic realistic drawing is copying what is seen on the picture-plane.

“If that is so,” you may object, “why not just take a photograph?” I believe one answer is that the purpose of realistic drawing is not simply to record data, but rather to record your unique perception—how you personally see something—and, moreover, how you understand the thing you are drawing. By slowing down and closely observing something, personal expression and comprehension occur in ways that cannot occur simply by taking a snapshot. (I am referring, of course, to casual photography, not the work of artist-photographers.)

Also, your style of line, choices for emphasis, and subconscious mental processes—your personality, so to speak—enters the drawing. In this way, again paradoxically, your careful observation and depiction of your subject give the viewer both the image of your subject and an insight into you. In the best sense, you have expressed yourself.

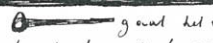
Use of the picture-plane has a long tradition in the history of art. The great Renaissance artist Leone Battista Alberti discovered that he could draw in perspective the cityscape beyond his window by drawing directly on the glass pane the view he saw behind the pane. Inspired by Leonardo da Vinci’s writing on the subject, German artist Albrecht Dürer developed the picture-plane concept further, building actual picture-plane devices. Dürer’s writings and drawings inspired Vincent Van Gogh to construct his own “perspective device,” as he called it, when he was laboriously teaching himself to draw (see Figure 6-11). Later on, after Van Gogh had mastered basic drawing, he discarded his device, just as you will.

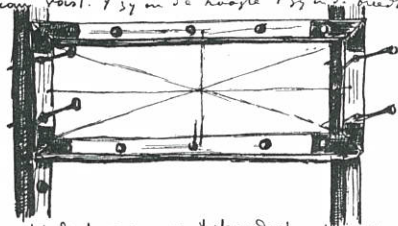
Note that Van Gogh’s device must have weighed twenty pounds or more. I can picture him in my mind’s eye laboriously dismantling the parts, tying them up, carrying the bundle—along with his painting materials—on his long walk to the seashore, unbundling and setting the device up, and then repeating the whole sequence to get home at night. This gives us some insight

Vaande This,

In myn vorigen brief zult ge een kruisbeeltje gevonden hebben van dat bekende perspectiefraam. Daar niet kon ik van den grond vandaan die yzeren punten aan de stobben heeft gemaakt en yzeren hoeken aan het raam.

Het bestaat uit twee lange pennen.

met sterke houten pennen  gaat het raam  
daarvoor vast. 1/2 m De hoogte 1/2 m 2. freeste



Dit maakt dat men op 't strand of op 't weiland of op een akker een kykje heeft als door 't venster. De loodlynen & waterpeeglynen van 't raam vanden de dragenaer & het kruis — of anders een verdeling in kwadraten geven vast & zeker eenige hoofdpunt, waardoor men met vastheid een tekening kan.

Fig. 6-11. Vincent Van Gogh's perspective device.



Fig. 6-12. The artist using his device at the seashore.

From *The Complete Letters of Vincent Van Gogh*.  
Greenwich: The New York Graphic Society, 1954.  
The drawings are reproduced by permission of  
The New York Graphic Society.

into how resolutely Van Gogh labored to improve his drawing skills (see Figure 6-12).

Another renowned artist, the 16th-century Dutch master Hans Holbein, who had no need for help with his drawing, also used an actual Picture Plane. Art historians recently discovered that Holbein used a glass pane on which he directly drew images of his sitters for the overwhelming number of portrait drawings required of him when he lived in the English court of Henry VIII. Art historians speculate that Holbein, one of the great draughtsmen of art history, did this to save time—the overworked artist could then quickly transfer the drawing on glass to paper and get on to the next portrait.

One more important point: “Drawing” means drawing a single view.

Recall that when you drew your hand directly on the plastic Picture Plane, I asked you to keep your hand still and your head still in order to see one view only on the Picture Plane. Even a slight movement of your hand or a slight change in the position of your head will give you a different view of your hand. I some-

Professor Elliot Elgart of the University of California at Los Angeles Art Department told me in conversation that he has often observed beginning drawing students, presented for the first time with a reclining model, tilt their heads far to one side while drawing the model. Why? To see the model in the position they are used to, which is standing up!

Seeing perspective drawing as depicting three-dimensional space is apparently a learned percept, culturally determined. Individuals from remote cultures sometimes do not decipher photographs or realistic drawings.

times see students bend their heads around to see something they couldn't see with their head in the original position. Don't do it! If you can't see that fourth finger, you don't draw it. To repeat: Keep your hand and your head in an unchanged position and draw just what you see.

For the same reason—to see one view only—you kept one eye closed. By closing one eye, you removed binocular vision, the slight variance in images, called “binocular disparity,” that occurs when we view an object with both eyes open.

Binocular vision allows us to see the world as three-dimensional. This ability is sometimes called “depth perception.” When you close one eye, the single image is two-dimensional—that is, it is flat, like a photograph. The paper we draw on is also two-dimensional or flat.

Here is yet another of the paradoxes of drawing:

The flat, two-dimensional image you see (with one eye closed) on the picture-plane, when copied onto your drawing paper, miraculously “looks” three-dimensional to the person who views your drawing. One necessary step in learning to draw is to believe that this miracle will happen. Often, students struggling with a drawing will ask, “How can I make this table look like it's going back in space?” or “How do I make this arm look like it's coming toward me?” The answer, of course, is to draw—to copy!—just what you see flattened on the picture-plane. Only then will the drawing convincingly depict these “movements” through three-dimensional space (see Figure 6-13).

You may be wondering, “Is it always necessary to close one eye while drawing?” Not always, but most artists do quite a lot of one-eye closing while drawing. The closer the viewed object, the more eye-closing. The farther away the object, the less eye-closing, because the binocular disparity referred to above diminishes with distance.

In this next exercise, you will use your technical aids (your plastic Picture Plane and your Viewfinders) to enable you to do a realistic drawing of your own hand—a “real” drawing depicting a three-dimensional form on a flat sheet of paper.