

3

PROPORTIONS: TAKING THE MEASURE OF THINGS

SIGHTING • FINDING THE MIDPOINT •
USING PLUMB AND LEVEL •
LOOKING FOR COMPARATIVE
MEASUREMENTS • FORESHORTENING •
INTENSIFYING PROPORTIONS

All gifted draughtsmen seem to have in common an almost infallible eye. I once watched a demonstration by an illustrator who was known for his uncanny drawing skill. He was drawing from a model. He first made a mark near the very top of his paper, then another at the bottom. He began the top of the head at the upper mark and rapidly worked his way down, finally hitting the big toe of the foot exactly on the bottom mark. Of course, everything in between was accurate. This feat is simple enough to describe but exasperatingly difficult to execute. I have often watched a friend of mine of even more prodigious abilities draw sweeping, complicated passages without lifting his charcoal from the paper. In a single, beautiful line, he would draw the model's out-thrust hip, then follow down the leg, catching each curve of muscle and jut of bone, turn sharply at the foot, articulate the toes, cross over the overlapping second foot and up the other leg, all with flawless precision.

As inspiring as these virtuoso performances are, it should be reassuring to all that the eye and hand can be trained to perform such feats — not necessarily with the same style, grace or intensity as the most gifted artists, but with considerable accuracy. In fact, drawing accurate proportions is probably the aspect of draughtsmanship that improves most with training and practice. Proportions are relationships — one part to another and all the parts to the whole. Although all good drawing requires it, when the human form is the subject, accuracy is most important because the average human viewer knows the human form intuitively. Proportions are the one area of art that everyone feels competent to criticize. “That’s a nice drawing, but isn’t the (fill in the blank) a little too (fill in the blank)?” When proportions are badly drawn, it interferes with the viewer’s appreciation of other qualities in the picture. When proportions are drawn correctly, it’s hardly even noticed — which is just what we want.



This drawing was done without using any sighting procedures. Notice the short legs and the extended upper torso.

In this chapter, you are going to learn three simple strategies for taking accurate measurements. All of them employ the drawing tool as a measuring instrument in a method called *sighting*.

To demonstrate the immediate benefits of sighting, I asked a student to make an outline drawing of me. The left-hand drawing above was the result. I then explained just one of the sighting techniques — finding the midpoint — and asked her to try again. The difference is remarkable. In the first case, the torso is unnaturally elongated and the legs shrunken. These defects are corrected in the second drawing, producing not only the proper size relationships but also a natural and graceful pose. I hope you will agree that it is an altogether more life-like drawing than the first.

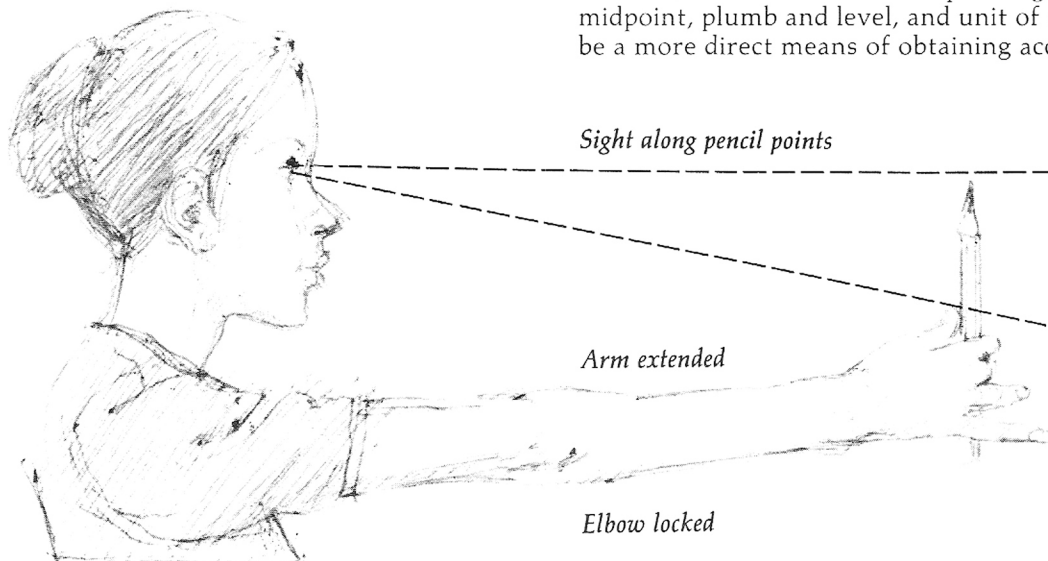
This drawing was done by the same student after finding the midpoint. Here the leg-to-torso relationship is more credible and the pose seems more natural.



For vertical measurements



For horizontal measurements



Sight along pencil points

Arm extended

Elbow locked

Thumb takes measurement

Drawing by eye

All methods we've discussed in the first two chapters amount to drawing by eye. Most of us have a pretty good eye, more accurate than we realize. When we judge which of two pieces of cake is larger, or whether a floor is level, or — impossible for me — whether a couch will fit through a doorway, we are relying on the same estimating skills used in drawing. These are the skills we've been developing up to this point. Now we're ready to add to these some objective measuring strategies.

Sighting — a tool for measuring

By holding your drawing tool in front of you and sighting along it, you have a valuable aid to accurate proportions. The procedure is this: grasp your pencil between your thumb and first two fingers so that most of it extends vertically as shown. Hold it at arm's length, elbow locked. Now, holding your head still, one eye closed, sight along the pencil at your subject. This will be the basic position for the measuring techniques we call sighting.

I'm using the term *pencil* for simplicity's sake, but all of the following applies as well to pen, crayon, or charcoal.

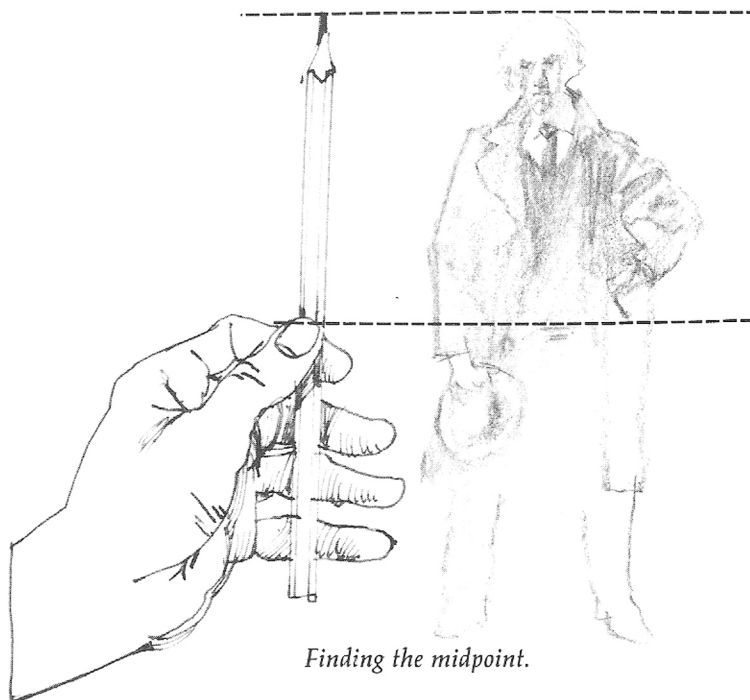
Three sighting strategies:

1. Finding the midpoint
2. Using plumb and level
3. Taking comparative measurements

These immensely useful and versatile procedures yield immediate and effective results. You'll learn to measure proportions as you *see* them rather than as they actually are. Of course, we know that objects appear the way they do because of their underlying form, but we are going to draw what we see *rather than what we know*. It is a fact that the average human figure is about seven heads high, but when your model is slouched in a chair, legs pointed toward you, that information is of little help. Using the sighting methods of midpoint, plumb and level, and unit of measure will prove to be a more direct means of obtaining accuracy in your drawing.

Finding the midpoint

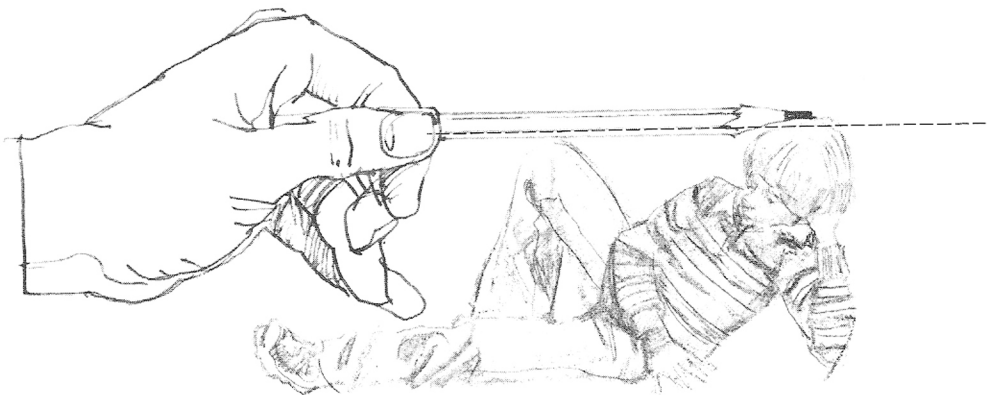
Think of your subject as a shape which you divide at the midpoint. That half above the midpoint must fit into the top 50% of your drawing area and the half below must fit into the lower 50%. Studiously finding and using the midpoint in this way ensures that each half of whatever you divide will be in proportion to the other.



Finding the midpoint.

Using plumb and level

Using your pencil like a carpenter's tool, you can establish the vertical and horizontal alignments of your subject and transfer them one at a time to your paper. This strategy is especially useful in establishing the action of your pose.

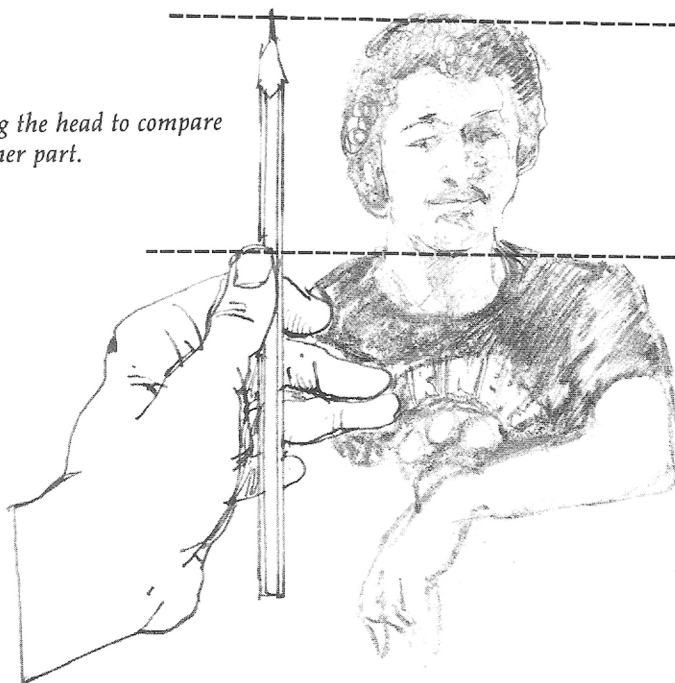


Using a level alignment.

Using comparative measurement

In this strategy you measure with your pencil the length of one part of your subject and compare it to the length of another part. The head is a commonly-used unit of measure, for instance, and might be compared to upper arm length or to shoulder width. This procedure is basic to finding proper proportions.

Measuring the head to compare with another part.





Finding the midpoint

Finding the midpoint starts you off on your drawing with a major proportional problem solved. Your subject will have been divided into two manageable halves, and, more important, they'll be placed correctly on your page. This measurement is used in the early stages of the drawing, probably only once, and it will save you a world of trouble later on.

To find the midpoint, first regard your subject — in this case a standing figure — as a shape. Lightly and loosely sketch that shape the size you desire on your page. This sketch need be little more than an amorphous indication, but make sure you clearly indicate the top and bottom of the shape. Now study your subject again and estimate the halfway point between the top of the head and the bottom of the feet. Make a mental note of that spot.

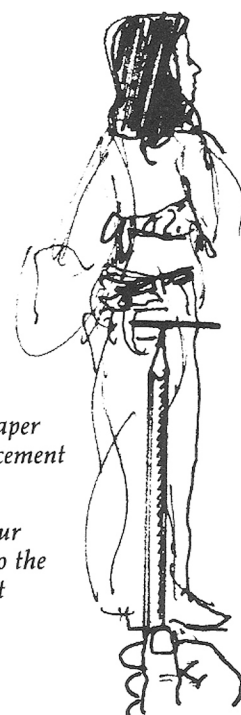
To see if it really is the midpoint, do a sighting with your pencil. Align the point with the top of the model's head and place your thumbnail against the pencil at the point that aligns with your midpoint guess. Now, keeping your thumb in place, lower your pencil tip to the midpoint and see if you thumb aligns with the bottom of the model's feet. If it does, you succeeded in dividing the model in half; and your eye is very good. If it doesn't, take another guess and try again; your eye will improve with practice.

Remember to keep your head straight and your elbow locked in the same way every time you measure. When you've found the midpoint, return to your paper and find the midpoint of the shape you've drawn. Mark that spot lightly, corresponding to the midpoint of the figure. Sketch it in. Now you've divided both your subject and your drawing into two manageable halves, your boundaries are set, and you're ready to proceed.

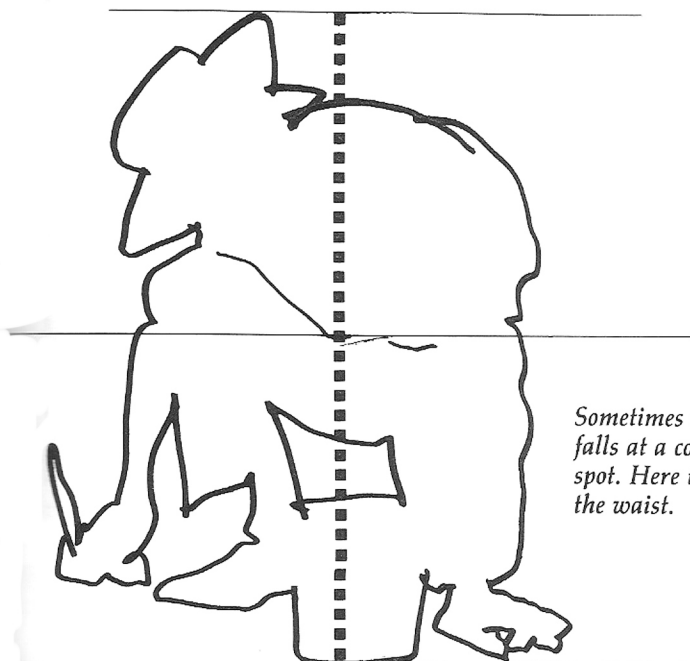
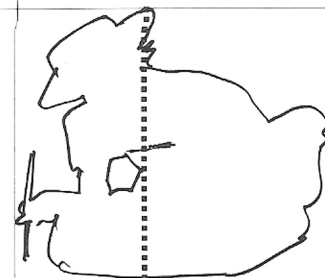


First indicate on your paper the general size and placement of your subject.

Find the midpoint of your subject and transfer it to the center of your placement shape.



Using comparative measuring, check to see if your subject is a more vertical or a more horizontal shape. Surprisingly, this one is more horizontal. Midpoint is at the top of the trapped shape.



Sometimes the midpoint falls at a convenient spot. Here it occurs at the waist.





Figure cut off at ankles.



Figure drawn too small in relation to paper.



To get the most size out of your drawing, the center of your shape (in this figure, it's at the woman's finger) should coincide with the center of your paper.



Lower portion distorted to fit paper.

Why find the midpoint?

One of my strongest grade school memories is that of my art teacher pacing between our desks with a frequent injunction, "Don't make little drawings in the center of the paper. Fill the entire page." It was good advice, but we soon realized what a trick it was to fill the page *and* get everything in at the same time. Invariably I'd end up having to choose between cutting something off (usually the feet) or compressing the proportions (usually the legs) when I began to run out of paper. For a long time, every horse I drew was either hoofless or pygmy-legged.

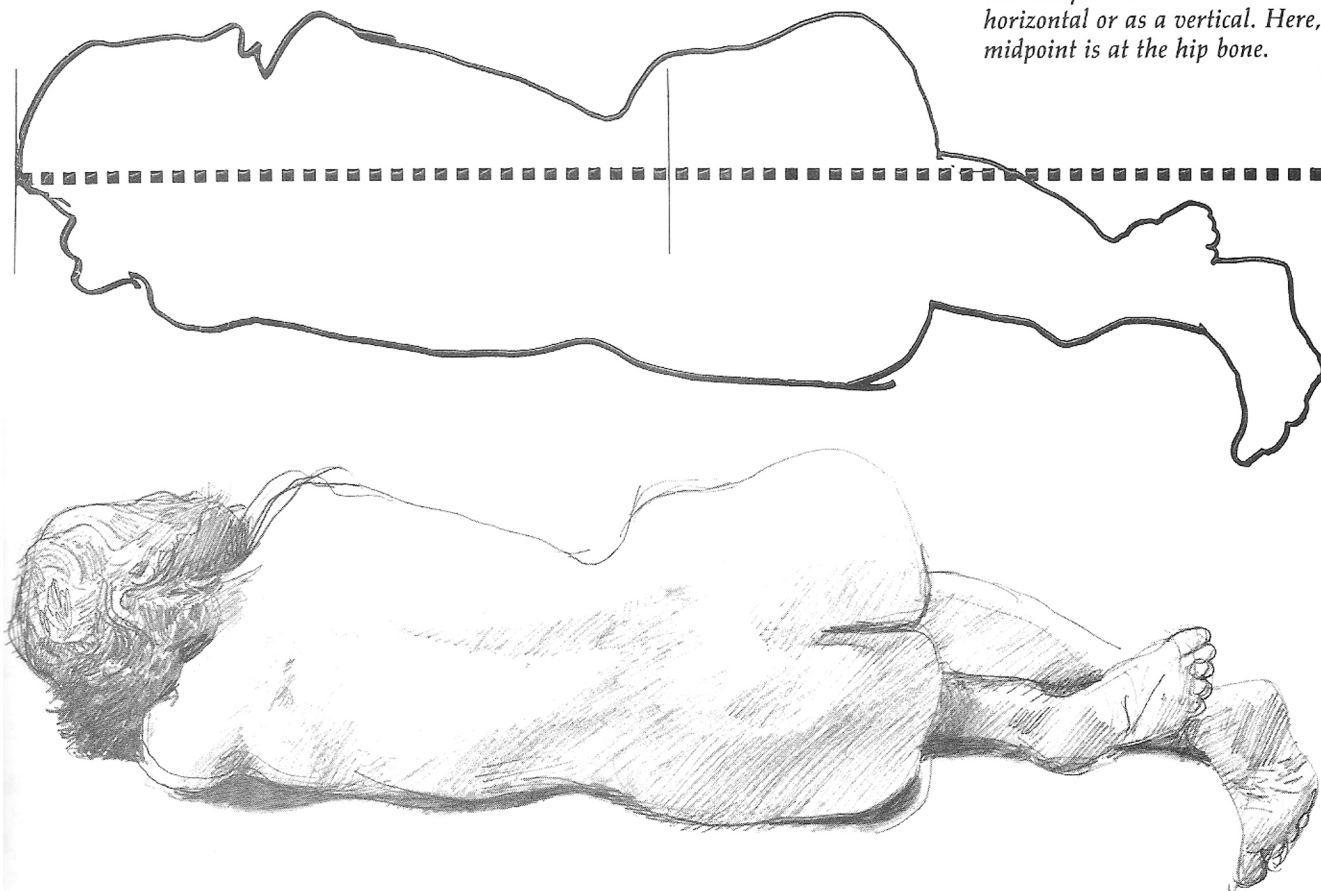
One of the great values in finding the midpoint is that it helps you "place" your drawing on the page. Without those top, bottom, and midpoint marks on your paper, it is difficult to draw a figure head to foot so that it just fills the area. Finding the midpoint solves the problem of running out of paper or leaving too much blank. If, with a few indications of head and upper torso, you find you have extended your drawing below the center mark of your paper, you will know you are drawing too large. If you end up above the center mark, you are drawing too small. In either case, you can quickly make the proper adjustments by restating.

Naturally, there will be times when you will want to fill the paper with only a part of the figure or to draw the figure quite small in a large empty space. Here again, finding the midpoint will help you place your subject exactly where you want it. If you wish, you can use finding the midpoint to further divide each half for more careful consideration.

Project 3 - A — Standing Figure

Draw a proportionately accurate figure, filling the page from top to bottom. Coax or cajole someone to take a standing position for you about ten feet away. Make two small marks on your paper, one near the top and one near the bottom to represent the extreme of the figure. Next include a center mark between those two points. Then spend less than a minute lightly and loosely sketching in some general placement of lines to indicate head, shoulders, hips, legs, and feet. Now, using the sighting method, find the midpoint of your model. This point will correspond to the center mark on your paper. Finish drawing the figure in detail, working with a top half and a bottom half. Use pencil or charcoal and restate as necessary. Allow 30-40 minutes.

The midpoint works as well as a horizontal or as a vertical. Here, midpoint is at the hip bone.



Alignments — using plumb and level

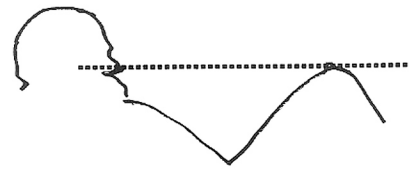
Proper use of alignments will capture the action of a pose. A plumb line is a vertical line, a level line is a horizontal one. All of us, with our sensory and balancing equipment, can judge verticals and horizontals quite accurately. Again, using our pencil as a measuring tool, we simply extend it in front of us over the subject and turn it this way and that at key points on the model to see what lines up vertically and horizontally.

There is a specific action to the pose of the figure drawn below. We can gather a sense of that action by lightly sketching in a simple shape or gesture and then employing our plumb and level alignments. Any protrusion such as a knee, shoulder, hip, elbow, toe or chin is a potentially good place to use alignment measurements. On the facing page, I've diagrammed the plumb and level measurements used in the drawing below.

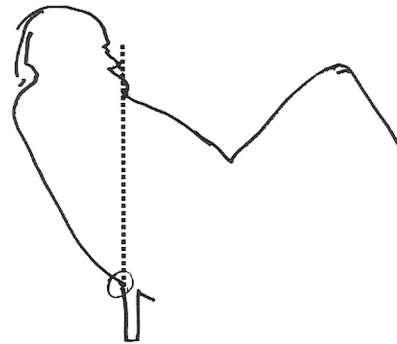


After making a preliminary sketch to place the figure, I sighted a level line from the point of the knee, determining that it was on a line with the model's nose. This was an important measurement because, beyond placing the nose, it gave me the location for the entire head. This information was transferred to my drawing where horizontals and verticals were easily made parallel by using the edges of the paper as guides.

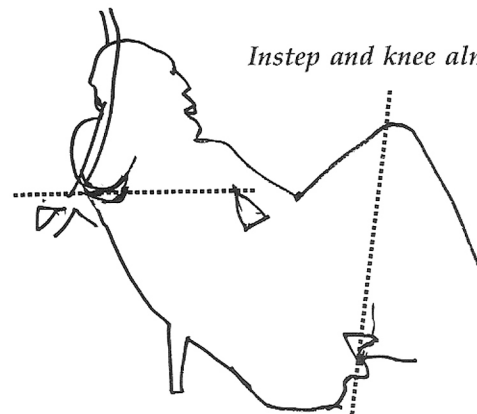
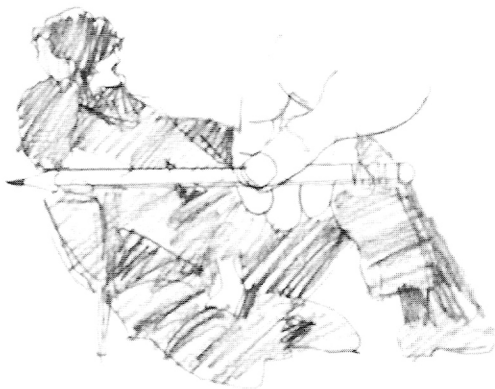
With this one alignment, I felt confident to sketch in the head, right shoulder, and chair. The chair itself offered some alignment information. By following down its back and legs, I could see the various points at which it intersected the figure. I



Nose and knee align.



Nose and chair-leg align.



Instep and knee almost align.

Elbow and arm/leg intersection align.

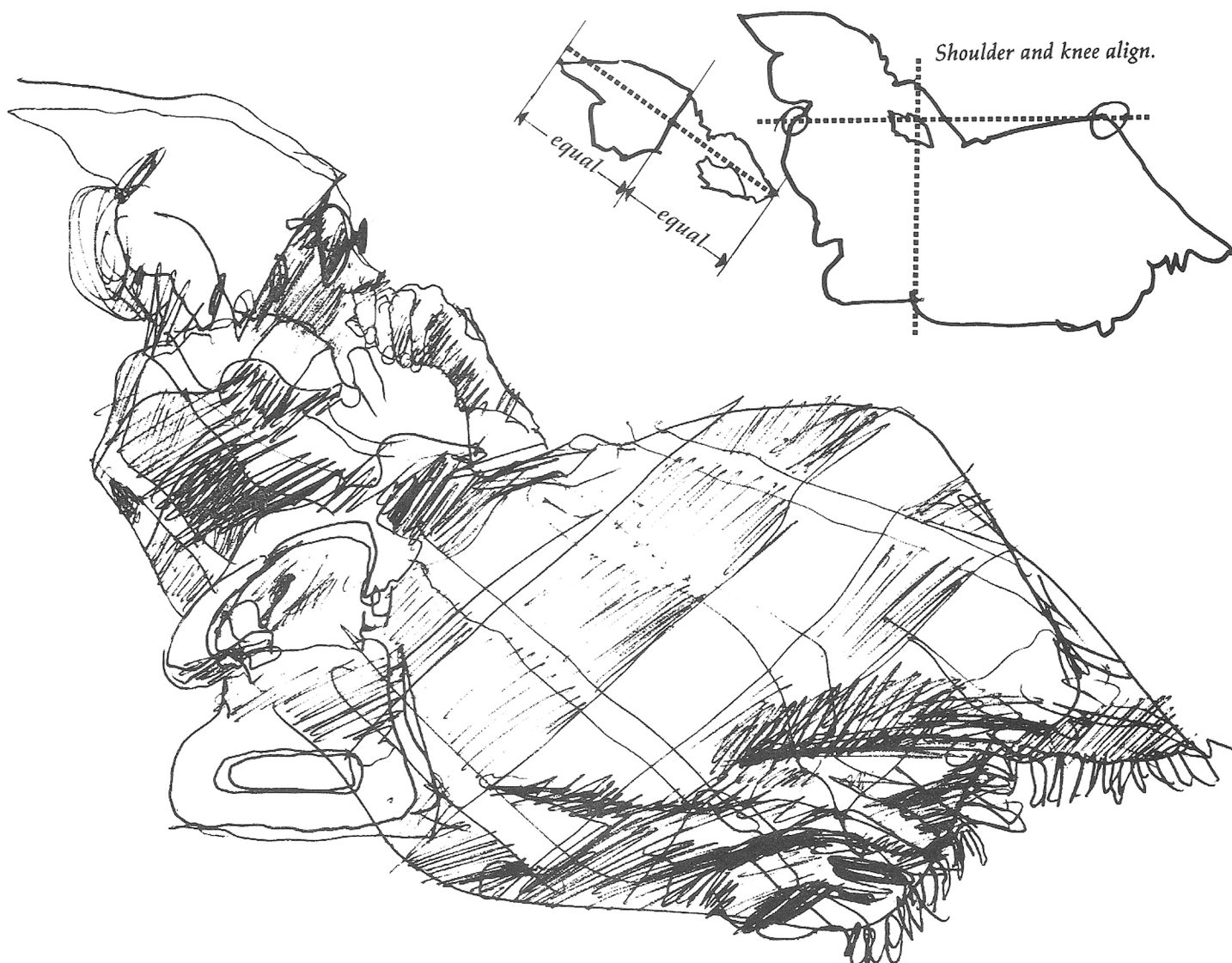
Project 3 - B — Lounging Figure

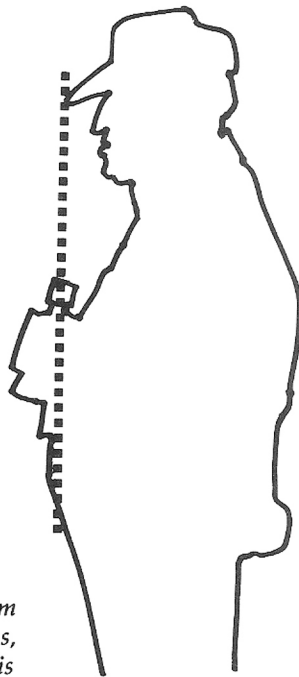
Make a drawing from a casually reclining model. Pose the figure propped on one elbow with one knee raised. With pencil or charcoal, lightly and loosely place the figure on your paper by drawing by eye and then adjust the proportions with sighting strategies. Find the horizontal midpoint. Use plumb and level and comparative measuring at least twice each. Restate as necessary. Allow 30-40 minutes.

then decided to check the plumb lines extending downward from the nose, and I saw the point at which the model's back intersected the chair leg. An additional alignment established the right elbow to be level with the point of intersection of the left arm and leg. A plumb line extending downward from the knee helped me locate the right foot.

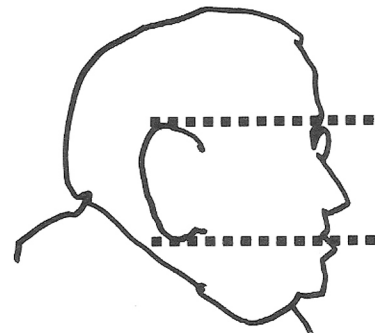
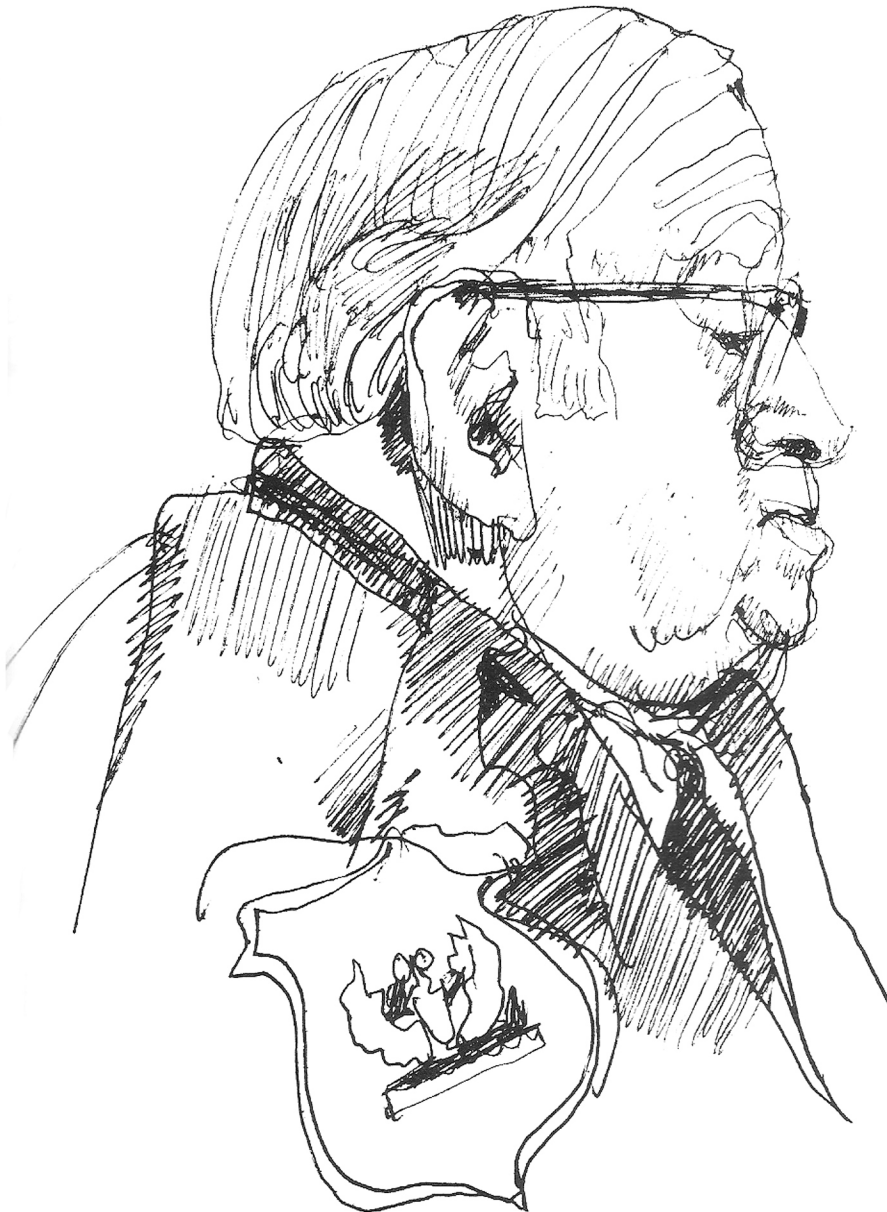
You can see how a few plumb and level lines establish the action of a figure in addition to helping you get better proportions. However, I don't want to convey by these explanations and diagrams that drawing can or should be reduced to any step-by-step system. In actual practice, use of alignments is mixed in a busy potpourri of gesture strokes, restatements, blind drawing, smudging, and erasing. How often you make use of this particular procedure will depend on your purpose at the time. The more accuracy you desire, the more plumb and level you will use.

For simple sketchbook studies, like the ones on these pages, you might use only one or two. In such cases, look for unusual alignments like a shoulder that is even with the knee, a jutting hat even with the bulge of a stomach, or a protruding lip even with the tip of a nose. Your eye will gradually develop the capacity for making these judgments automatically.

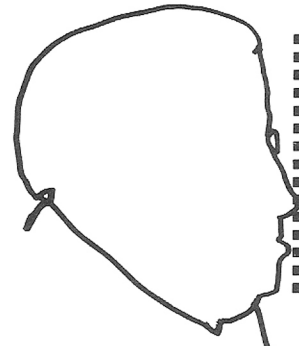




Look for alignments to extend from points such as elbows, noses, chins, shoulders, knees, or even as in this case, the bills of caps.



Ears usually align between eyebrows and base of nose; however, this man's ears are unusually large.



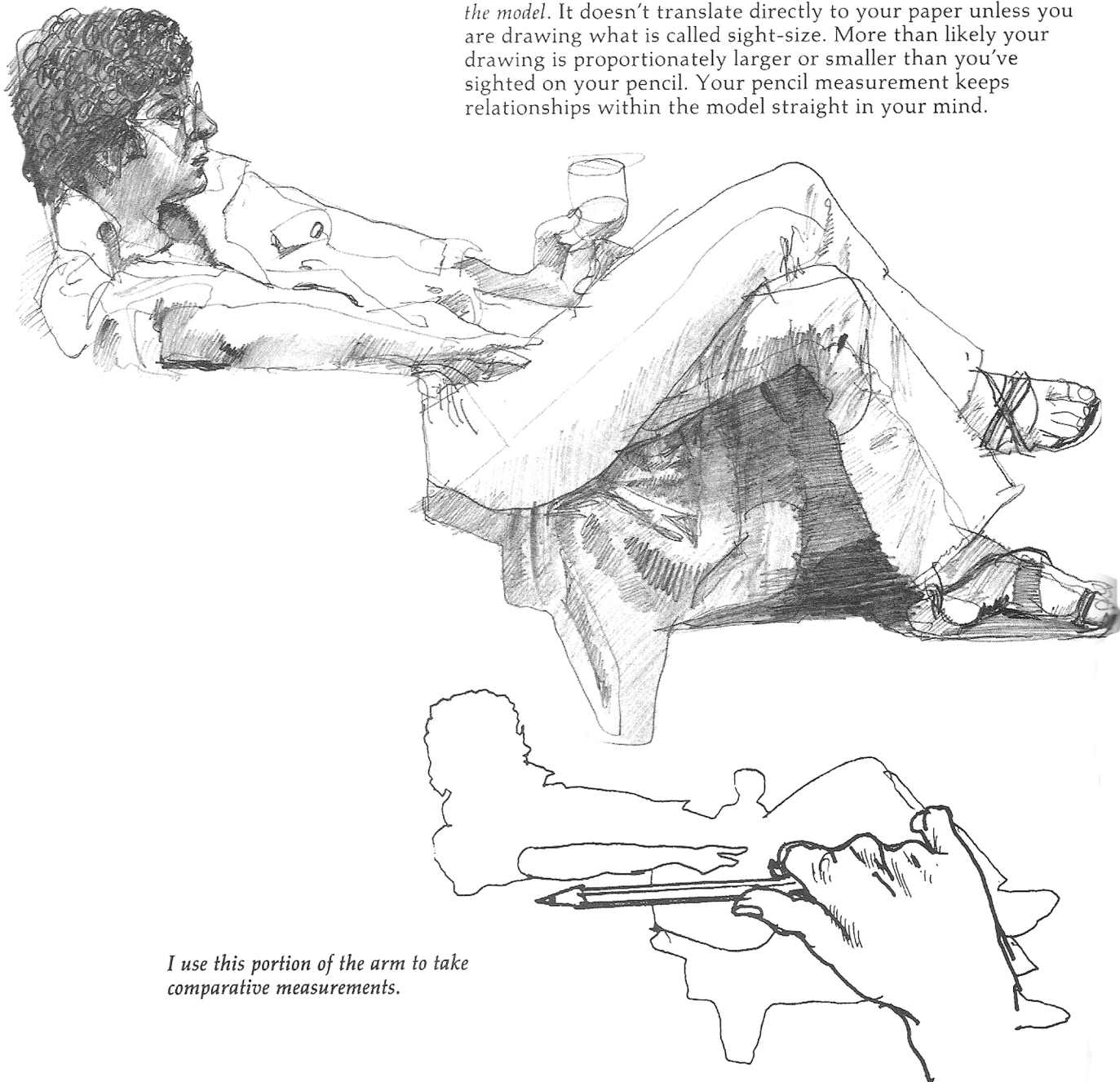
After the nose, look for the next most forward protrusion of the face. In this case, it is the lower lip.

Taking comparative measurements

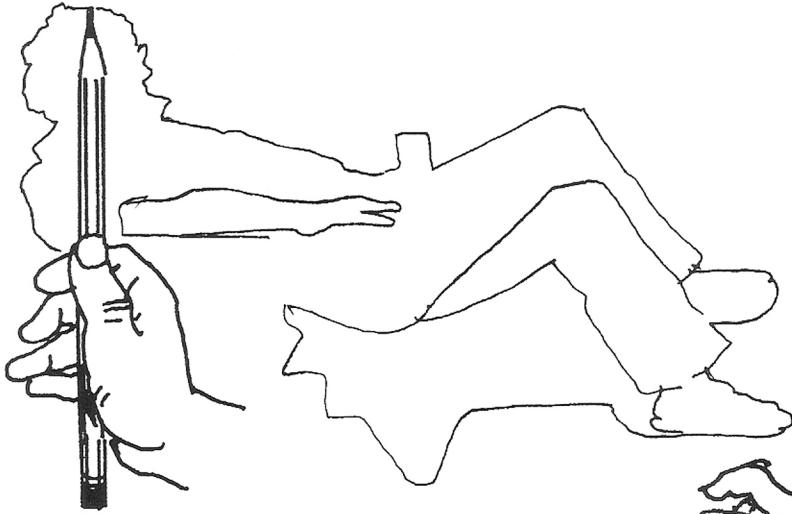
Taking frequent comparative measurements is a good way to check on proportions during the course of your drawing. Use your pencil as a measuring tool to compare the length of one part of your subject to the length of another part so you have an idea of their relative sizes.

Although you can use any part of your subject for this purpose, the head is a common unit of measure so use that as an example. Using our sighting method of pencil held upright, arm extended, one eye closed, put the tip of the pencil at the top of the head and mark the chin with your thumb. Now you have a means of comparing that distance to other parts of the model — perhaps to the length of the upper arm or width of the shoulder.

That measured distance on your pencil is for use *against the model*. It doesn't translate directly to your paper unless you are drawing what is called sight-size. More than likely your drawing is proportionately larger or smaller than you've sighted on your pencil. Your pencil measurement keeps relationships within the model straight in your mind.



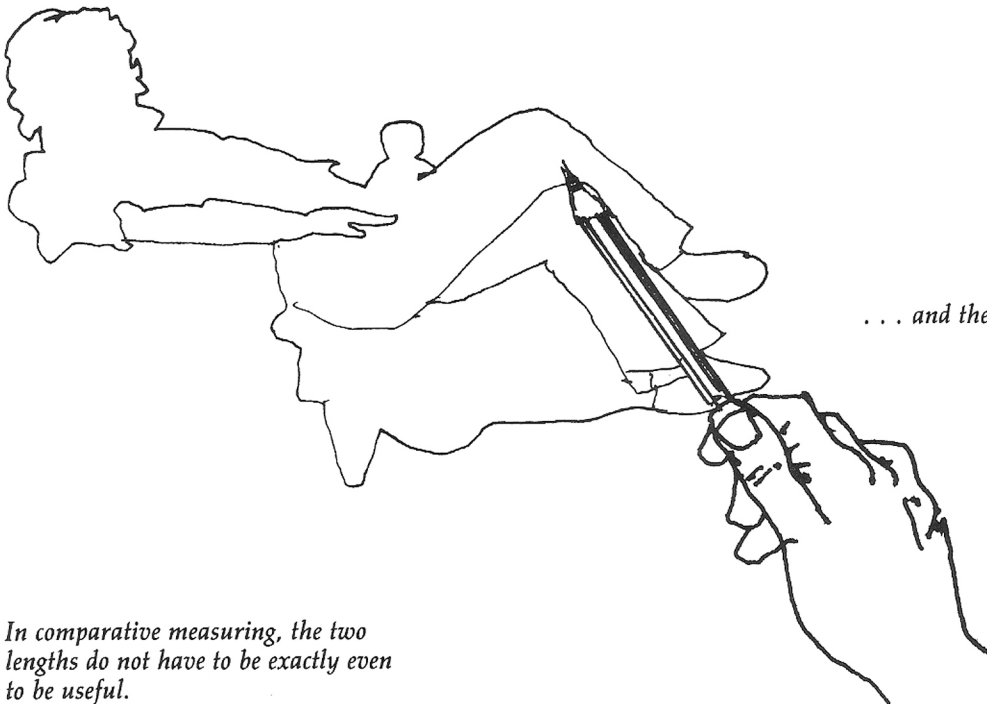
I use this portion of the arm to take comparative measurements.



Forearm length closely corresponds to the distance from elbow to top of head.

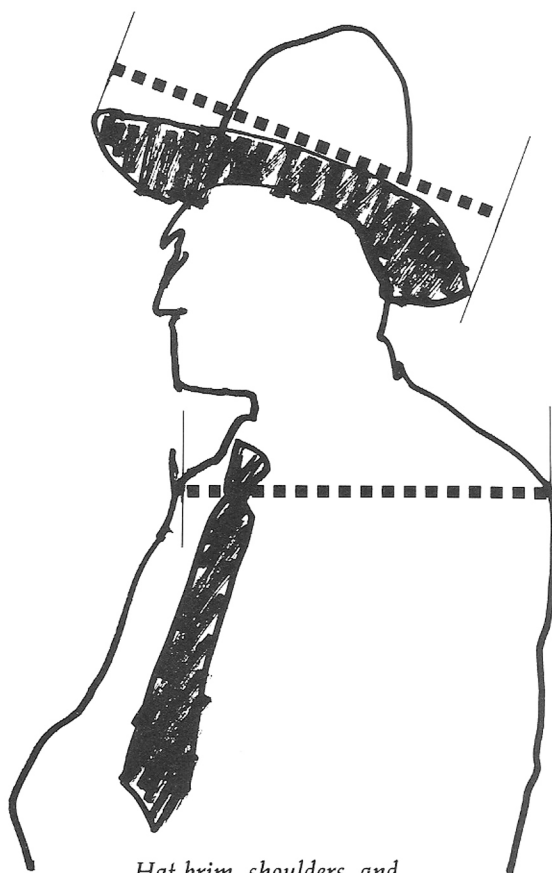


It's almost the same length as the upper leg . . .

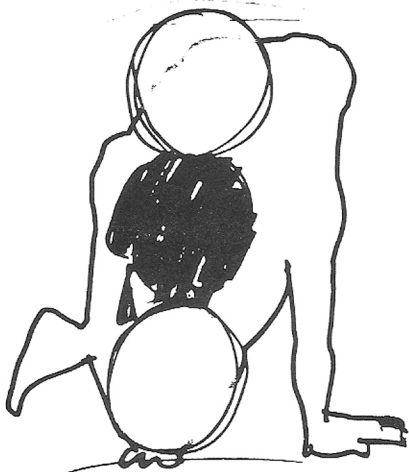
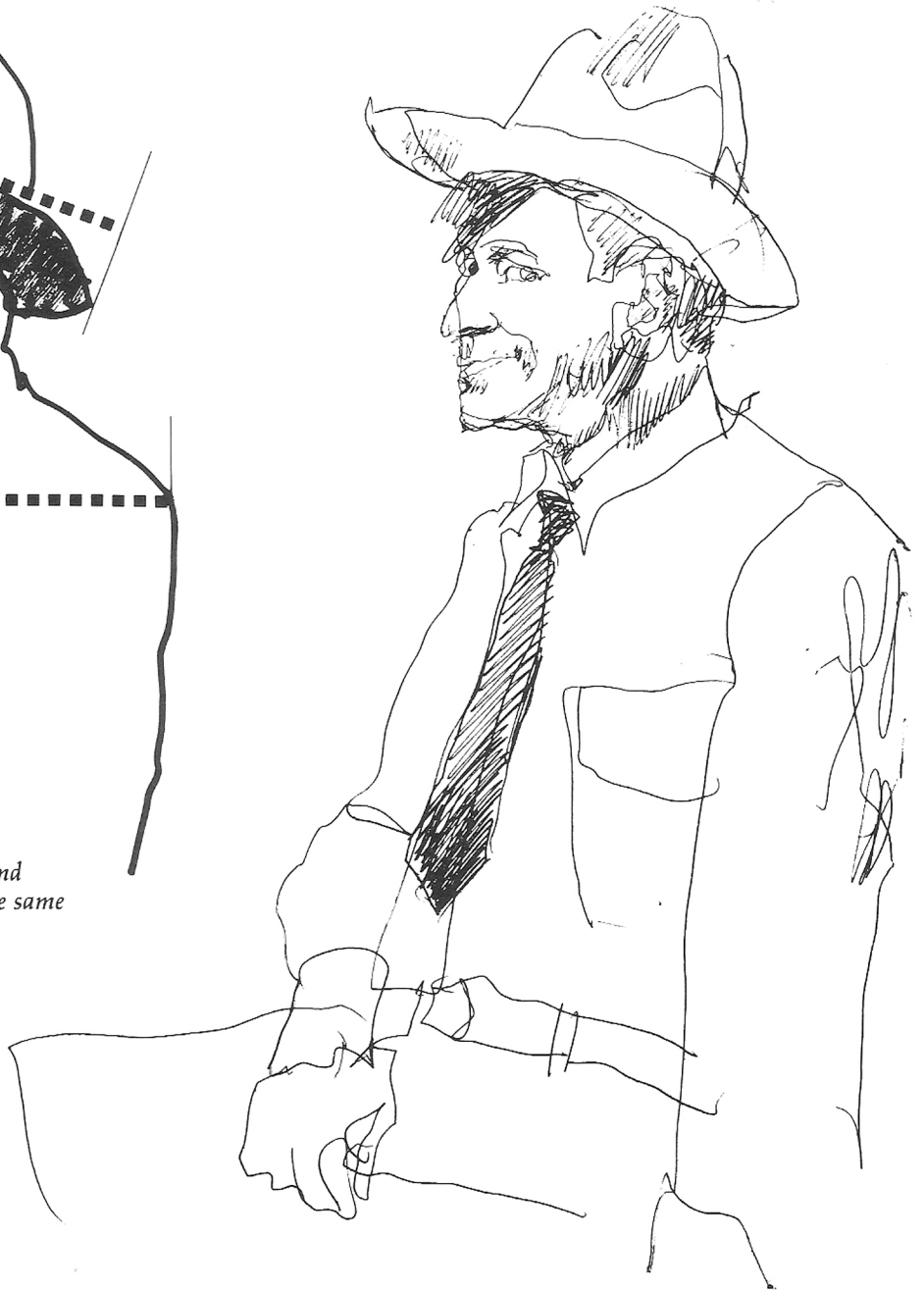


. . . and the lower leg plus foot.

In comparative measuring, the two lengths do not have to be exactly even to be useful.



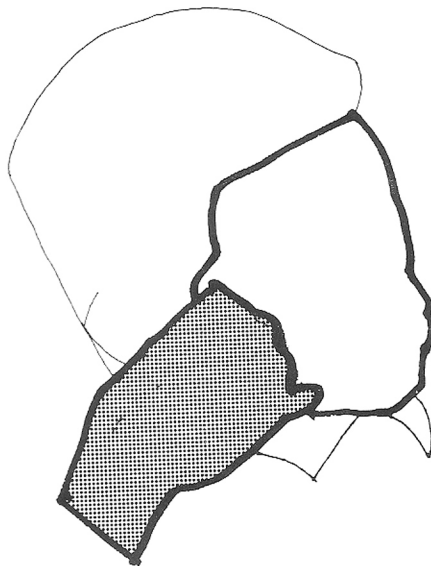
Hat brim, shoulders, and necktie are all about the same measurement.



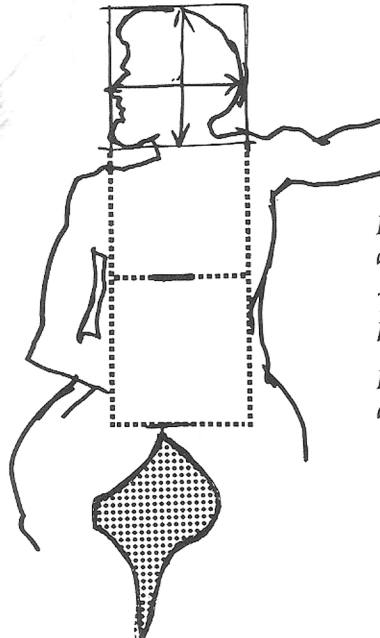
Head is used as a measure. From this view, the figure is three heads high.

Size comparisons can be made not only for parts of the body but for any lengths or widths in your subject. I like to use this technique to compare two shapes that seem to be about the same size. They may turn out to be equal or they may turn out to be different, but the information thus gained allows me to maintain the proper size relationship. Whenever you need to check on proportions, use this handy device.

The diagrams and captions here and on the facing page demonstrate the procedure, but I repeat my earlier caveat that these are only intended to show the technique in isolation from all the drawing that should be taking place in between. Taking comparative measurements is something that should pepper the drawing process, not overpower it.



Length of face, forehead to chin, is slightly greater than length of hair mass, measured from forehead to crown. Compare the length of the hand to the face.

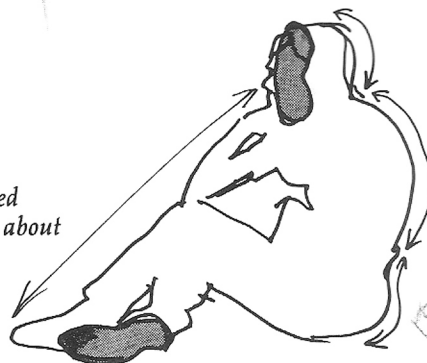


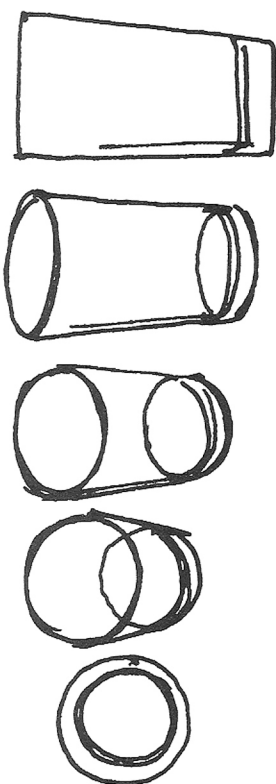
Height and width of head are almost equal.

Torso is about two heads high.

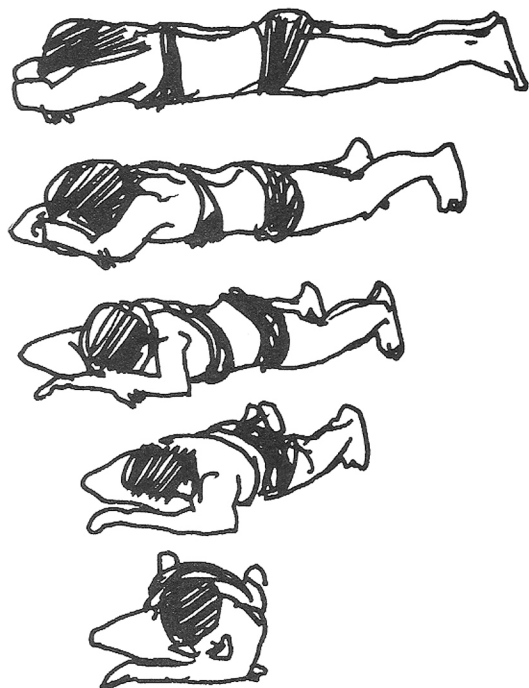
Length of trapped shape is about equal to head.

Foot, width of trapped shape, and head are about equal.





As the glass tips toward us, we see less of its sides. The same is true of the human figure.



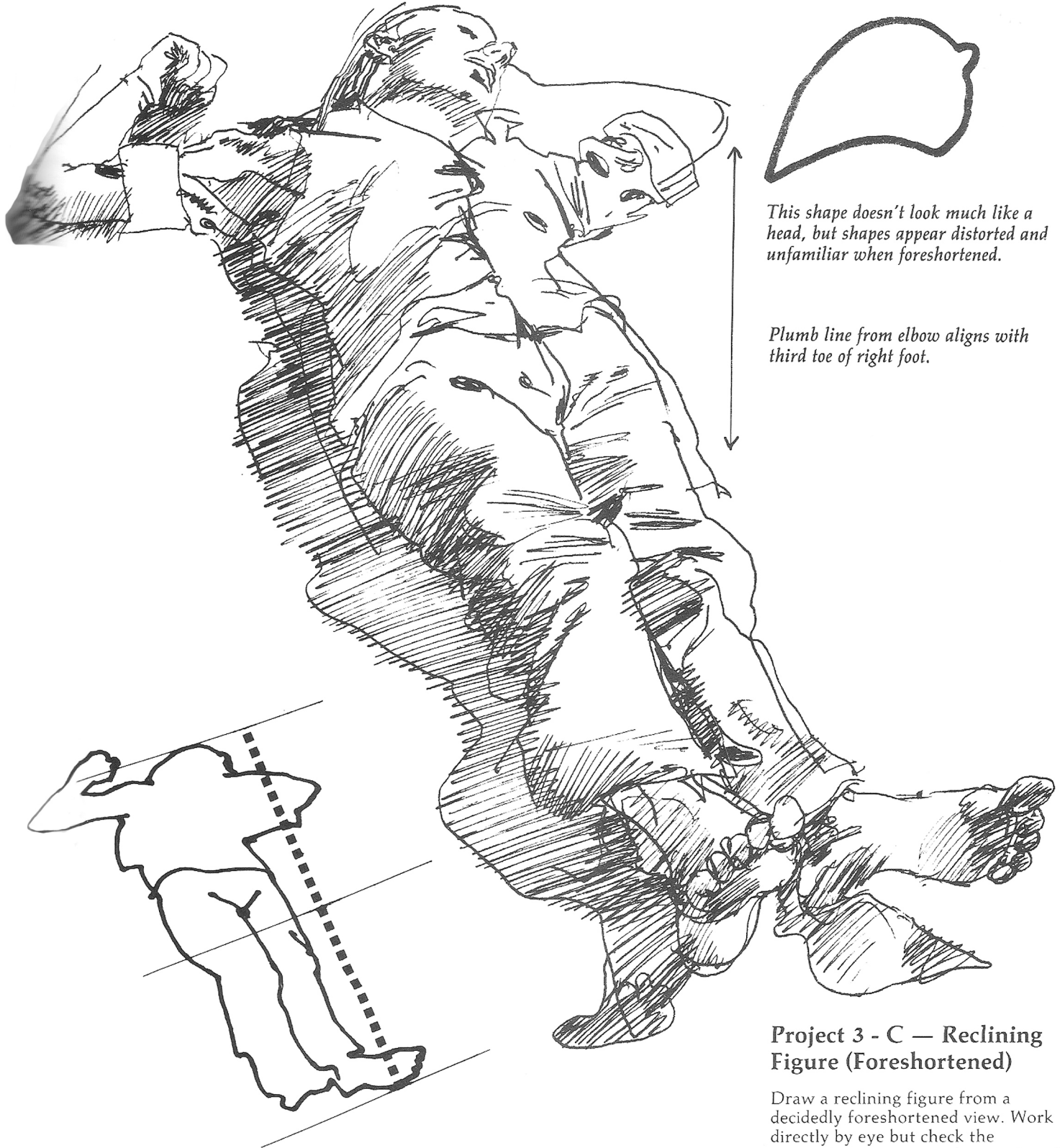
Foreshortening

Foreshortening is drawing a person or object in perspective. In essence, it involves a simple principle: the more we see of the end of something, the less we see of its sides. Foreshortening means violating certain things we know in favor of drawing what we see, but you should be getting comfortable with that now. It may require you to draw a person you know to be tall and thin as compressed and squat. Of course, when you are finished, the drawing will look right, but while you're working it may not feel right.

Foreshortened shapes often seem nonsensical. That strange little shape isolated on the facing page doesn't look like a head. If you had just drawn it yourself, wouldn't you be tempted to alter it to make it more recognizable? Foreshortening, however, requires that you have faith in the authority of your eye, and trust that by the time you've added features you'll wind up with a convincing head.

All three sighting strategies are of inestimable value in drawing an end view. I especially recommend finding the midpoint. In a foreshortened figure, the midpoint is almost never where you would guess it to be. On the figure on the facing page, the midpoint is located just above the knee — much lower than you might expect. If you were to draw the same figure from a top-end view, the midpoint would fall somewhere on the upper torso.





This shape doesn't look much like a head, but shapes appear distorted and unfamiliar when foreshortened.

Plumb line from elbow aligns with third toe of right foot.

The midpoint is lower than you might guess. In this case it's a little above the knees. Elbow to elbow width is equal to area from head to lower knee.

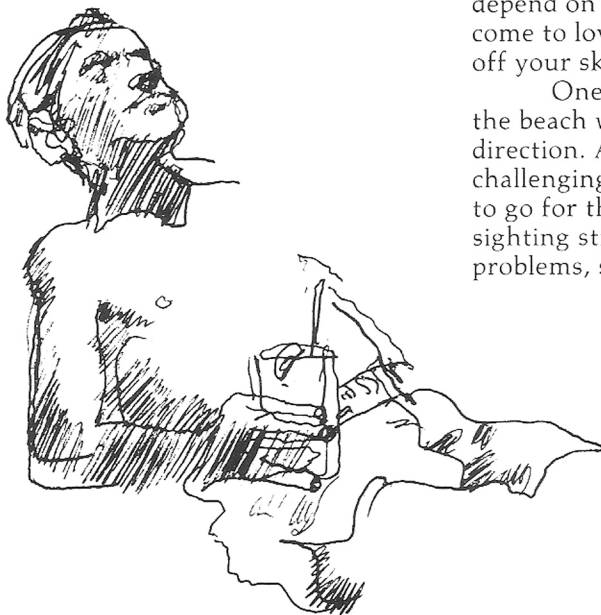
Project 3 - C — Reclining Figure (Foreshortened)

Draw a reclining figure from a decidedly foreshortened view. Work directly by eye but check the proportions as you go along, using all three sighting strategies. The midpoint is particularly vital in foreshortened drawings. Locating additional, secondary midpoints will also prove very helpful. Use plumb and level and comparative measuring at least twice each. Work in pencil or charcoal, restating as necessary. Allow 30-40 minutes.



Foreshortening is inevitable in figure drawing. In almost any pose, some part of an arm or leg or torso is foreshortened. You'll find you can draw these parts convincingly if you depend on your sighting procedures. If you're like me, you'll come to love foreshortening problems for the chance to show off your skill and daring.

One of my favorite locations for end-view drawing is the beach where reclining bathers sprawl in every conceivable direction. Another good spot is at a second-story window for challenging top-view subjects. In both situations you may have to go for the quick shape and forego the more time-consuming sighting strategies. If you want longer foreshortening problems, sleeping friends or family are a good bet.





Critical measuring — portraits

Much art instruction teaches the student to first draw the underlying form, then to proceed to the specific case. ("Learn to draw the head as a basic shape with simplified parts, then you'll be able to draw a portrait.") It is a sound approach, and I've borrowed a few ideas from it. For the most part, however, the focus of this book is on drawing the specific and individual from the start. A thorough knowledge of what lies below the surface of an object tends to get lost in my method. However, I believe the adventure of diving into a drawing more than compensates for the loss. By risking ourselves with a live, individual subject, we are likely to draw better than we think we can; and we'll learn much about underlying structure in the process.

We are now ready to apply our three sighting strategies to heads and portraits. I've called this critical measuring because an individual face is a collection of subtle relationships, and a good deal of accuracy is required to capture a likeness. The smallness of the shapes involved and the distances between them require a lot of precision. If the features are incorrectly sized or placed, the drawing loses its likeness. John Singer Sargent summed up the difficulty: "A portrait is a picture of a person in which the mouth isn't quite right."

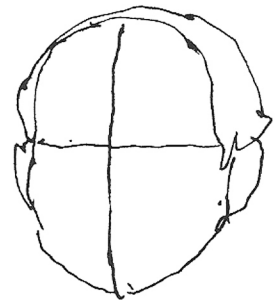
Three initial steps.



Sketch overall shape.



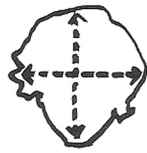
Lightly establish midpoint line



. . . and center line.



Shadows on the face create small shapes which make drawing easier.



(a)



(b)

Compare height to width of (a) entire head and (b) face shape only.

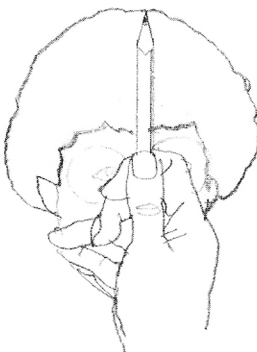
Front view

You're going to need a model who is willing to sit for perhaps an hour. Place him or her about four feet away. See to it that the subject is relaxed and comfortable, and take breaks about every ten minutes. If you can't find a willing model, you'll have to draw yourself. In that case, seat yourself comfortably at arm's length from a mirror. You'll be moving your head as you shift your eyes from the mirror to your drawing so you'll need to re-set your pose each time you look up. Measure by closing one eye and placing your pencil up against the mirror.

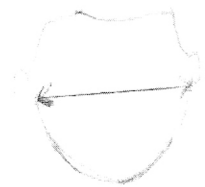
We'll be drawing the head from front view, but before you do any drawing or measuring, pause to look at your model — or reflection — for a few moments. Let your eyes sweep over the entire head, seeing it as a whole. What are the first two or three things that strike you? Dark features? Small chin? Strong cheekbones? These will make good triggering words. Repeat to yourself even impressions that aren't physical characteristics: tired eyes, inner strength. Squint until the head becomes a vague shape. Scan the outlines of that shape and note the main light and dark areas within it.



Squint to get a vague overview . . . and continue to squint frequently as you work. This helps you see the relationship between all the points.



Place eyes near midpoint line. Measure to be certain.



Where is the widest part of the face? You'll usually find it at the cheekbones.

Now you're ready to begin drawing. Start by lightly sketching the overall head shape. Once you've done this, find the top-to-bottom midpoint, using the methods already described. The midpoint will be somewhere near the eyes but you'll want to be as precise as possible. Rather than making a simple point there, draw a line horizontally across the face. Now draw a light vertical center line through the face from top to bottom. This line is a rough guide for the placement of features.

At this point, you should have something that looks like the examples on page 89. Drawing the overall shape, midpoint line, and center line has probably only taken a couple of minutes, but you've established three valuable references.

From now on, you'll be mixing use of your sighting strategies with drawing by eye in a back-and-forth process. There is no set procedure for doing this. I prefer to draw by eye first and then correct by measuring. Typically, I might draw in the eyes, nose, and mouth shapes lightly and then begin to measure and correct. You'll find the location of the eyes by their relationship to the midpoint line.

Measure the width of one eye and see if it is equal to the space between the eyes, as it is likely to be. Find the midpoint from the bridge of the nose to the chin. Is the base of the nose above or below it? Correct your drawing as needed. Is the mouth nearer the nose or nearer the chin? Extend plumb lines down from the pupils to locate the corners of the mouth. Compare widths of upper and lower lip. Use a level line to see how the mouth aligns with the corners of the jaw.

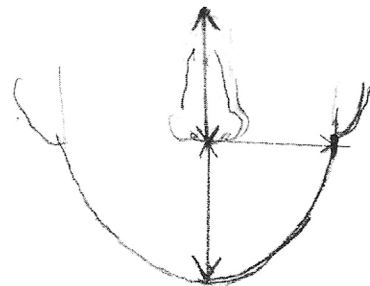
It's still too early to expect much resemblance to your model but patient measuring procedures combined with stepping back now and then will bring you increasingly closer to the likeness. The subtle refinements necessary here will require more erasing and adjusting than I've been encouraging until now, but don't be timid about leaving some restatements in your finished drawing.

Project 3 - D — Front View Portrait

Draw a front view head, mixing drawing by eye with all three sighting strategies. You will need to take many plumb and level measurements as well as comparative measurements — at least three of each. Use a model or draw your self-portrait in the mirror. Follow the procedures indicated in the text. Draw slowly and painstakingly, correcting and making subtle adjustments as you work. Use restatements as well as erasures to gradually refine your drawing. Work in pencil or charcoal and allow at least one hour, permitting the model to break every 15 or 20 minutes.

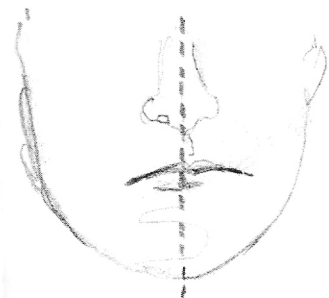
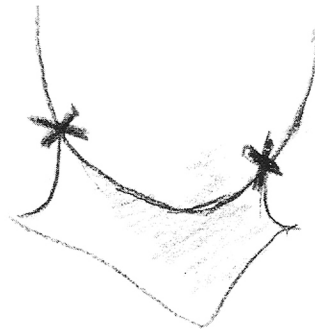


Measure distance between eyes. They are generally one eye-width apart.

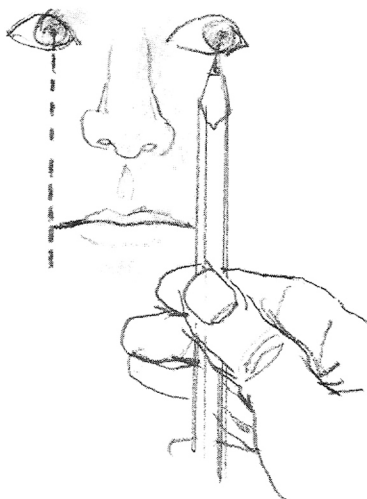


Measure length of nose and see how it compares to distance from base of nose to chin. Also compare this with nose to ear distance.

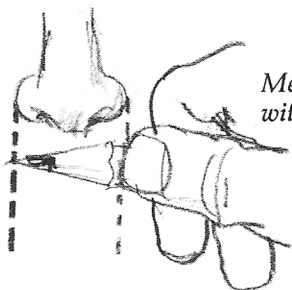
Notice, from your viewing angle, the exact points where neck and jaw meet. Avoid tendency to make neck too thin.



Center of mouth and base of nose are usually on center line. Here, because of the viewing angle, and a slightly protruding dental arch, the mouth is slightly off the center line.



Measure width of nose and compare it with width of eye.



Look for special distinguishing features. Here the lips are thin and the corners of the mouth turn slightly down.



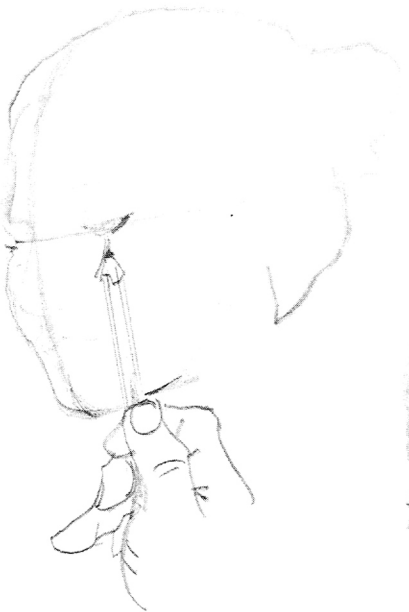
Try to get a good feel for the center line in the three-quarter view. Its location will depend upon the degree to which the head is turned.



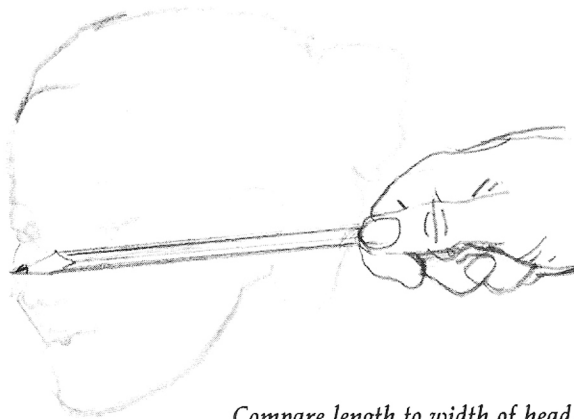
The three-quarter view

Drawing the head in the three-quarter view involves taking many of the same measurements we took with the full face. There are, however, a few noteworthy variations.

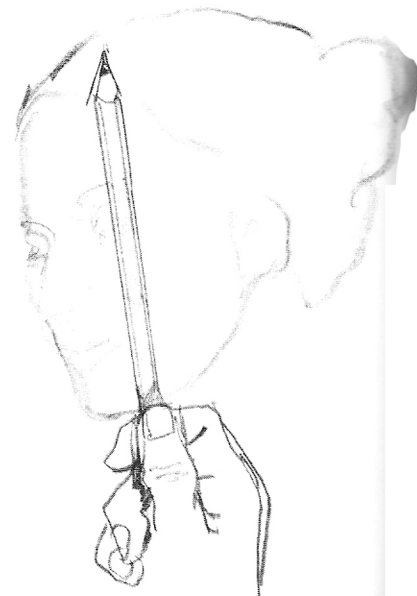
When viewed from the front, the head is basically egg shaped, that is, longer than it is wide. As it is turned to the side, though, more of the back of the head is revealed until, at full profile, the distance from the forehead to the back of the skull is about the same as from the top of the head to the chin. Students commonly shave off the back of the head unless they are careful to make their comparative measurements. Be sure also to measure the distance from the near eye to the chin and compare it to the distance from that eye to the back of the ear.



See how pupils of eyes align with corners of mouth.

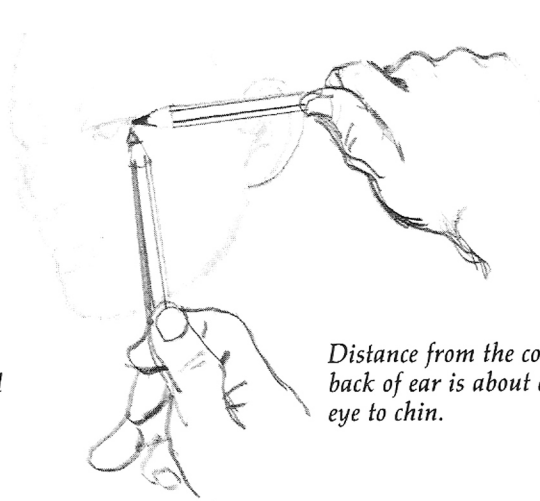


Compare length to width of head.





Draw carefully the trapped shapes created by the coincidence of nose and cheek (the darkened areas of the diagram).



Distance from the corner of the eye to back of ear is about equal to corner of eye to chin.



Eye shapes are different from each other, especially when seen in three-quarter view.

Because the face is three-quarter turned, the center line — on either side of which the features are aligned — will be off to one side or the other as shown in the diagram at left. This means that all the features are uniformly shifted in that direction. It follows then that the tip of the nose and the far cheek are going to be in some proximity to each other. They may even form a tangent, but, whatever the relationship, it will provide an important indication as to how far the head is turned. This juncture of nose and cheek also creates a trapped shape on the far side. Remember, "If you see a trapped shape, draw it." In the example shown, several trapped shapes have been created. The piece from the tip of the nose to the eyebrow has some smaller shapes within it, and there is another piece of cheek between nose and lower lip. Take the time to draw these shapes carefully.

In the three-quarter view, the eyes will not be one eye-width apart, and they will be noticeably different from each other in size and shape. Recalling our discussion of eyes in Chapter 1, you'll remember that the far eye appears as a smaller and more open shape.

As you can see from the examples, an off-center mouth is a common and serious student problem. If the center of the mouth does not align with the base of the nose, everything else in the lower face is likely to be wrong, too. The center line will help you align these two points so that you can then draw in the mouth line. The darker, more important, mouth line is drawn first, and serves as a reference for placement of the lips.



Notice exact point where neck disappears behind ear.

Watch the nose/mouth alignment carefully.



Mouth too far to the right



Mouth too far to the left



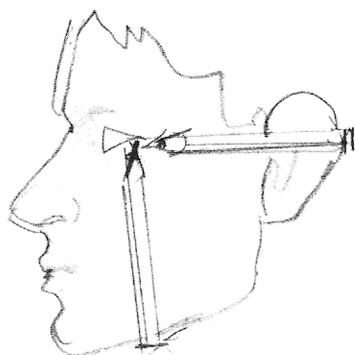
Nose and mouth properly aligned

Project 3 - E — Three-Quarter View Portrait

Follow the procedure in Project 3 - D for a front view portrait but pay particular attention to the location of the center line, so you can properly align the features. Also note the size and character of the trapped shapes on the far side of the face.



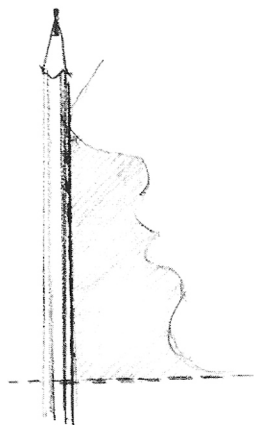
Measure height and width of hair shape.



Compare eye to back of ear with eye to chin. They should be approximately equal.



Check alignment from front of eye to corner of mouth.



Study this trapped shape between pencil and lower face. Does chin align with base of nose?

Front-view head is much longer than wide.

Three-quarter-view head is only a little longer than wide.

In the profile, length and width are nearly equal.

Profile

In the profile view we concentrate critical measuring on the front portion of the face. Here is where we'll do most of the subtle individualizing of our model. As usual, study your subject for a few moments. You'll definitely need a model for this project. Your own reflection won't work, even with two mirrors.

You might want to get your impression of the head down on your paper with a few light strokes. You'll have no center line in a profile head of course, and, for the moment, we'll eliminate consideration of the midpoint line as well. You'll want to focus all your energy on the contour line which encompasses forehead, nose, mouth, and chin. I recommend drawing this by eye. Be prepared to make a number of revisions after measuring and aligning.

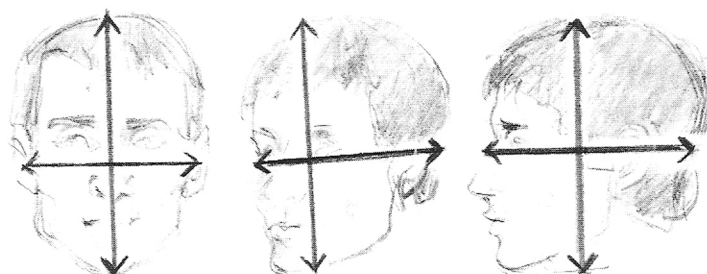
At this stage, a useful procedure is to take a vertical sighting of your model off the tip of the nose to see if you can get a feeling for the trapped shapes both above and below the tip of the nose. Is there a pronounced bridge to the nose? How much curve is in the forehead? Study the action of the forehead and chin and note whether they are more or less parallel to your pencil or, if they fall away, at what angles.

Establish the chin and crown. Find the midpoint, which should be at or near the eye. In placing the eye, make sure it is far enough back from the bridge of the nose by comparing that distance with the width of the eye shape.

The mouth line generally occurs about one-third of the way down between the base of the nose and the chin. Ascertain this by measuring. A plumb line from the front of the eye should help you locate the corner of the mouth. Drop a plumb line from the base of the nose. Do the lips protrude beyond this line? If not, by how much are they recessed? Check the chin in the same manner. There are other fine measurements you can make, for instance, the relative thickness of the upper and lower lips, the distance from eye to eyebrow, the width of the nose flange. Although I don't want you to forget about spontaneity, every additional measurement you take will contribute to overall accuracy.

It's important not to undermine your good efforts in the critical area of the face by lazy observation of the simple parts. Let's consider the rest of the head. We mentioned before the common mistake of drawing the back of the head too small. Measure the length of the head and compare it with the width — including hair mass — so you aren't tempted to shave off any of the skull. Make sure you get the hair shape sufficiently large and accurately drawn; it's frequently about the same size as the face.

To get the proper ear placement, compare the distance from the corner of the eye to the back of the ear and, perpendicular to it, the distance from the corner of the eye down to the jawline. Pay attention to the neck, notice how it pitches slightly forward and joins the head at a higher point in the back than in the front. To get the width, a good comparison to make is with the distance from the corner of the eye to the jaw.

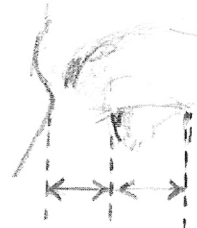




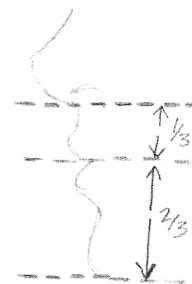
Most critical measuring occurs in this front area.



Neck joins head at the base of the skull.



Measure distance from front of eye to bridge of nose. Compare this distance with the eye width.



Compare mouth-to-nose distance with mouth-to-chin distance.



This is the same model with beard and hat.

Foreshortening heads

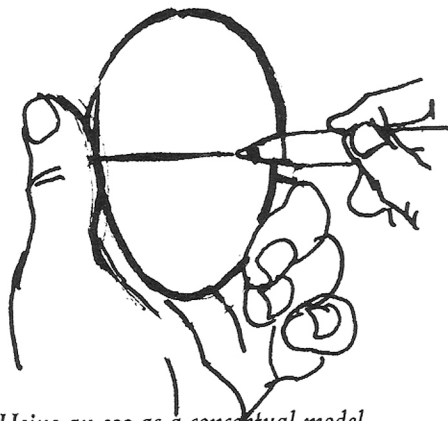
We've seen the kind of shape and proportional distortions that occur when the head is looked at from an end view. Drawing can be difficult in such cases, because the distortions may seem too great to accept. Instead, beginners will frequently alter their drawings to make them more "sensible," but will be perplexed when the result is less than convincing.

Some of you will trust me when I say, "Draw what you see," and you will get good results. For those of you who are resistant, I offer something that was of enormous help to me when I first tackled this problem: the egg head.

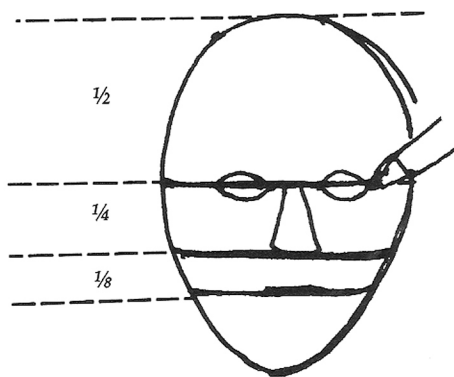
You'll need to draw three horizontal lines around an egg upon which will be drawn the eyes, nose, and mouth. The eye line is drawn around the middle of the egg, the nose line halfway below that, and the mouth line one-third the distance below that. Darken two little almond-shapes for the eyes on the mid-line and draw in a long wedge-shaped nose from between them and down to the nose line. On the line below that, draw in a mouth. Putting in some eyebrows, too, will help you place the ears. Turn your egg to either side and draw them in between the nose and eyebrow lines.

You'll get more out of this if you can get someone to sit about five feet from you and tip their head forward and back as you move the egg in the same way. Close one eye and hold the egg up beside your model's face. Adjust forward and back until the egg is the same size as the human head.

When you look straight at the egg, the features appear proportionally spaced, and the lines you've drawn appear as straight horizontals. When you tip it, you create an example of foreshortening. As one end is tipped toward you, the features compress and gather at the other end. Notice that the same thing happens on your friend's face. Tip the forehead-end of the egg toward you and ask the model to do the same. Notice how the features seem to gather down near the chin. Tilt it back the other way, and you'll see how they gather at the forehead. Notice how the facial features become more curved the further you tip the head, revealing the wrap-around nature of their underlying form.



Using an egg as a conceptual model, draw a line around the midpoint.



Draw nose line at the half-way point below the eye line, and draw the mouth line one-third the distance below that. Add simple features.

Compare egg with a real person.



Note the proximity of eye to base of nose in this foreshortened view.



Project 3 - F — Foreshortened Head

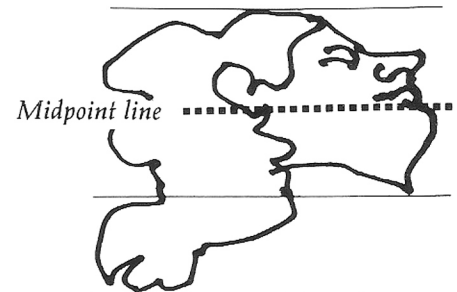
Draw from a model a foreshortened head, tipped either up or down. Mix drawing by eye with all three sighting strategies, but take special care to accurately find the midpoint. Force yourself to draw exactly and only what you see. Use level lines to make sure features appear to curve around the head. Use eye, nose, and hair mass for comparative measuring. Use pencil or charcoal and restate and erase as necessary. Allow at least one hour.

Though their shape alters when the head is tipped, the ears act as pivot points and remain in the same place. They will appear, however, much higher than the eyes when the head tips down and much lower than the eyes when the head tips back.

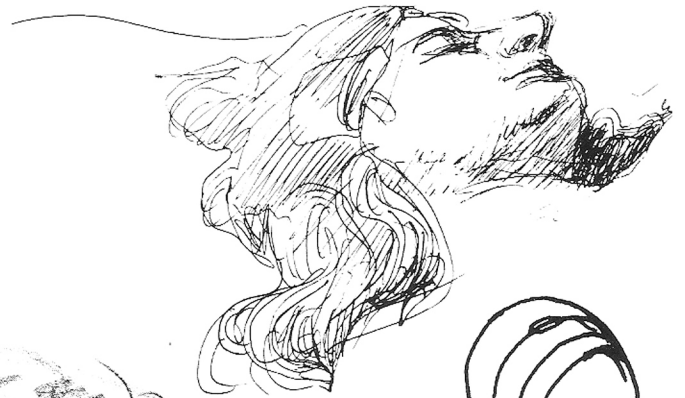
The egg model is an excellent way to understand what you see when you look at a foreshortened head, but it does not account for the protrusion of the nose and inset of the eyes. For an understanding of these complications, we must look to our human model. When the head is cast far downward, the nose tip may extend to or even overlap the mouth. It sounds strange, but it makes sense when you see it. When the head is tilted severely back, the nose may extend above the eyes and eyebrows.

The inset of the eyes in their sockets makes for another unusual situation. Viewed from above, the eyebrows are very close to the eyes and perhaps may obscure them. From below, the eye-to-eyebrow measurement may actually increase over the same distance when viewed from the front.

Students commonly find it difficult to force themselves to draw these things when they occur unless they have a little understanding of the underlying principles. In the egg, we have a conceptual model that clarifies what happens when the head is viewed either from above or from below. If measuring is generally critical when drawing the human face, it is particularly so when drawing the foreshortened face. Because the features are more compressed, the tolerances are that much closer. You should, however, find yourself able now to use your sighting procedures unimpeded by old mind-sets about the face.

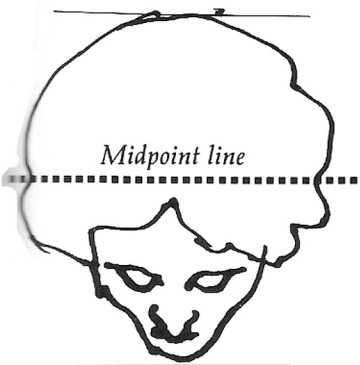


Note alignment between chin and ear.

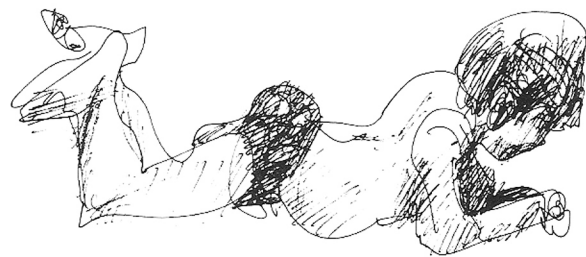
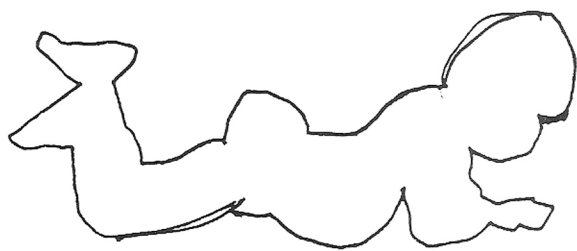


When tipped back, features gather near the top.

Be sure to get the hair shape large enough. It is often larger than the face shape.



When the head is tipped forward, the features gather near the bottom.



Intensify "kid" proportions like pot belly, sway back, rounded rump.

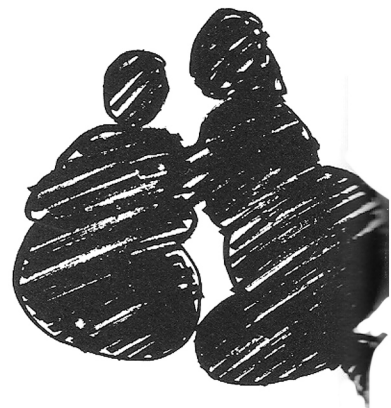
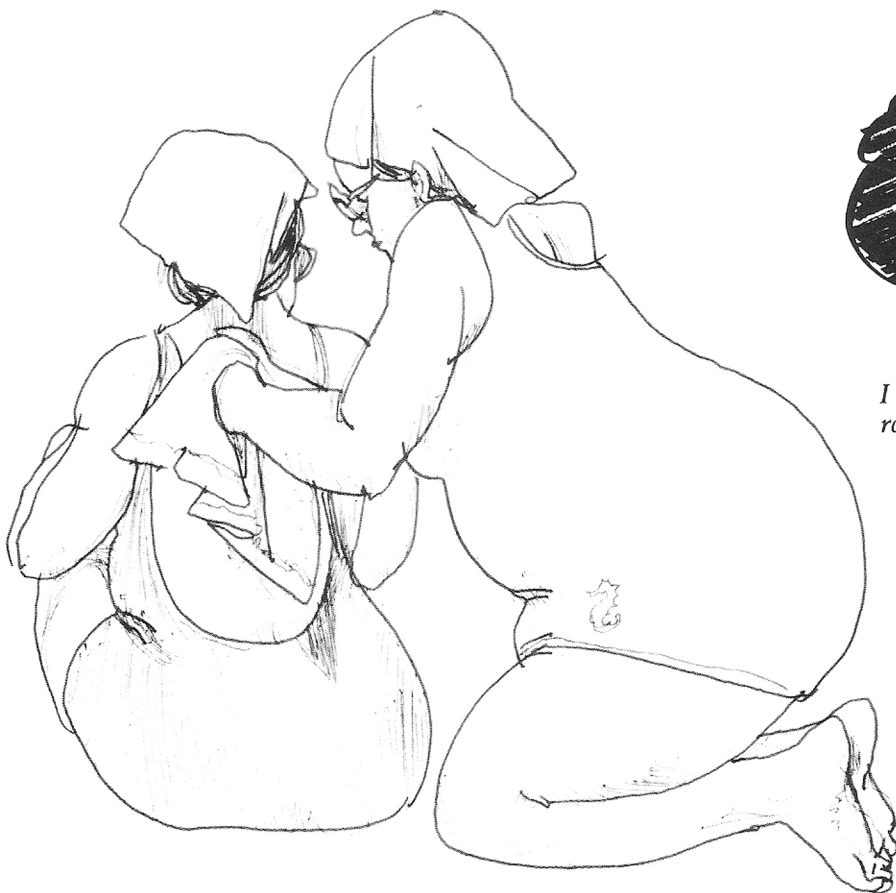
Intensifying proportions

In case you're feeling slightly constrained by all this talk of "accuracy and precision" and "drawing only what you see," I recommend that you break out from time to time and intensify important characteristics in your subject. Draw what you see — only more so. If something is round, make it rounder. When you see bony angles, make them bonier.

I believe that most of us, students and artists alike, ought to concern ourselves less with what we think is the right way to draw and more with letting our feelings flow through our hand. In this way, we stretch our dynamic nature. Our larger goal should be to draw in a way that expresses our vision. We'll discuss other ramifications of intensifying in later chapters, but for now I suggest that in your casual drawings you occasionally get into a playful spirit and add a dimension of excess.



This profile had a Dick Tracy quality. I made it even more so.



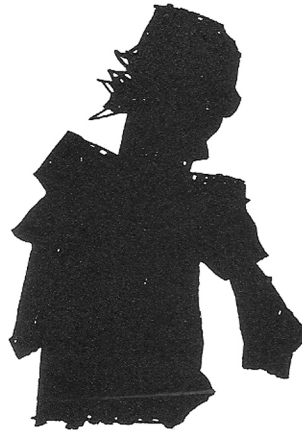
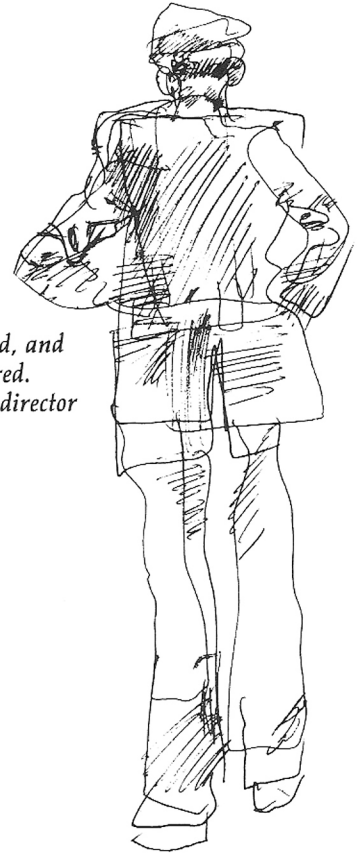
I emphasized the heavy rounded shapes.



An assortment of intensified shapes—



*Tall, long-legged, and square shouldered.
(Sketch of film director John Huston.)*



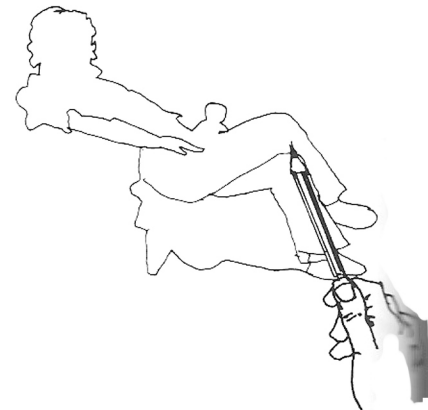
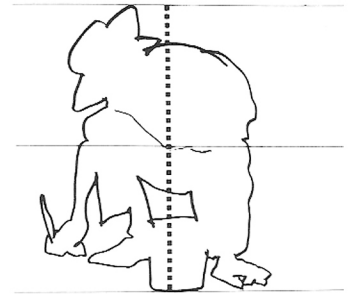
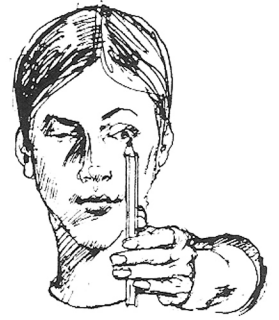
Spiky, bony, and angular



KEYS TO CHAPTER 3

Proportions: taking the measure of things

- **Sighting.** Use your pencil as a measuring tool by holding it in front of you, arm extended, one eye closed. Take measurements between the point of the pencil and your thumb.
- **Find the midpoint.** Use this method to get a quick overall sense of proportions. It will also help you place your subject on the paper.
- **Use plumb and level.** By holding your pencil either vertically or horizontally, you'll be able to establish alignments which not only enhance proportions but also provide you clues to the action of the pose.
- **Compare measurements.** Various parts of your subject should be measured in relation to others. In particular, look for parts which seem to be of more or less equal length.
- **Foreshorten.** The more you see of the end view of something, the less you see of its sides. An object so situated should be drawn in just this way even though, as you draw, it may seem distorted.
- **Measure critically.** Where accuracy is essential, as in portraiture, take special care with your measurements and take more of them.
- **Intensify proportions.** Look for distinguishing characteristics and emphasize them. This occasional expression of the interaction between your feelings toward your subject and the subject itself stimulates your faculties.



SELF-CRITIQUE OF YOUR PROJECTS

Project 3 - A — Standing Figure

YES NO

- Did you alternate between drawing by eye and measuring? _____
- Did your drawing fill the page from top to bottom? _____
- Did you use the sighting procedure to find the midpoint? _____
- Is the midpoint of your figure near the middle of your page? _____
- Did you locate a secondary midpoint? _____

Project 3 - B — Lounging Figure

YES NO

- Did you begin with a gesture sketch? _____
- Did you modify and correct with comparative measurements? _____
- Did you alternate between direct drawing by eye and by measuring? _____
- Did you use at least two plumb alignments? _____
- Did you use at least two level alignments? _____
- Did you locate the midpoint and does your drawing fill the page? _____

Project 3 - C — Reclining Figure (Foreshortened)

YES NO

- Did you position yourself to establish a definite foreshortened view? _____
- Did you draw the shapes just as you saw them? _____
- Did you find the midpoint with the sighting method? _____
- Did you use at least two plumb and two level alignments? _____
- Did you correct and restate with at least two comparative measurements? _____
- Were you careful in accurately drawing the head shape? _____

Project 3 - D — Front View Portrait

YES NO

- Did you first gather an overall impression, using triggering words to remind yourself of the subject's prominent features? _____
- Did you lightly sketch in the overall head shape with a few suggested lines for features? _____
- Did you establish a center line to properly align the features? _____
- Did you locate the midpoint line and note its relationship to the eyes? _____
- Did you use at least three comparative measurements? _____
- Did you make subtle adjustments by erasing and restating? _____

Project 3 - E — Three-Quarter View Portrait

YES NO

- Did you first gather an overall impression, using triggering words to remind yourself of the subject's prominent features? _____
- Did you lightly sketch in the overall head shape with a few suggested lines for features? _____
- Did you establish a center line to properly align the features? _____
- Did you locate the midpoint line and note its relationship to the eyes? _____
- Did you use at least three plumb and three level alignments? _____
- Did you use at least three comparative measurements? _____
- Did you observe and carefully draw the trapped shapes on the far side of the face? _____

Project 3 - F — Foreshortened Head

YES NO

- Did you mix drawing by eye with measuring strategies? _____
- Did you establish the midpoint carefully and accurately? _____
- Did you force yourself to draw only what you saw? _____
- Did you use level lines to ensure that features curved around the head? _____
- Did you use eye, nose, and hair mass in your comparative measuring? _____
- Did you take pains to draw the face shape accurately? _____
- Did you pay particular attention to the location of the tip of the nose? _____
- Did you make subtle adjustments by erasing and restating? _____