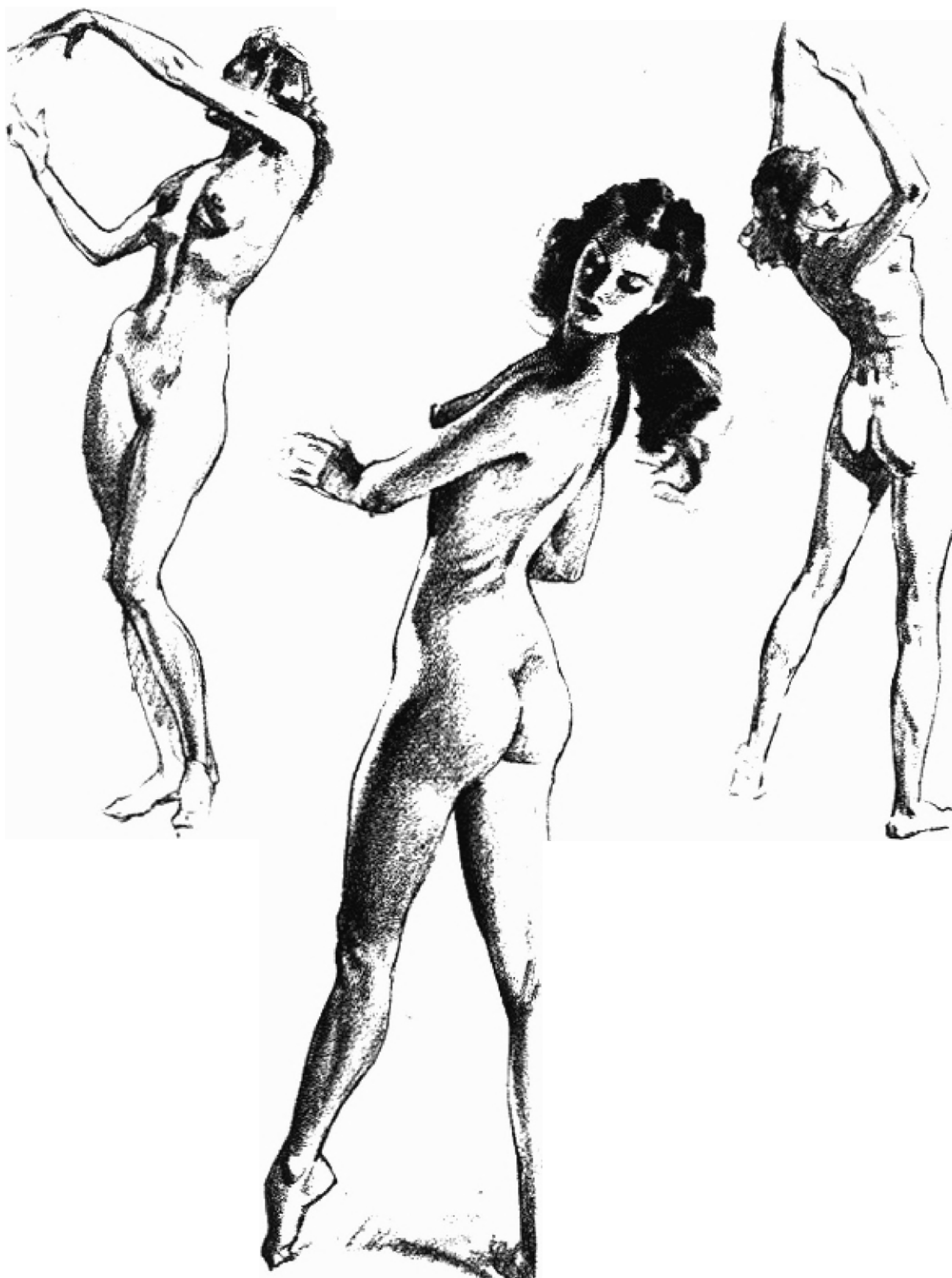


FIGURE DRAWING FOR ALL IT'S WORTH

A BOOK OF FUNDAMENTALS FOR AN ARTISTIC CAREER



THE MANNIKIN FIGURE

The foregoing has given us a general framework to which we can now add a simplification of the bulk or solid aspect of the figure. It would be both tedious and superfluous if, every time we drew a figure; we went through the whole procedure of figure drawing. The artist will want to make roughs and sketches that can serve as an understructure for pose or action — perhaps to cover with clothing, perhaps to work out a pose that he will finish with a model. We must have some direct and quick way of indicating or setting up an experimental figure — one with which we can tell a story. The figure set up as suggested in the following pages will usually suffice. Properly done, it can always be developed into the more finished drawing. When you are drawing a mannikin figure, you need not be greatly concerned with the actual muscles or how they affect the surface. The mannikin in drawing is used much as is a "lay" figure, to indicate joints and the general proportion of framework and masses.

The mannikin serves a double purpose here. I believe that the student will do much better to set up the figure this way and get the "feel" of its parts in action than to begin at once with the live model. It will not only serve for rough sketches but will also become an ideal approach to the actual drawing of the figure from life or copy. If you have the frame and masses to begin with, you can later break them down into actual bone and muscle. Then you can more easily grasp the placing and functions of the muscles and what they do to the surface. I am of the opinion that to teach anatomy before proportion - before bulk and mass and action - is to put the

cart before the horse. You cannot draw a muscle correctly without a fair estimate of the area it occupies within the figure, without an understanding of why it is there and of how it works.

Think of the figure in a plastic sense, or as something with three dimensions. It has weight that must be held up by a framework which is extremely mobile. The fleshy masses or bulk follows the frame. Some of these masses are knit together quite closely and adhere to the bony structure, whereas other masses are full and thick and will be affected in appearance by action.

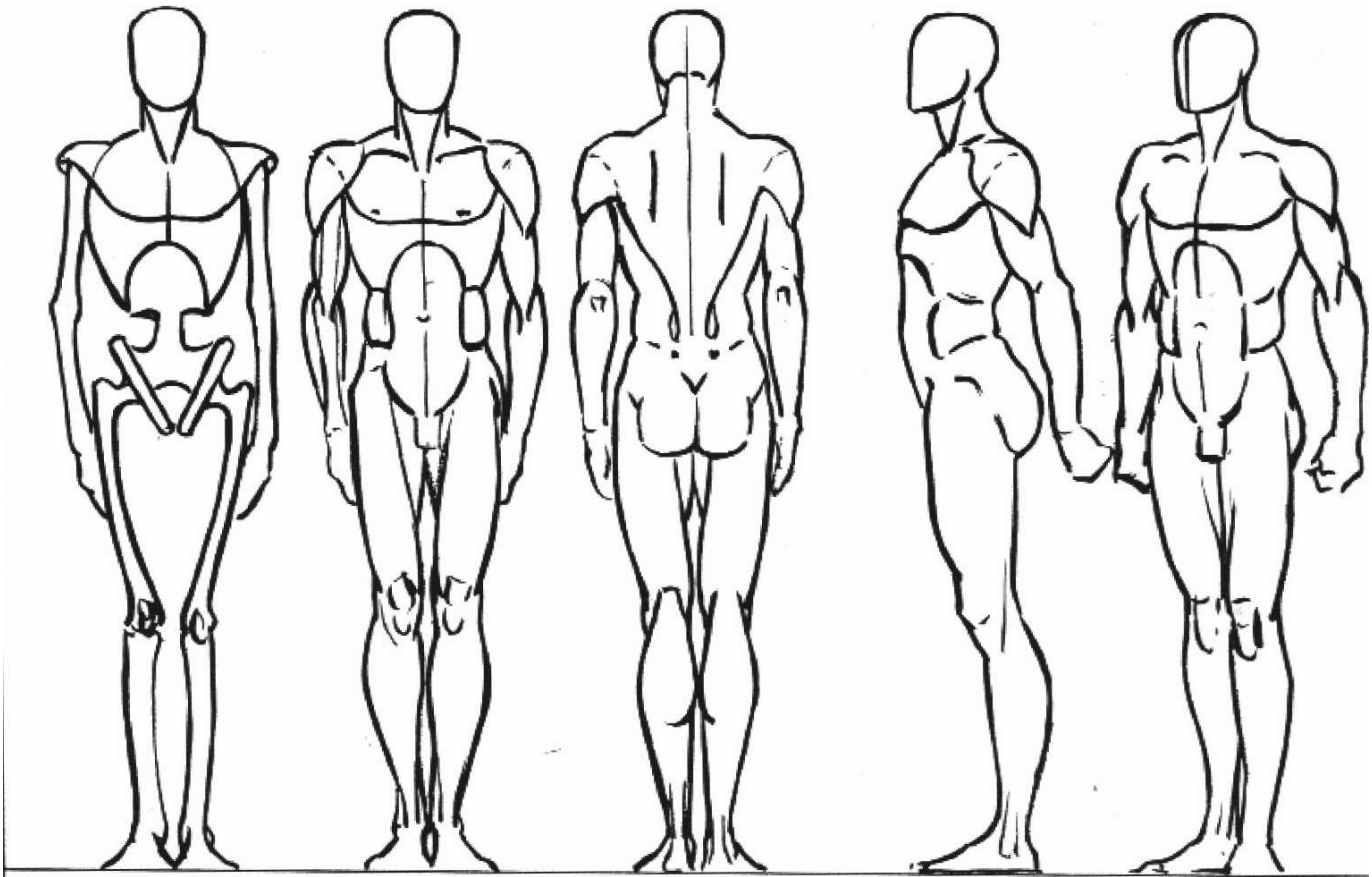
If you have never studied anatomy, you may not know that the muscles fall naturally into groups or chunks attached in certain ways to the frame. We will not treat their physiological detail here, but consider them merely as parts interlocked or wedged together. Hence the human figure looks very much like our mannikin. The thorax, or chest, is egg-shaped and, as far as we are concerned, hollow. Over it is draped a cape of muscle extending across the chest and down the back to the base of the spine. Over the cape, in front, lie the shoulder muscles. The buttocks start halfway around in back, from the hips, and slant downward, ending in rather square creases. A V is formed by the slant above the middle crease. There is actually a V-shaped bone here, wedged between the two pelvic bones that support the spine. The chest is joined to the hips by two masses on either side. In back the calf wedges into the thigh, and in front there is the bulge of the knee.

Learn to draw this mannikin as well as you can. You will use it much more often than a

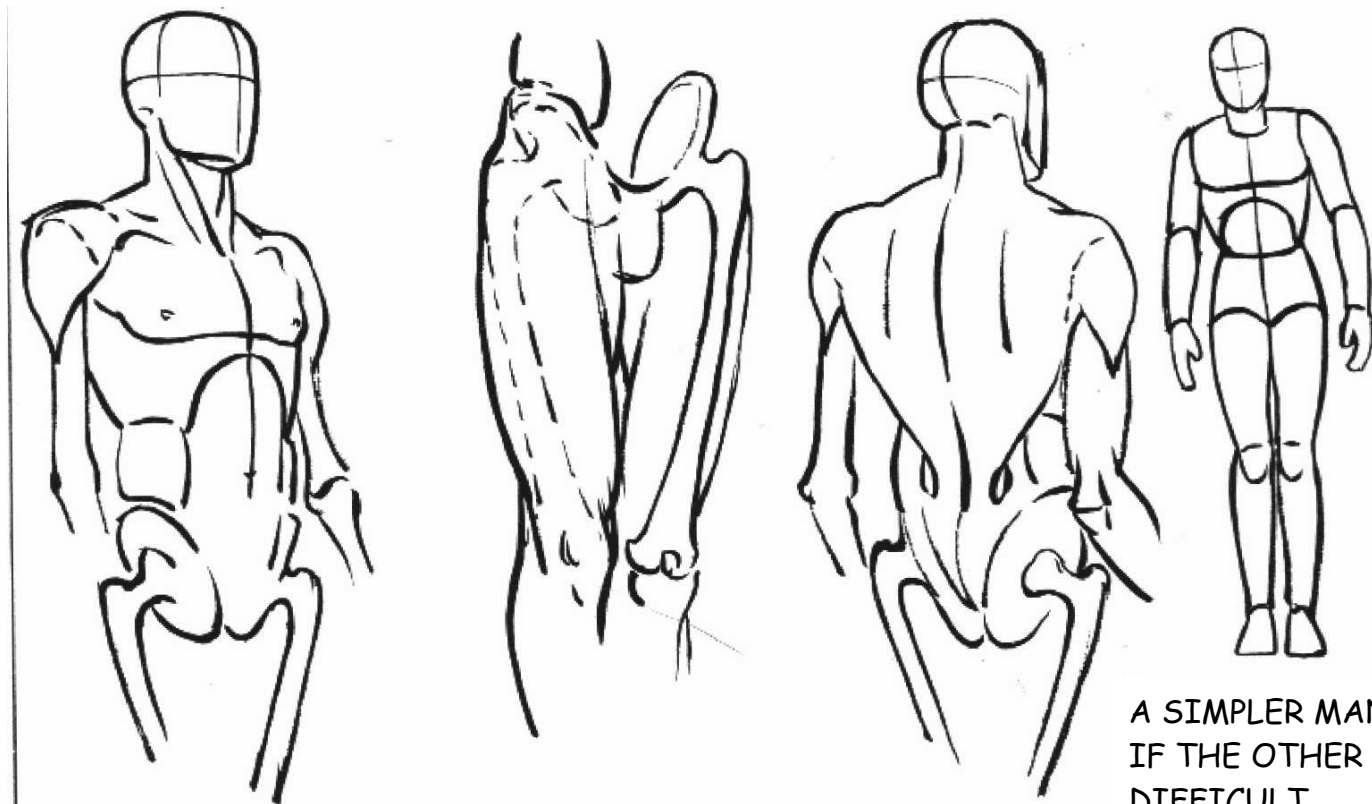
careful anatomical rendering. Since it is in proportion in bulk and frame, it may also be treated in perspective. No artist could possibly afford a model for all his rough preliminary work—for layouts and ideas. Yet he cannot intelligently approach his final work without a preliminary draft. If only art directors would base their layouts on such mannikin figures, the finished figures would all stand on the same floor, and heads would not run off the page when drawn correctly.

ADDING BULK TO THE FRAME

THE GROUPS OF MUSCLES SIMPLIFIED



DEVELOPING THE PREVIOUS FRAME WITH SIMPLIFIED MUSCLE GROUPS LAID ON TOP.



A SIMPLER MANNIKIN
IF THE OTHER IS TOO
DIFFICULT.

WE WILL STUDY THE "ACTUAL" BONE AND MUSCLE CONSTRUCTION LATER. GET THIS.

ADDING PERSPECTIVE TO THE SOLID MANNIKIN



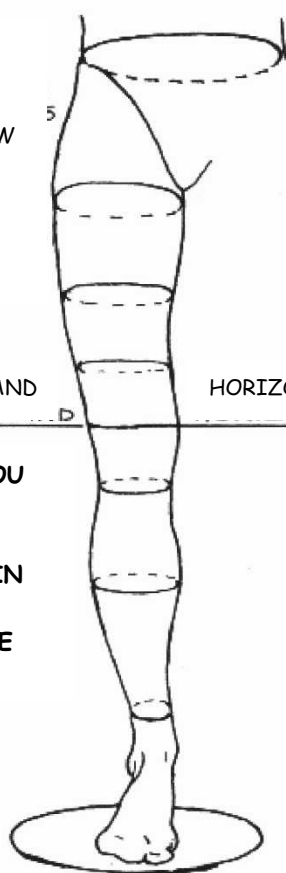
HERE IS A GROUP OF CYLINDERS, NOTE HOW THE ELLIPSES NARROW DOWN AS THEY NEAR THE EYE LEVEL, EITHER FROM ABOVE OR BELOW

EYE LEVEL AND

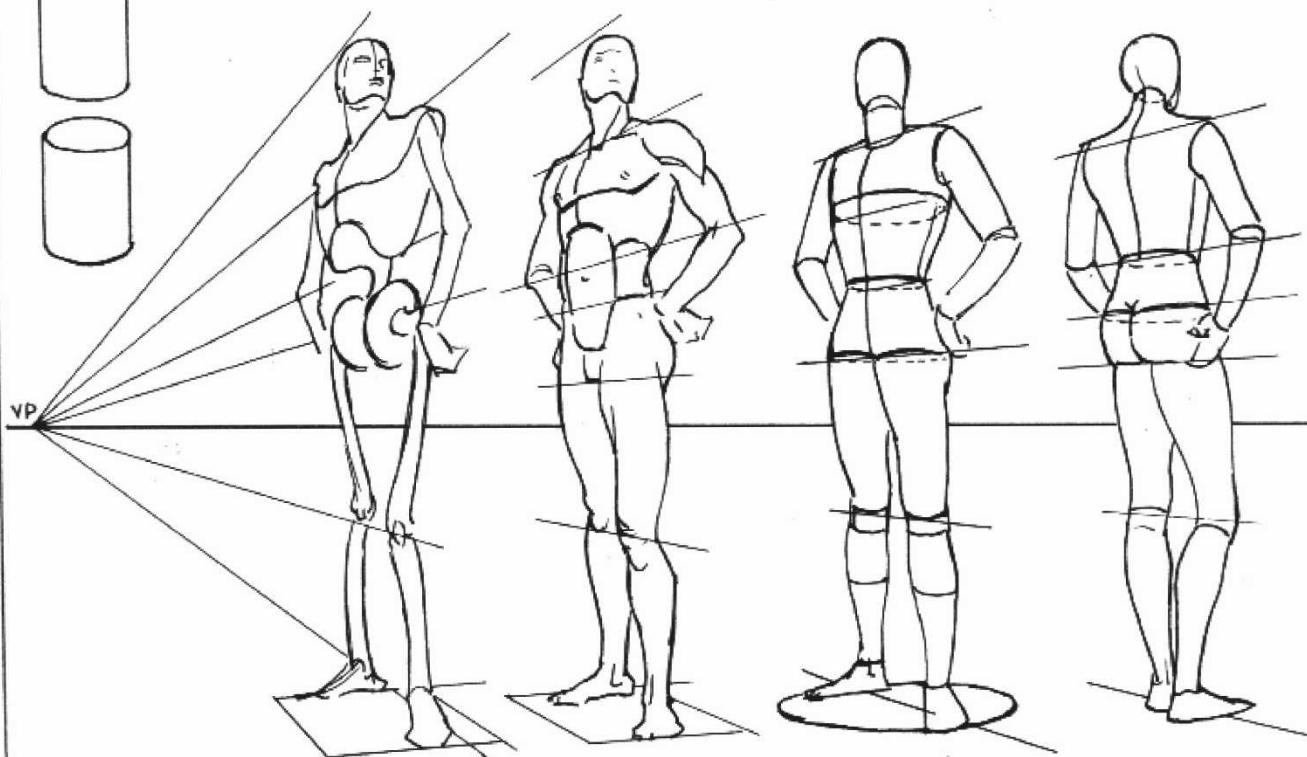
HORIZON



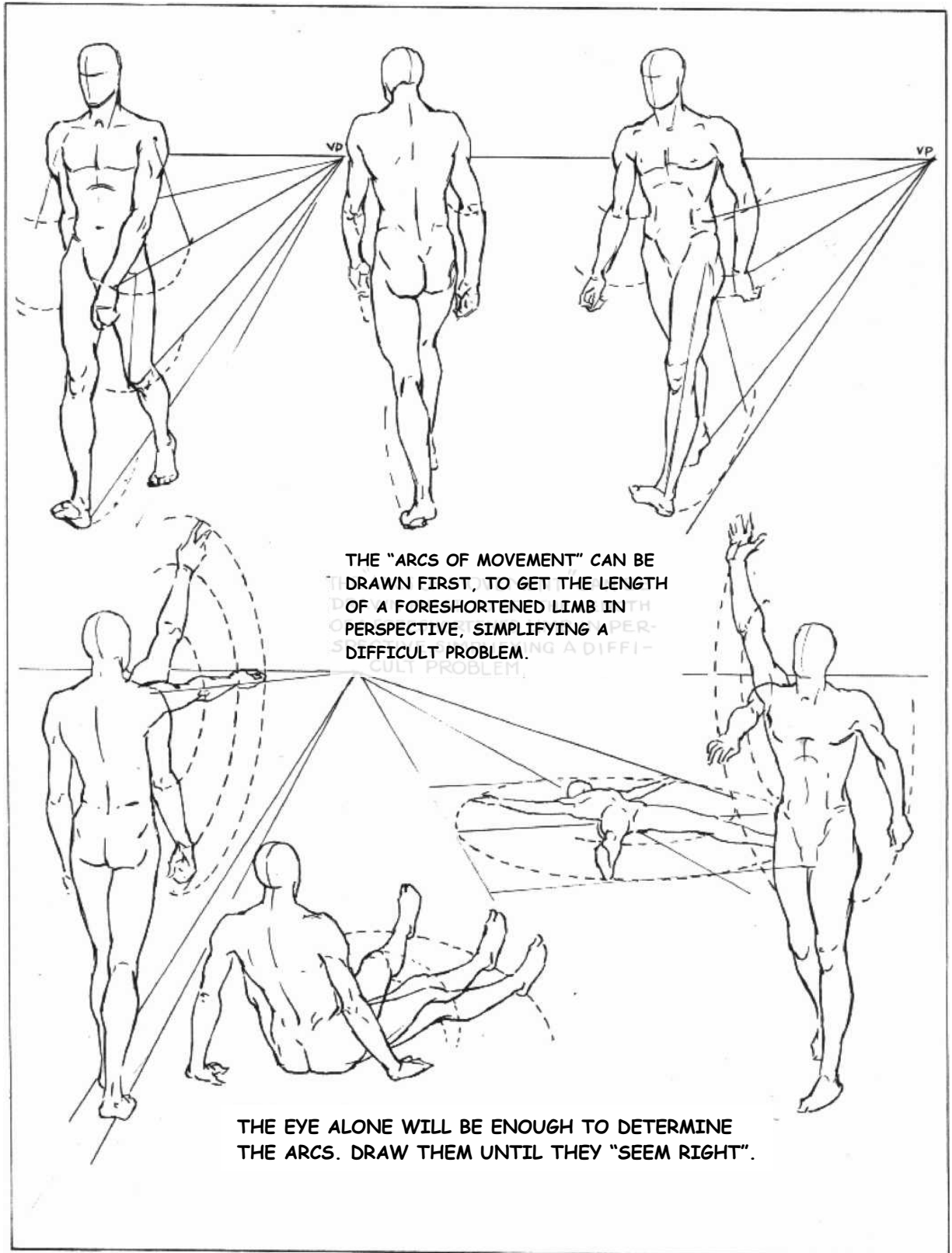
FROM THIS YOU GET THE PRINCIPLE OF PERSPECTIVE IN THE ROUND FORMS ON THE FIGURE.



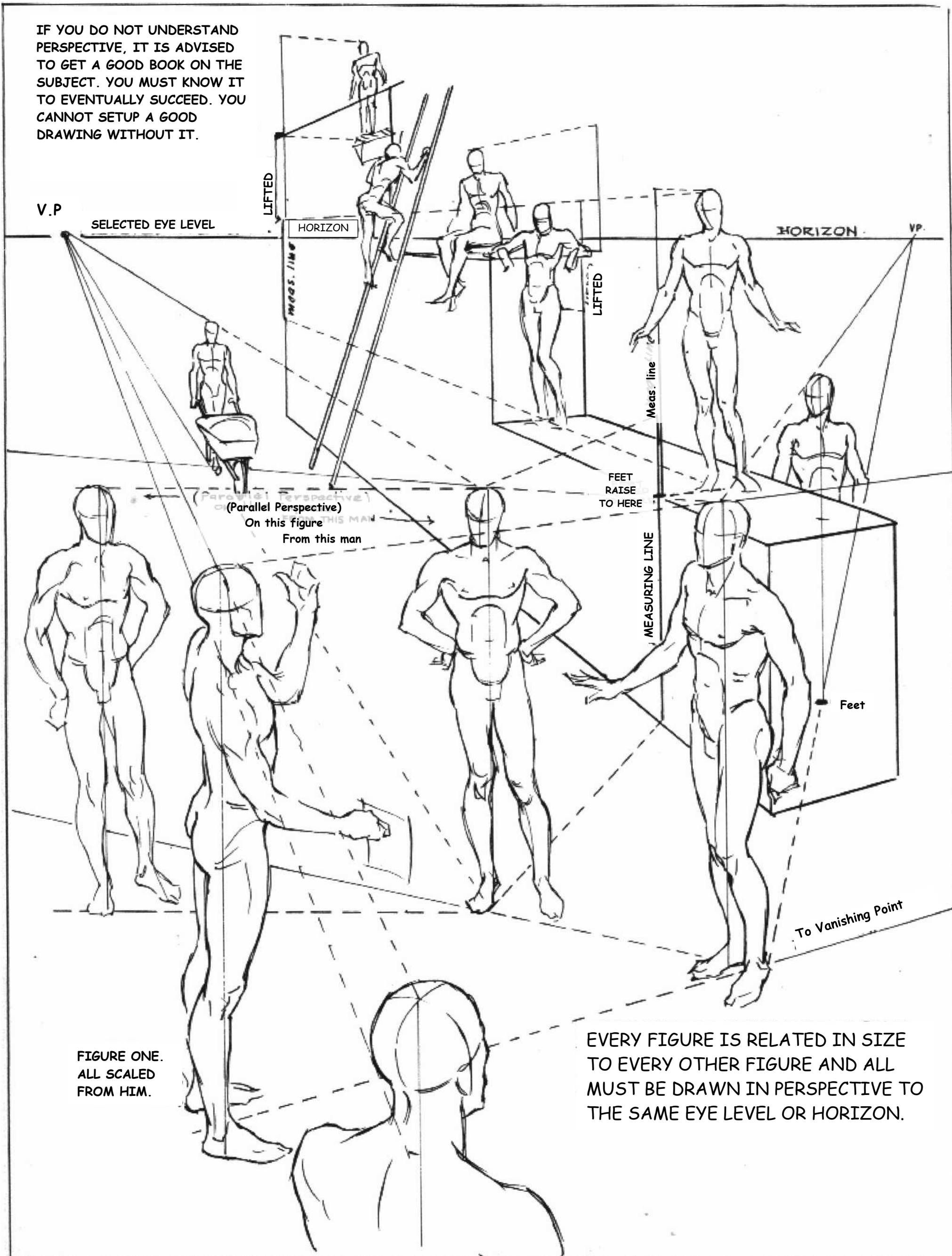
TRY DRAWING YOUR MANNIKIN FIGURE TO THE HORIZON



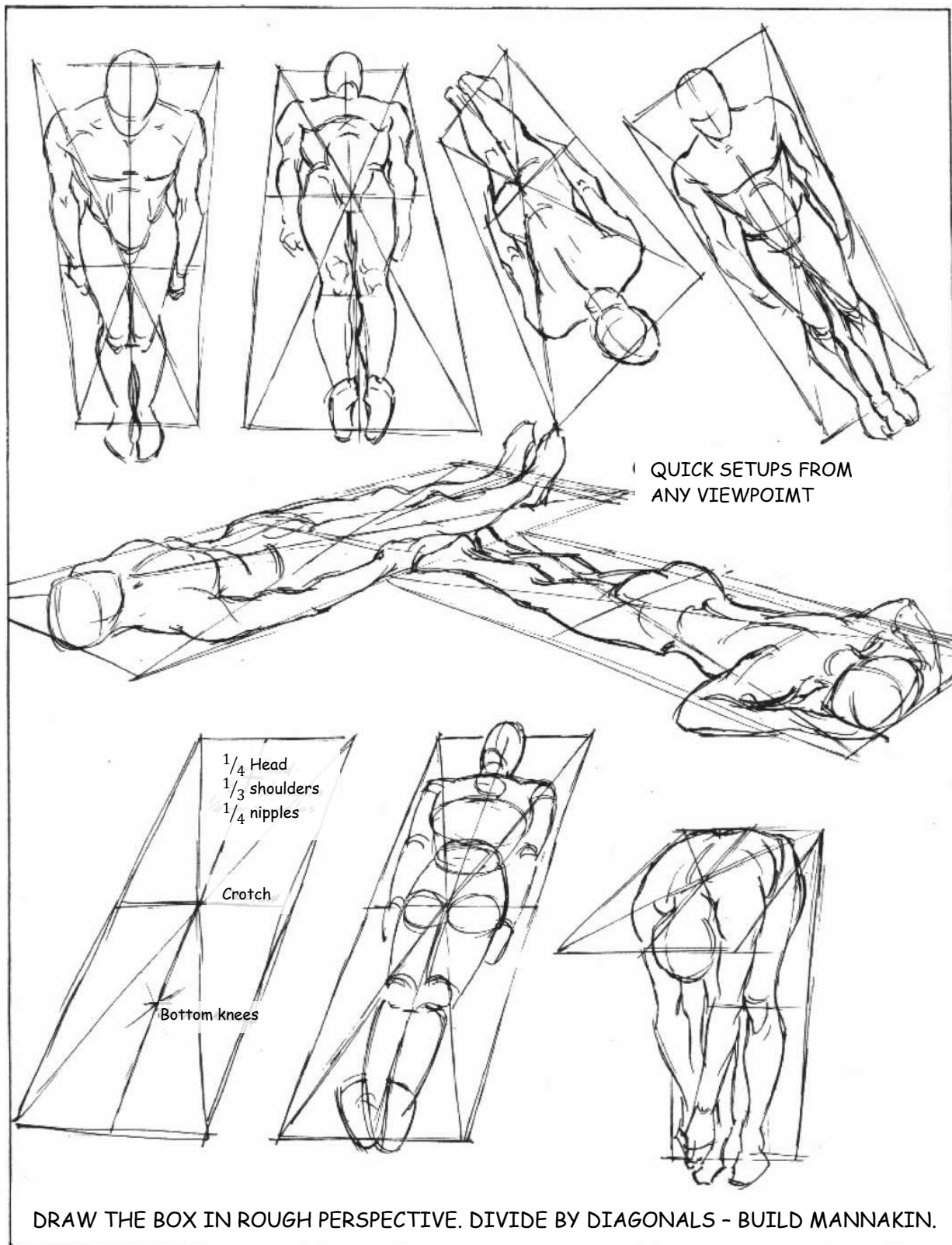
ARCS OF MOVEMENT IN PERSPECTIVE



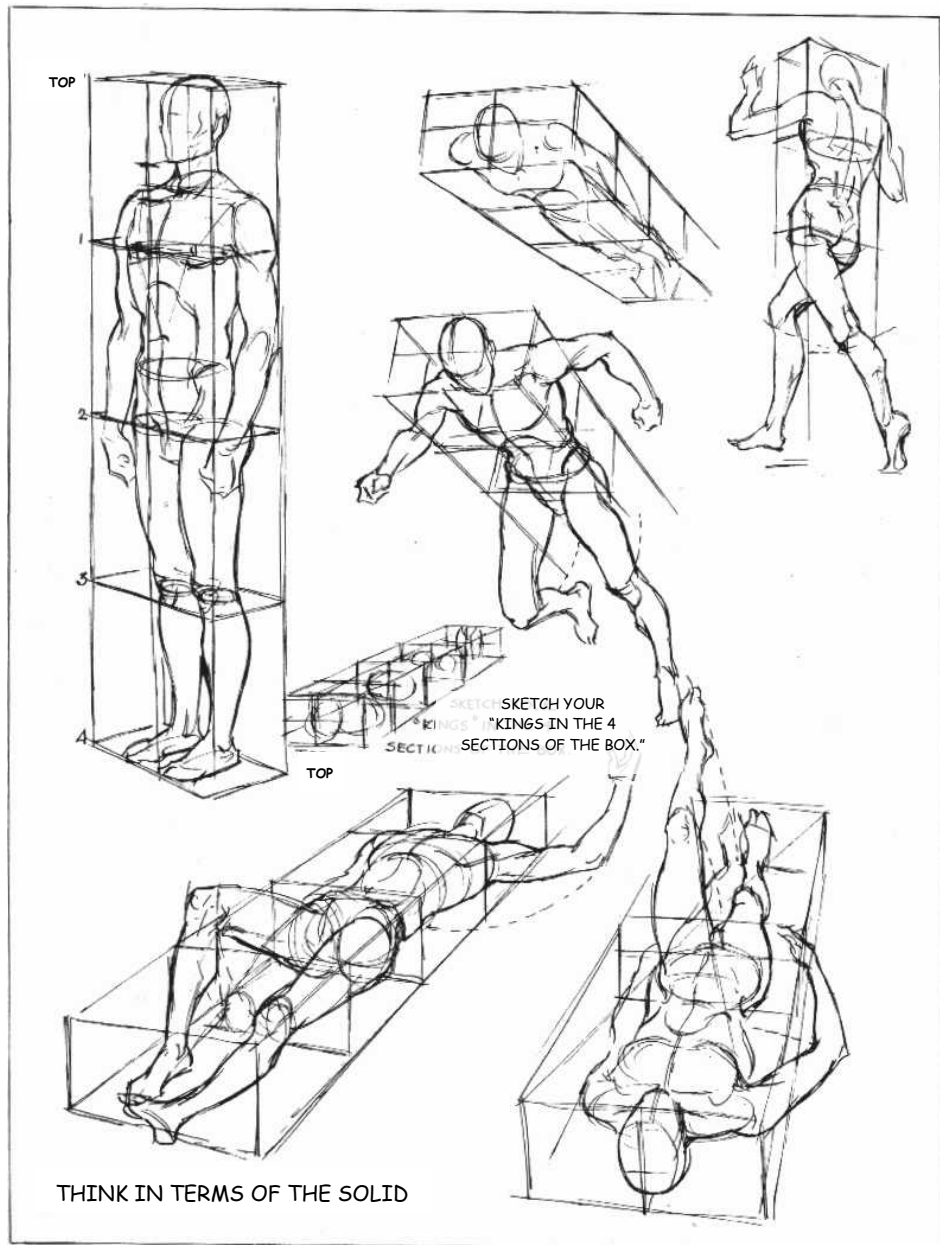
IF YOU DO NOT UNDERSTAND PERSPECTIVE, IT IS ADVISED TO GET A GOOD BOOK ON THE SUBJECT. YOU MUST KNOW IT TO EVENTUALLY SUCCEED. YOU CANNOT SETUP A GOOD DRAWING WITHOUT IT.



DRAWING THE MANNIKIN FROM ANY VIEWPOINT

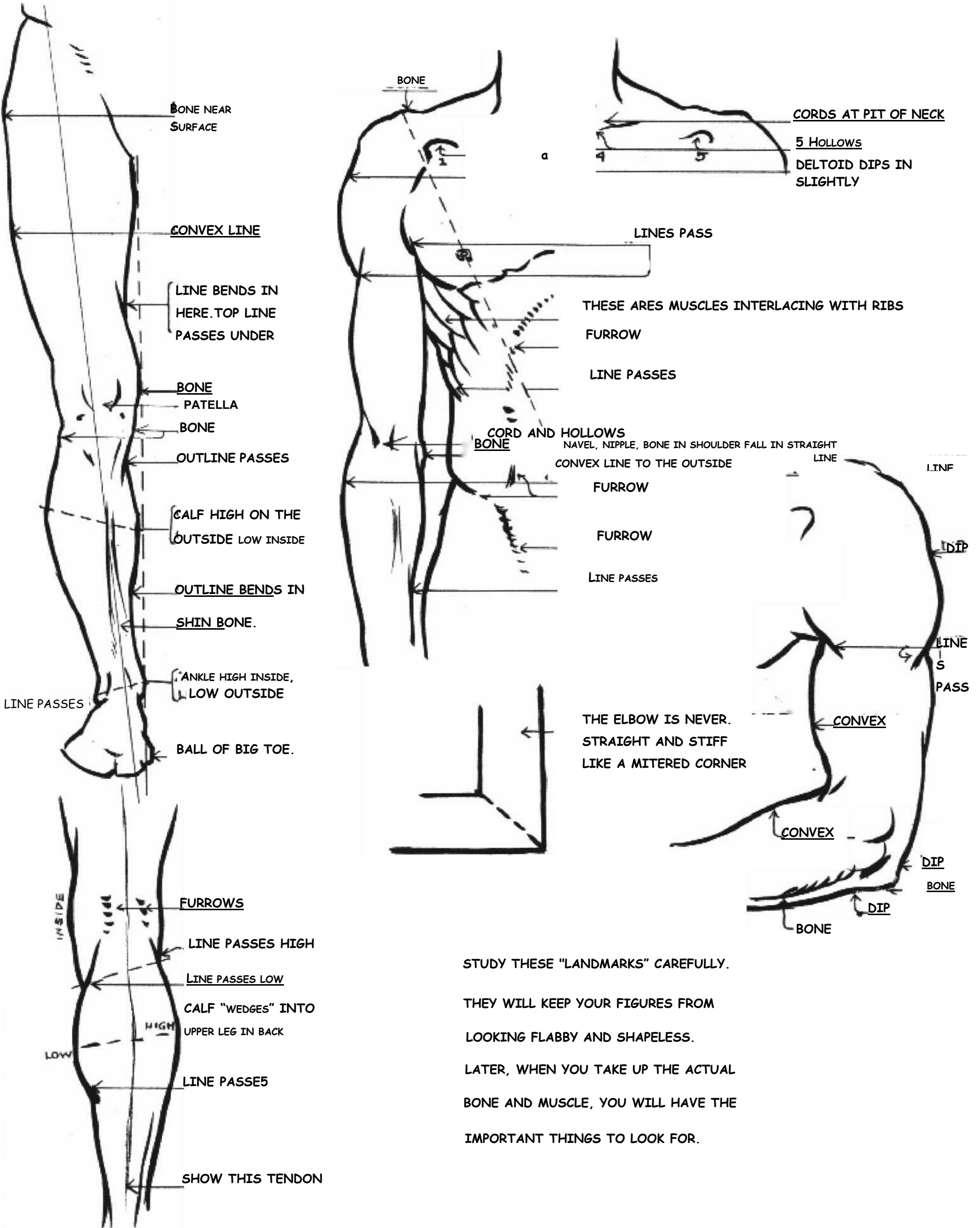


COMBINING ARCS OF MOVEMENT WITH THE BOX



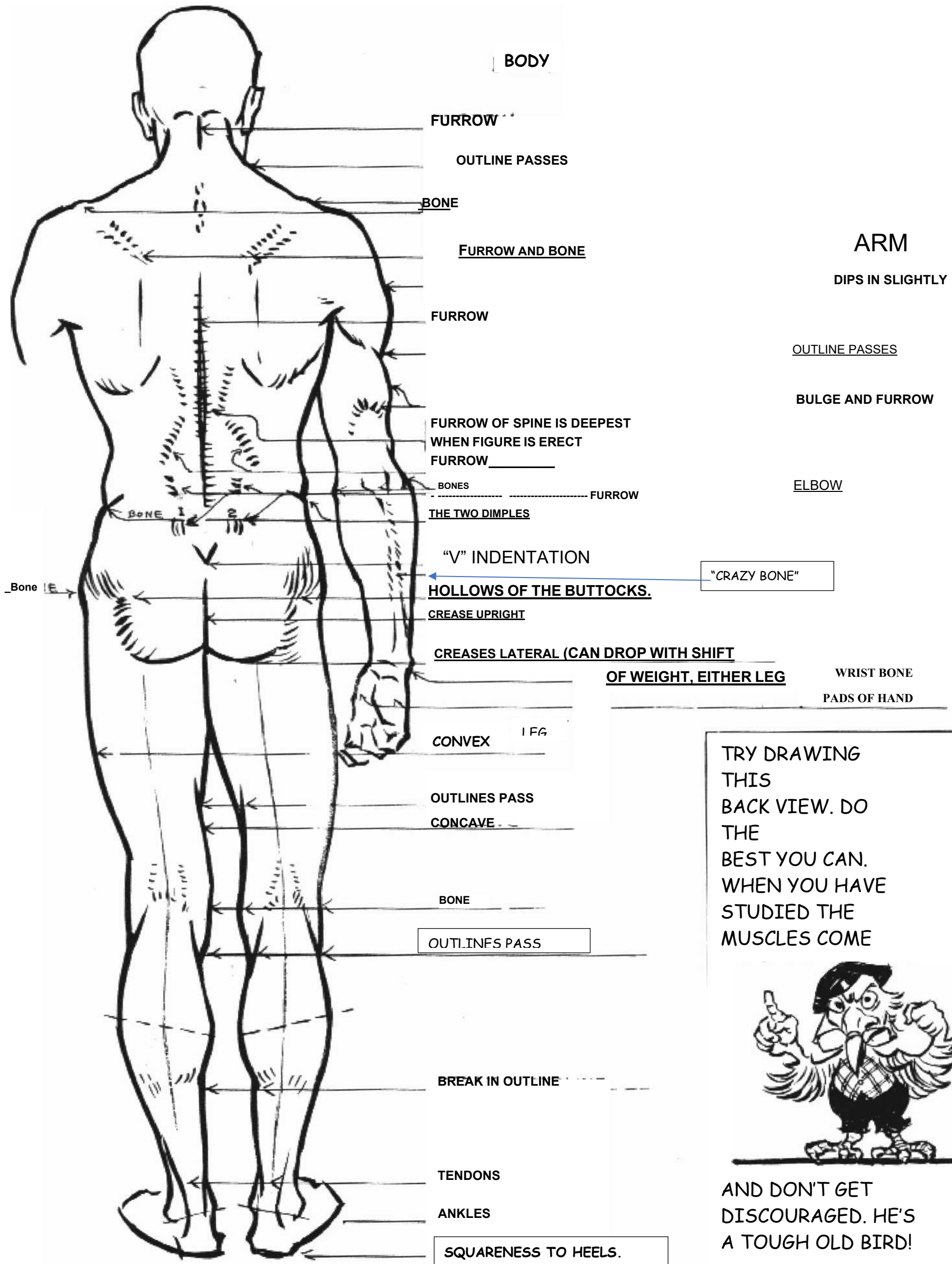
LANDMARKS YOU SHOULD KNOW

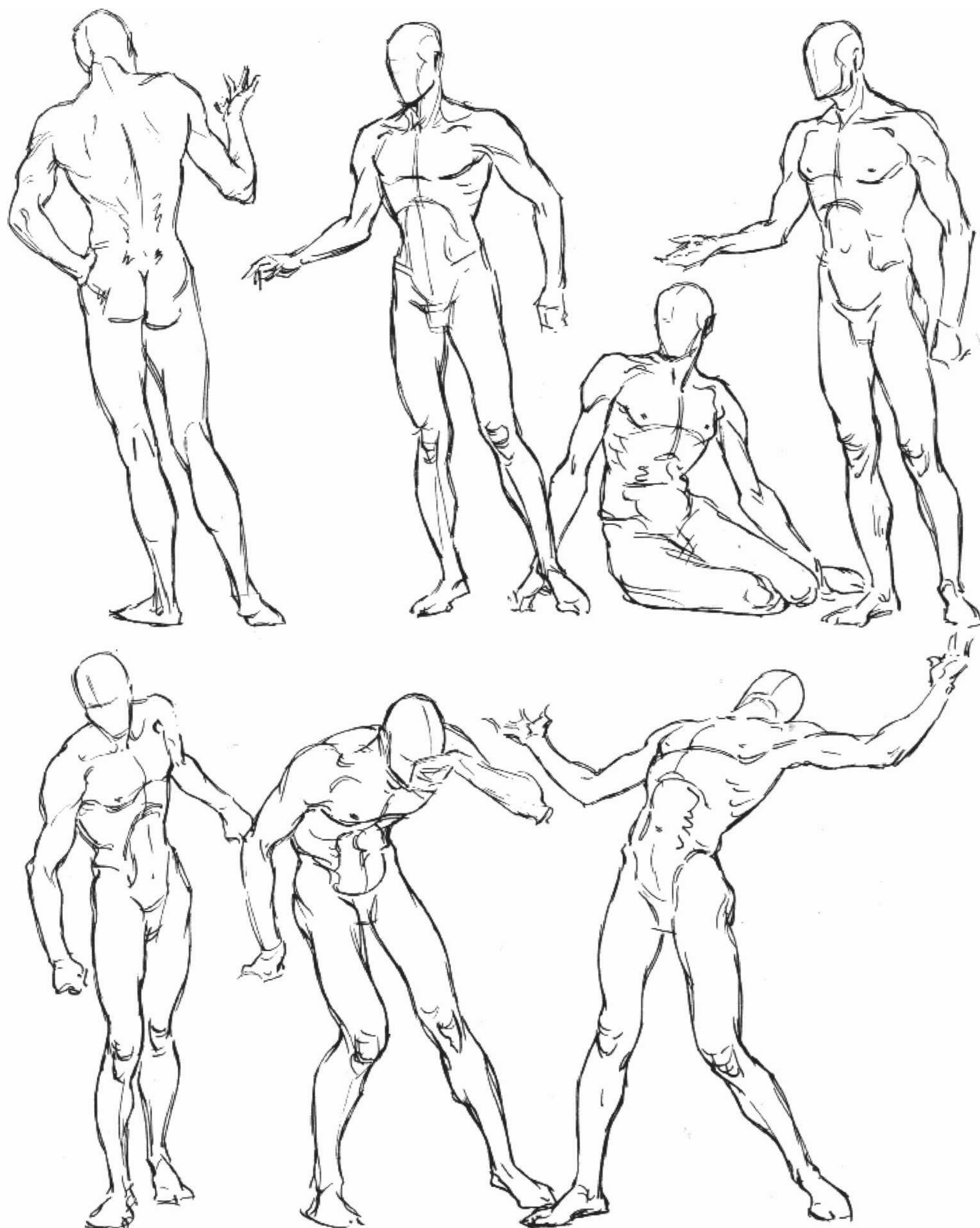
SURFACE CHARACTERISTICS THAT GIVE* PUNCH" TO THE FIGURE PRAWN WITHOUT A MODEL



LANDMARKS YOU SHOULD KNOW

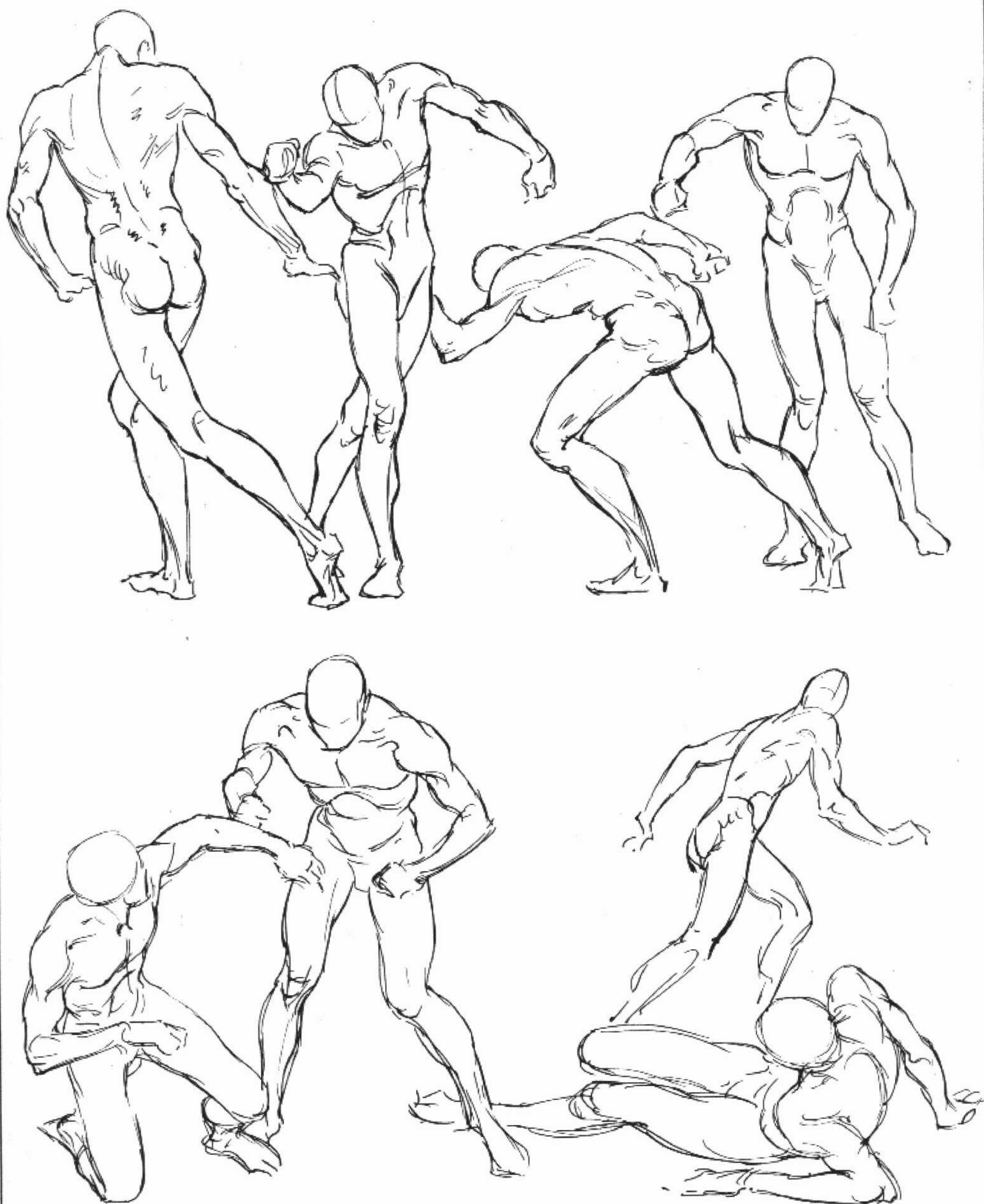
SURFACE CHARACTERISTICS ON THE BACK OF THE MALE FIGURE TO MEMORIZE.





LEARNING TO "FEEL" AND SETUP THE FIGURE IN ACTION IS NOT AS DIFFICULT AS IT LOOKS

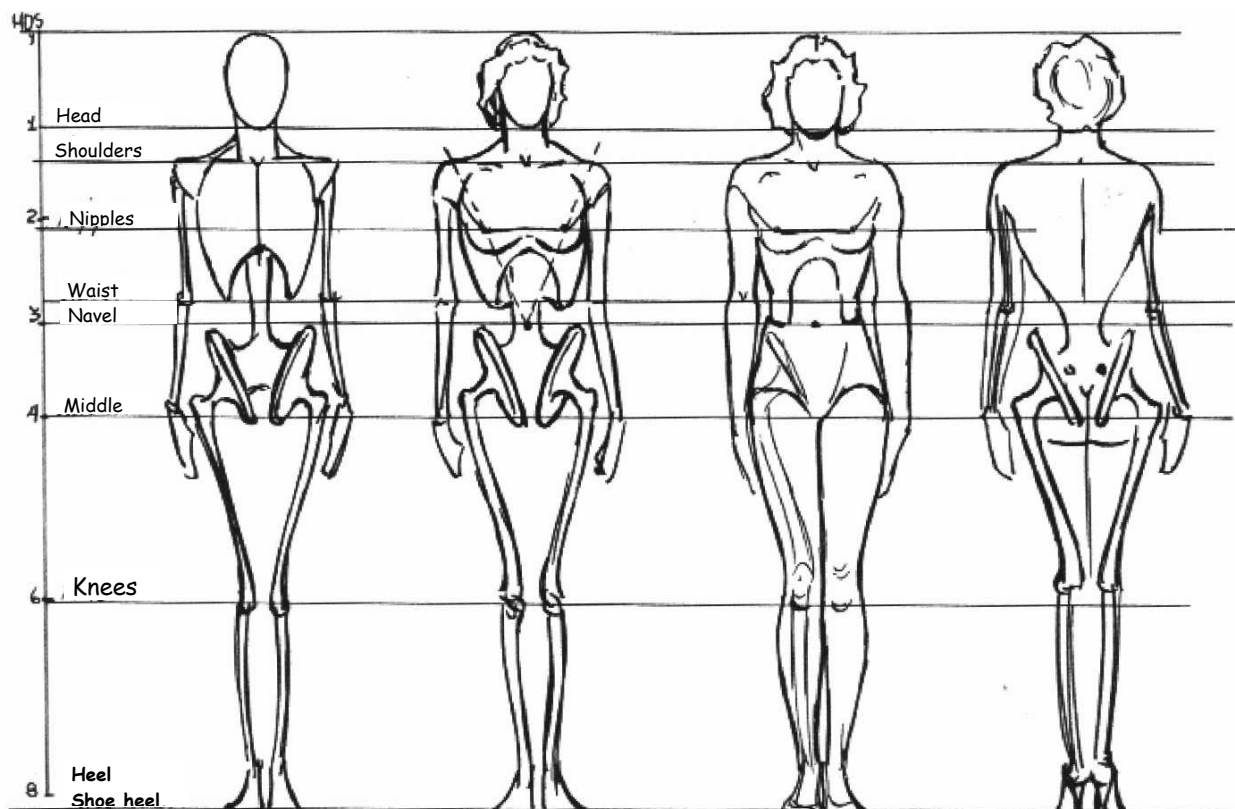
DRAW SOME OF THESE, BUT DRAW MANY OF YOUR OWN



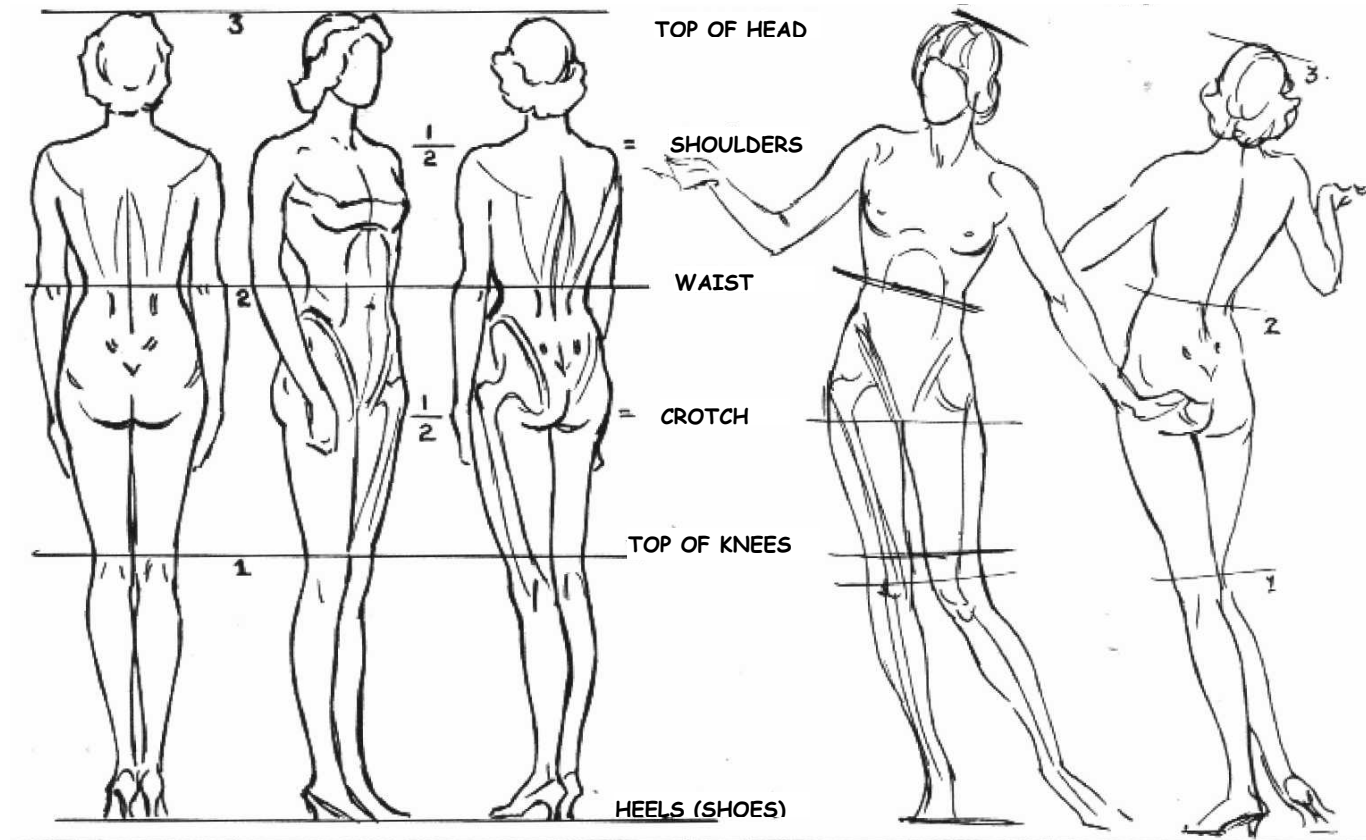
KEEP YOUR DRAWING FREE AND SKETCHY. DRAW MANY FIGURES AT VARIOUS EYE LEVELS.

THE FEMALE MANNIKIN

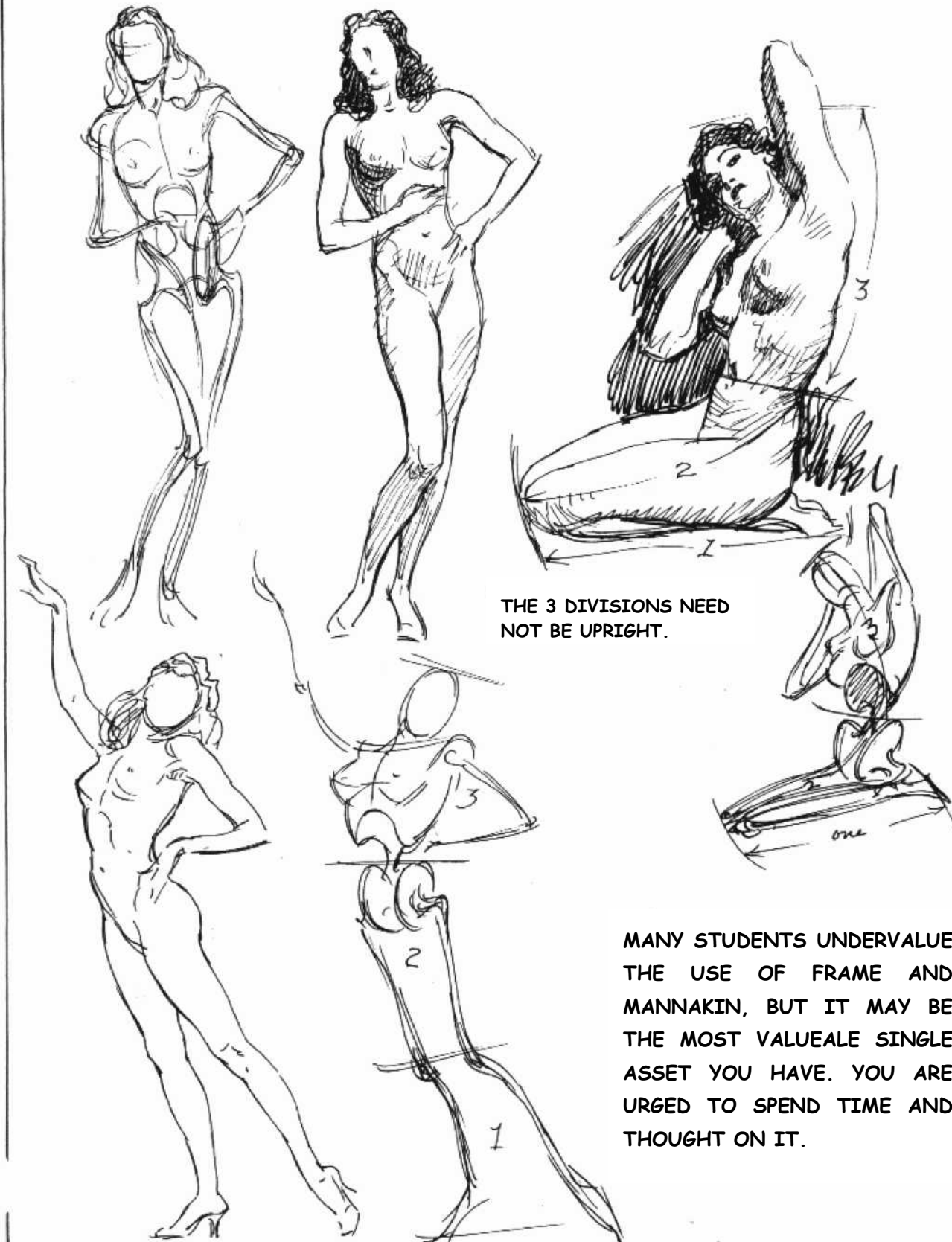
THE MAIN DIFFERENCE BETWEEN THE MALE AND FEMALE MANNIKIN IS IN THE PELVIS (DISCS). THE
HIP BONES COME UP TO THE LINE OF THE NAVEL (MALE, THEY ARE TWO OR THREE INCHES BELOW). THE
FEMALE WAISTLINE IS ABOVE THE NAVEL, THE MALE AT OR JUST BELOW. FEMALE RIB CASE IS SMALLER,
PELVIS WIDER AND DEEPER, SHOULDERS NARROWER. "CAPE" DROPS IN FRONT TO INCLUDE BREASTS.



A SIMPLE WAY OF GETTING FEMALE PROPORTIONS - TAKE $\frac{1}{3}$ TO KNEES, $\frac{2}{3}$ TO WAIST, $\frac{3}{3}$ TO TOP OF HEAD.



SKETCHES

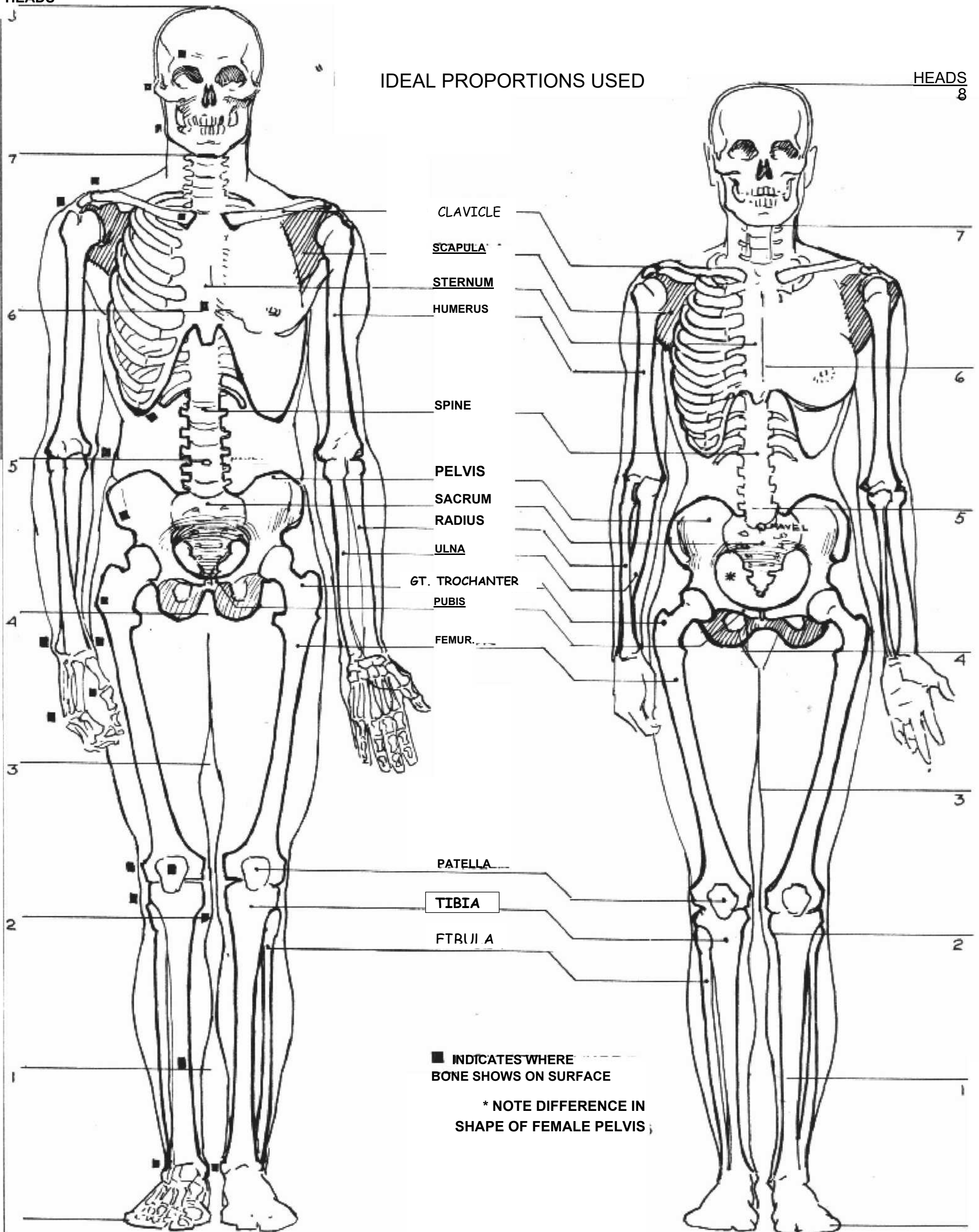


THE MALE AND FEMALE SKELETONS

HEADS

IDEAL PROPORTIONS USED

HEADS
8



II. THE BONES AND MUSCLES

The further you go in the study of anatomy, the more interesting it becomes. Made of soft and pliable material, elastic yet strong, capable of unlimited movement and of performing countless tasks, operating on self-generated power, and repairing or renewing itself over a period of time in which the strongest of steel parts would wear out - the human body is indeed an engineering miracle.

On the opposite page the male and female skeletons have been set up. I have kept the head units alongside so that you may relate the bones to the figure in correct proportion.

The skeleton, though strong, is really not so rigid as it appears. Though the spine has a rigid base in the pelvis, it possesses great flexibility; and the ribs, too, though they are fastened firmly into the spine, are flexible. All the bones are held together and upright by cartilage and muscle, and the joints operate on a ball-and-socket plan with a "stop" for stability. The whole structure collapses with a loss of consciousness.

Strain upon the muscles can usually be transferred to the bony structure. The weight of a heavy load, for example, is largely taken over by the bones, leaving the muscles free to propel the limbs. Bones also form a protection to delicate organs and parts. The skull protects the eyes, the brain, and the delicate inner parts of the throat. The ribs and pelvis protect the heart, lungs, and other organs. Where protection is most needed, the bone comes closest to the surface.

It is very important for the artist to know that no bone is perfectly straight. An arm or a leg drawn with a perfectly straight bone will be rigid and stiff-looking. Curvature in the bones has much to do with the rhythm and action of a figure. It helps make it appear alive.

The chief differences between the male and

female skeletons are the proportionately larger pelvis in the female and the proportionately larger thorax, or rib case, in the male. These differences account for the wider shoulders and narrower hips of the male; the longer waistline, lower buttocks, and wider hips of the female. They also cause the female arms to flare out wider when they are swinging back and forth and the femur, or thigh bone, to be a little more oblique. The hair and breasts, of course, distinguish the female figure, but they are merely its most obvious characteristics. The female is different from head to toe. The jaw is less developed. The neck is more slender. The hands are smaller and much more delicate. The muscles of the arms are smaller and much less in evidence. The waistline is higher. The great trochanter of the femur extends out farther; the buttocks are fuller, rounder, and lower. The thighs are flatter and wider. The calf is much less developed. The ankles and wrists are smaller. The feet are smaller and more arched. The muscles, in general, are less prominent, more straplike - all but those

of the thighs and buttocks, which are proportionately larger and stronger in the female. This extra strength is, like the larger pelvis, designed to carry the extra burden of the unborn child. Concentrate upon these fundamental differences until you can set up an unmistakable male or female figure at will.

Note the black squares on the male skeleton. Those are bony prominences where the bones are so near the surface that they affect the contour. When the body becomes fat, these spots become dimples or recessions in the surface. In thin or aged figures, these bones protrude.

Working from life or photographs will not eliminate the necessity of knowing anatomy and proportion. You should recognize what the

REQUIREMENTS OF SUCCESSFUL FIGURE DRAWING

humps and bumps are - and why they are there. Otherwise your drawing will have the look of inflated rubber, or a wax department-store dummy. The final work on any commission of importance should be drawn from a model or good copy of some kind, since it must compete with the work of men who use models and good copy. Most artists own and operate a camera as a help. But it will not do the whole job. Outlines traced from a photograph, because of the exaggerated foreshortening by the lenses, have a wide and dumpy look. Limbs look short and heavy. Hands and feet appear too large. If these distortions are not corrected, your drawing will simply look photographic.

It might be well to mention here some of the requirements of successful figure drawing. The "smart" female figure has some mannish contours. The shoulders are drawn a little wider than normal, without much slope, the hips a little narrower. The thighs and legs are made longer and more slender, with tapering calves. When the legs are together, they should touch at the thigh, knee, and ankle. The knees should be small. The leg is elongated from the knee down with small ankles. It is merely a waste of time to show an art director a figure that looks large-headed, narrow-shouldered, short-armed or legged, wide-hipped, short, fat, dumpy, or pudgy. But a figure may be actually bony and unusually tall and still please a fashion editor.

Slimness in figure drawing has become almost a cult. What the artists of the Middle Ages considered voluptuous appeal would be plain fat today. Nothing will kill a sale so quickly as fatness or shortness. (It is a curious fact that short people are apt to draw 'short figures. A man with a short wife will tend to draw short women.) If my figures seem absurdly tall, remember that I am giving you the conception accepted as a standard. They will not look too tall to the art buyer. In fact, some of my figures here are even shorter than I would instinctively draw them.

The essence of successful male figure drawing is that it be kept masculine - plenty of bone and muscle. The face should be lean, the cheeks slightly hollowed, the eyebrows fairly thick (never in a thin line), the mouth full, the chin prominent and well defined. The figure is, of course, wide shouldered and at least six feet (eight or more heads) tall. Unfortunately, it is not easy to find these lean-faced, hard-muscled male models. They are usually at harder work.

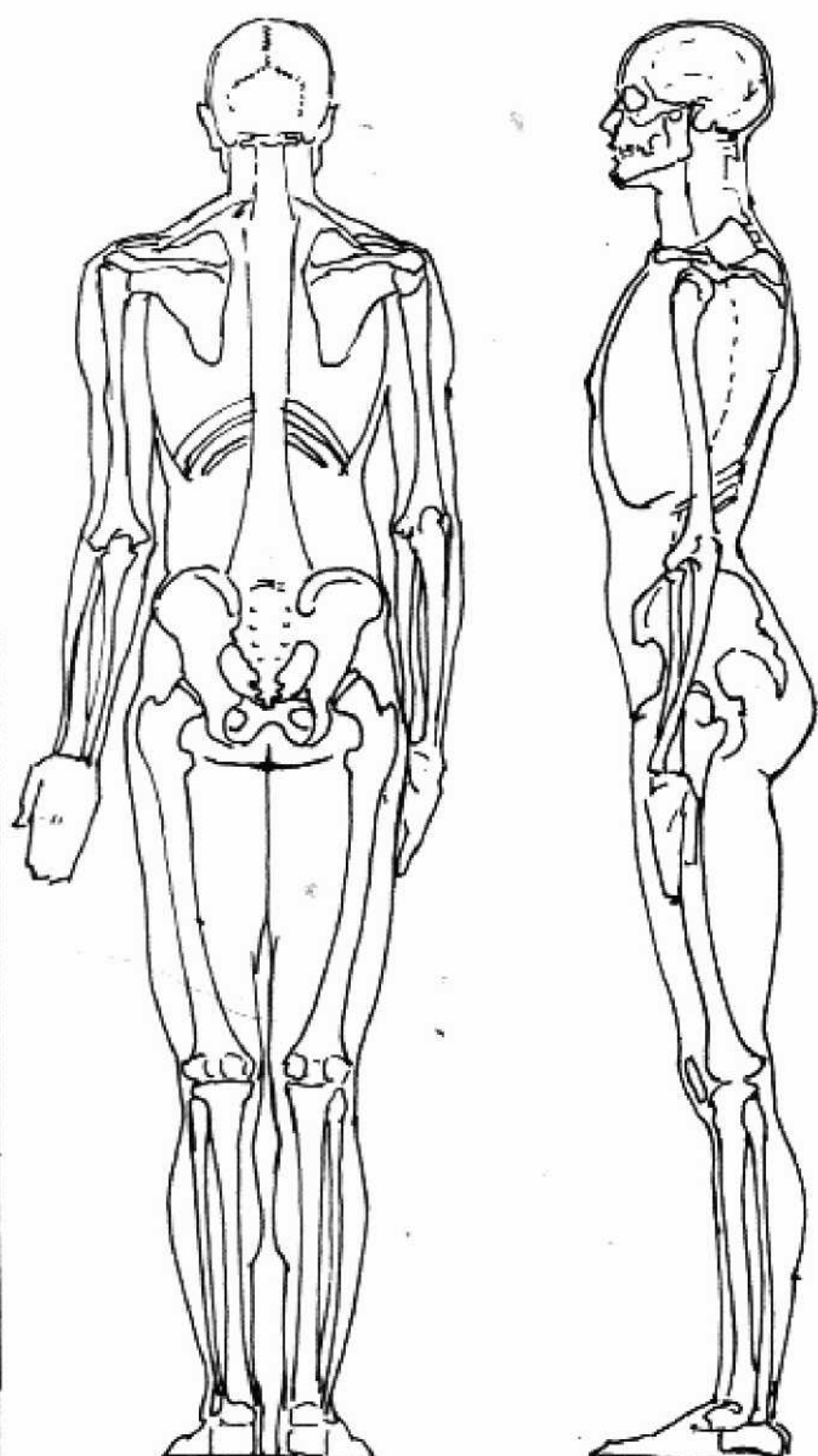
Children should be drawn fairly close to the scale of proportions given in this book. Babies obviously should be plump, dimpled, and healthy. Special study should be given to the folds and creases at the neck, wrists, and ankles. The cheeks are full and round, the chin is well under. The upper lip protrudes somewhat. The nose is round and small and concave at the bridge. The

ears are small, thick, and round. The eyes practically fill the openings. The hands are fat and dimpled and there is considerable taper to the short fingers. Until the structure of babies is well understood it is almost fatal to try to draw them without good working material.

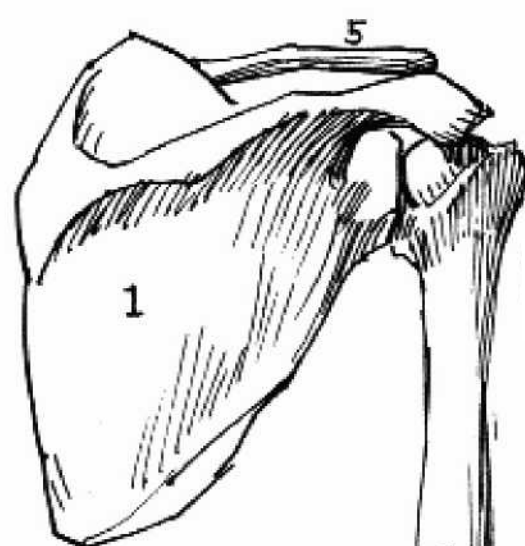
Keep all children up to six or eight years quite chubby. From eight to twelve they can be drawn very much as they appear, though the relative size of the head should be a little larger than normal.

If you get into character drawing, you may do a fat fellow—but don't make him too young. Do not draw ears too large or protruding in any male drawing. The male hands should be exaggerated a little in size and in the ideal type must look bony and muscular. Soft, round hands on a man simply won't go.

The art director seldom points out your faults. He simply says he does not like your drawing. Any one of the above mistakes may account for his dislike. Ignorance of the demands upon you is as great a handicap as ignorance of anatomy.

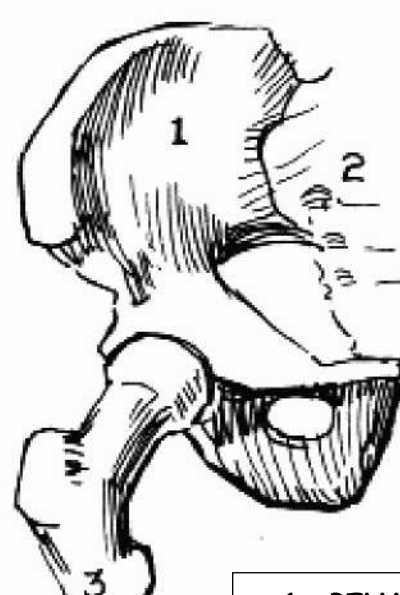


MALE SKELETON, BACK AND SIDE VIEWS



SHOULDER
BACK VIEW

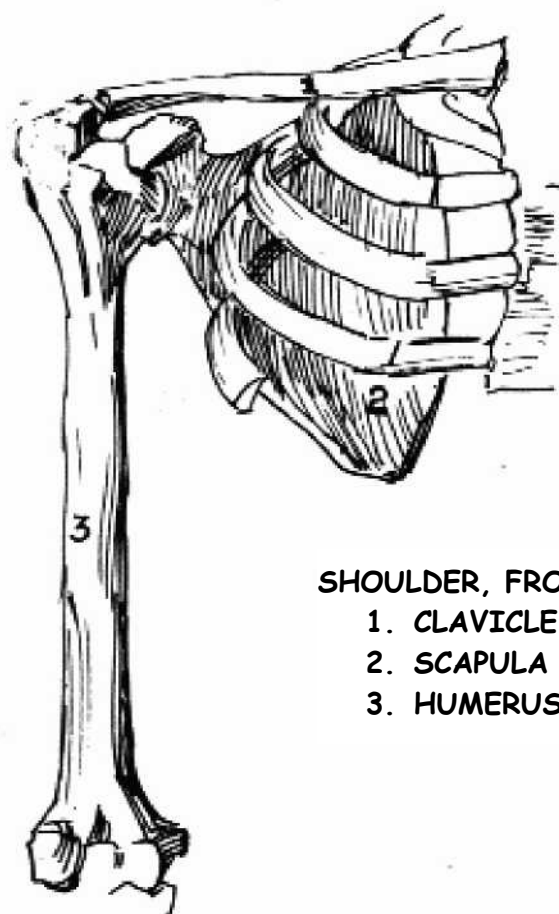
1. SCAPULA
2. HUMBRUS
3. ULNA
4. RADIUS
5. CLAVICLE



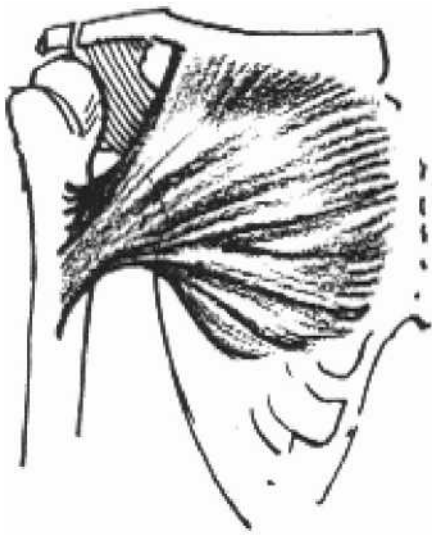
1. PELVIS
2. SACRUM
3. FEMUR
4. PATELLA
5. TIBIA
6. FIBULA



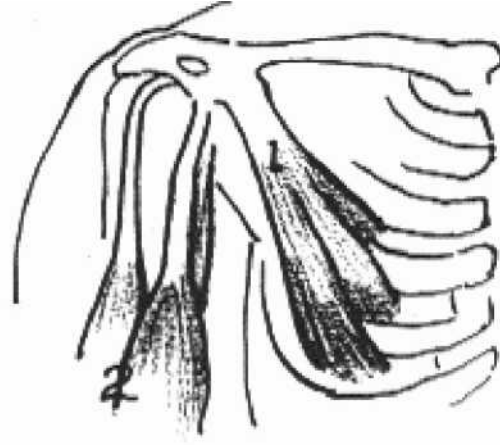
PELVIS, BACK VIEW.



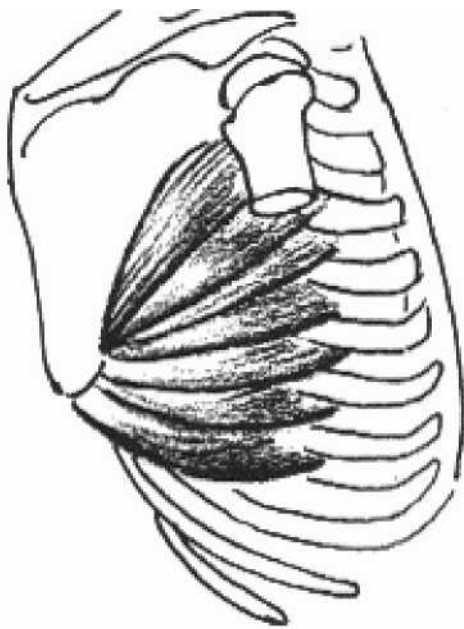
SHOULDER, FRONT
1. CLAVICLE
2. SCAPULA
3. HUMERUS



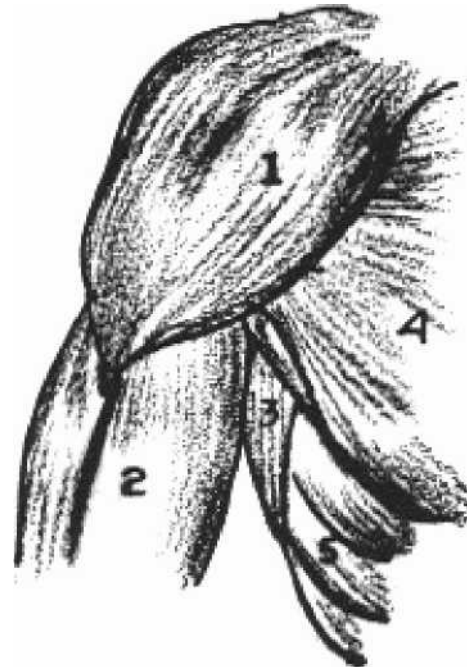
PECTORALIS MAJOR



1. PECTORALIS MINOR
2. BICEPS



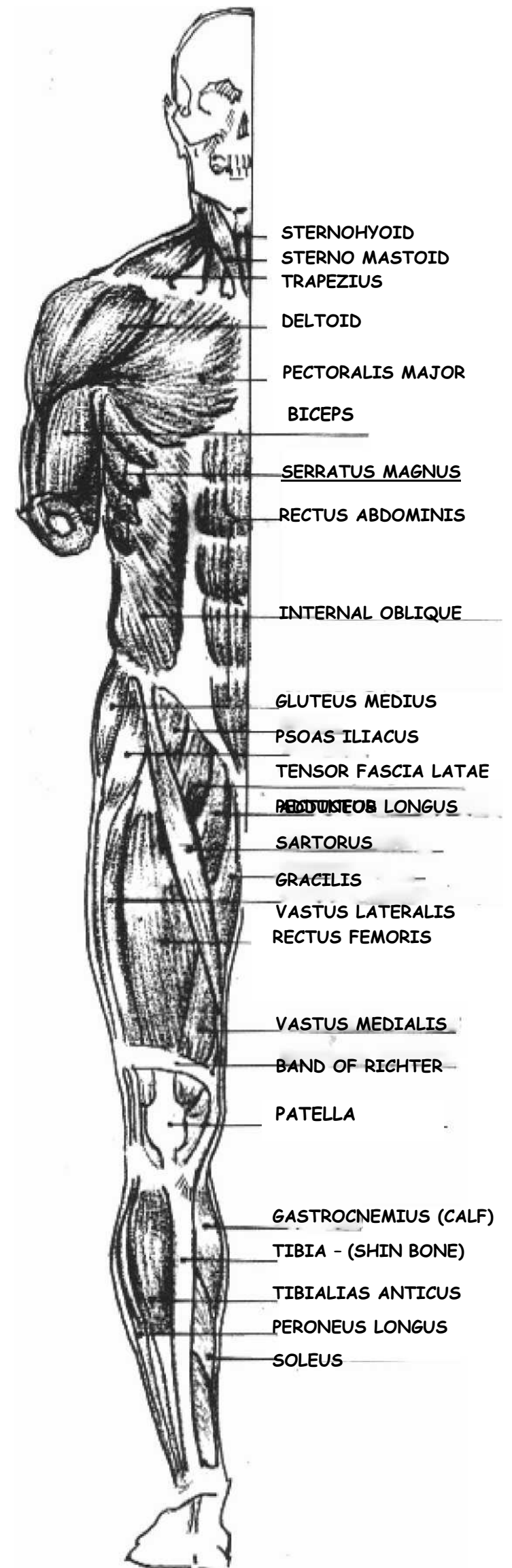
SERRATUS MAGNUS



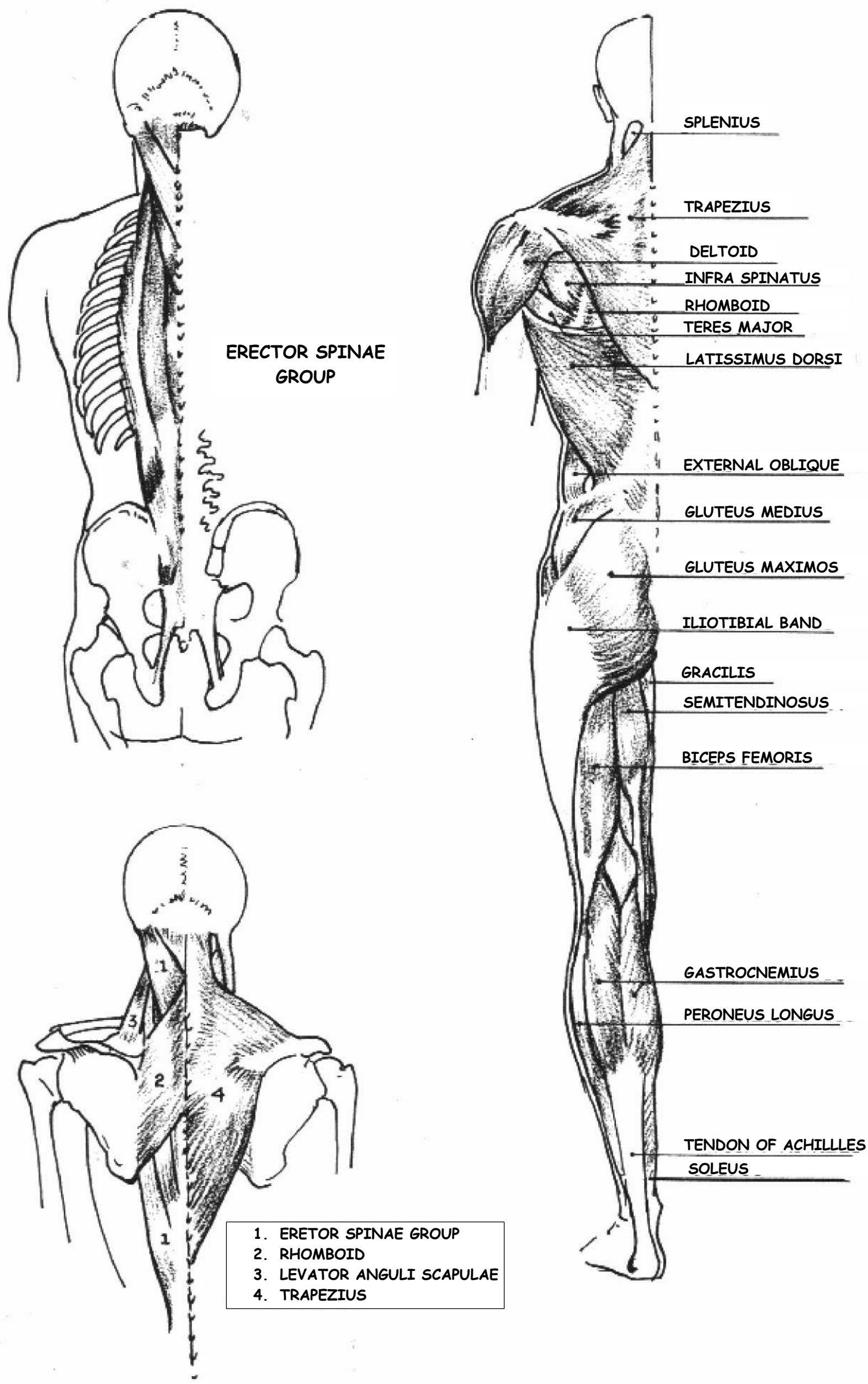
1. DELTOID
2. BICEPS
3. PECTORALIS MAJOR
4. LATISSIMUS DORSI
5. SERRATUS MAGNUS



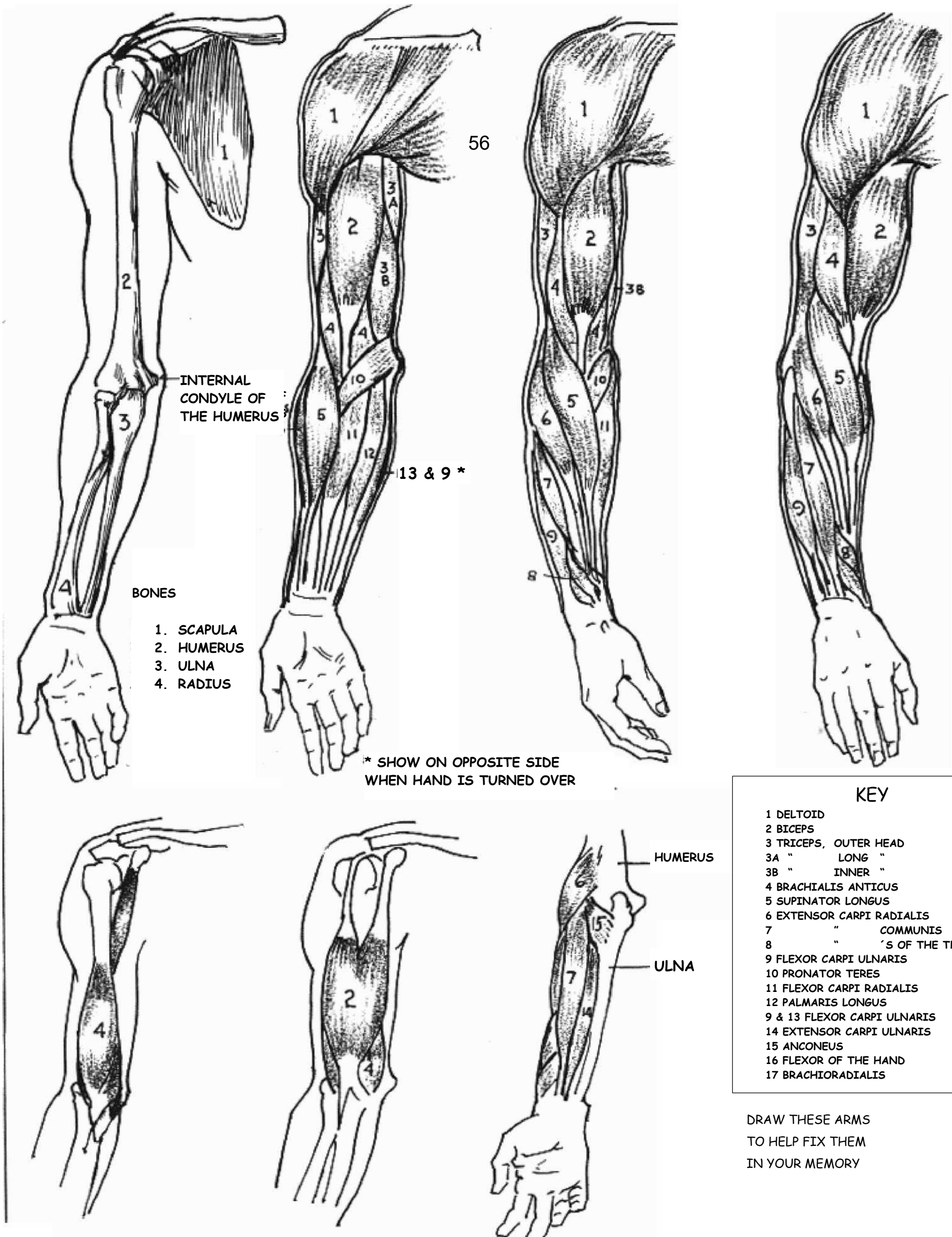
1. STERNO MASTOID
2. TRAPEZIUS
3. STERNOHYOID



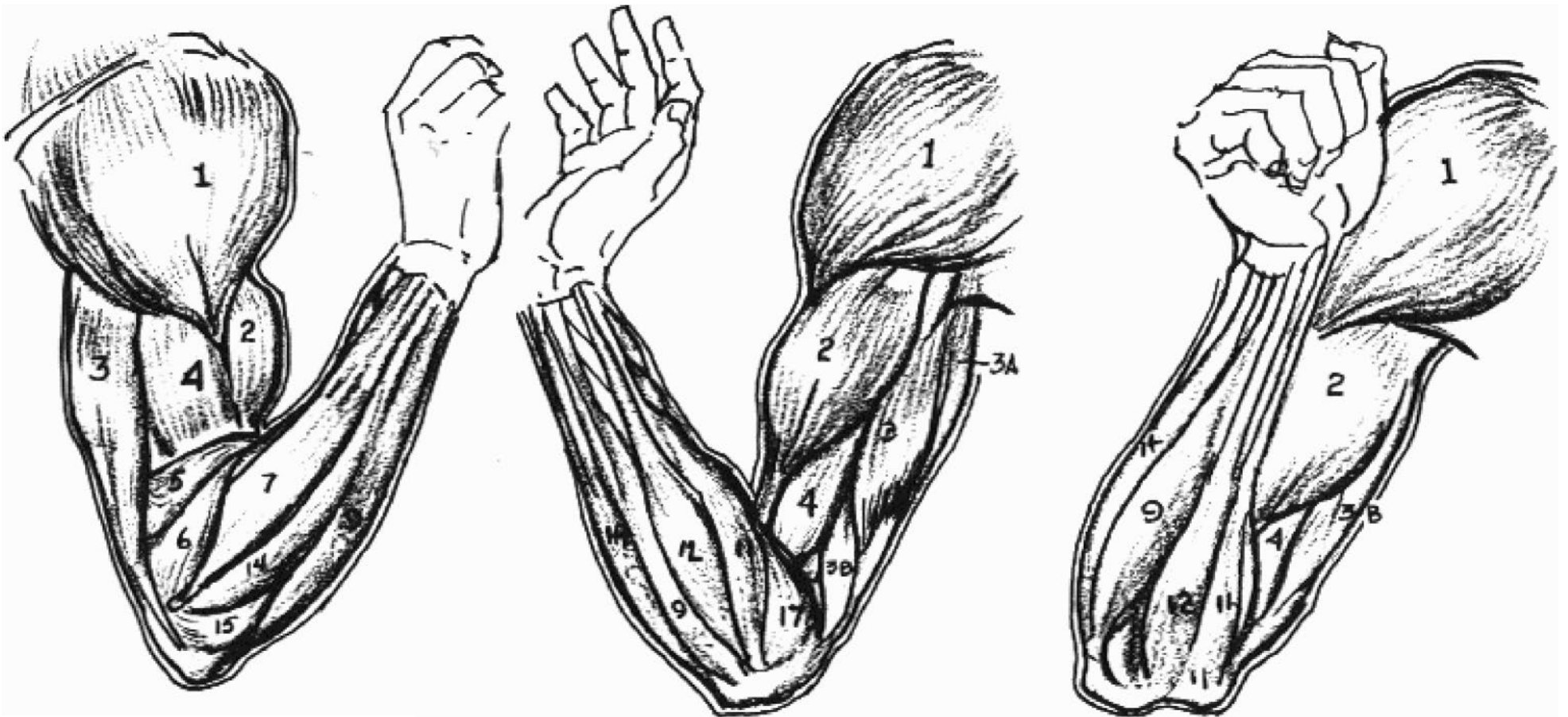
MUSCLES ON THE BACK OF THE FIGURE



MUSCLES OF THE ARM FRONT VIEW



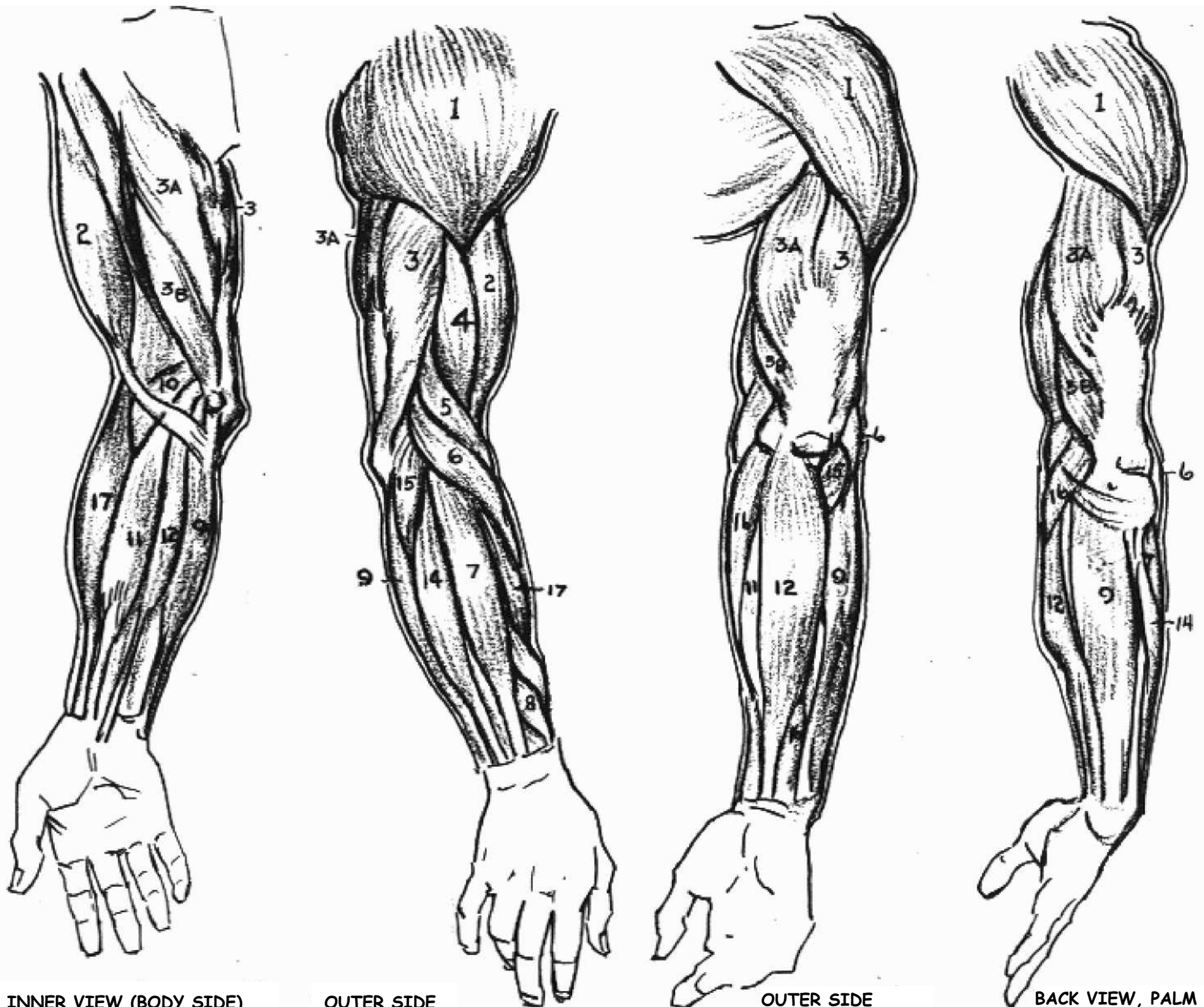
MUSCLES OF THE ARM, VARIED VIEWS



OUTER SIDE VIEW RIGHT ARM

OUTER SIDE VIEW RIGHT ARM

UNDER AND INSIDE VIEW



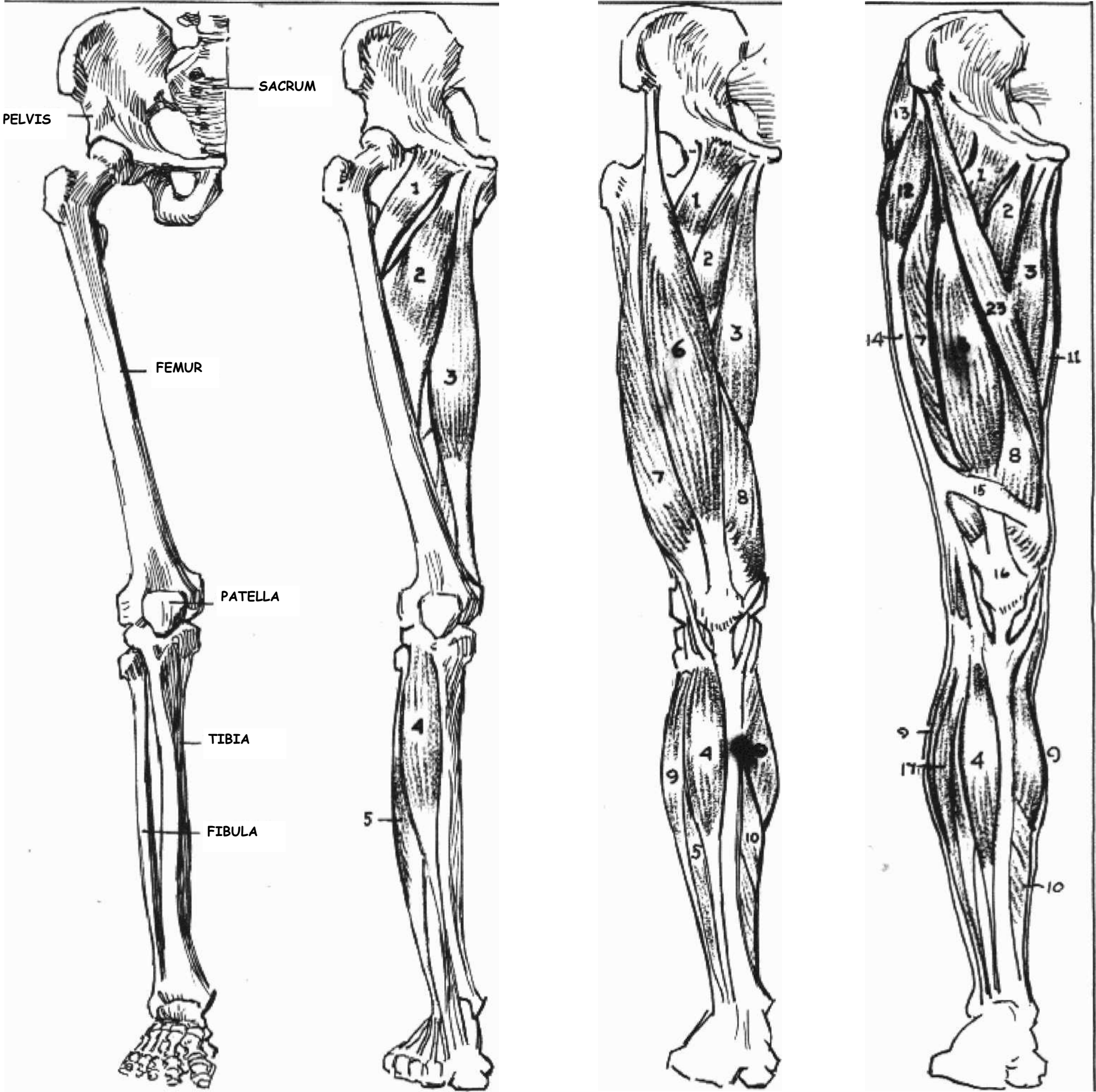
INNER VIEW (BODY SIDE)

OUTER SIDE

OUTER SIDE

BACK VIEW, PALM IN

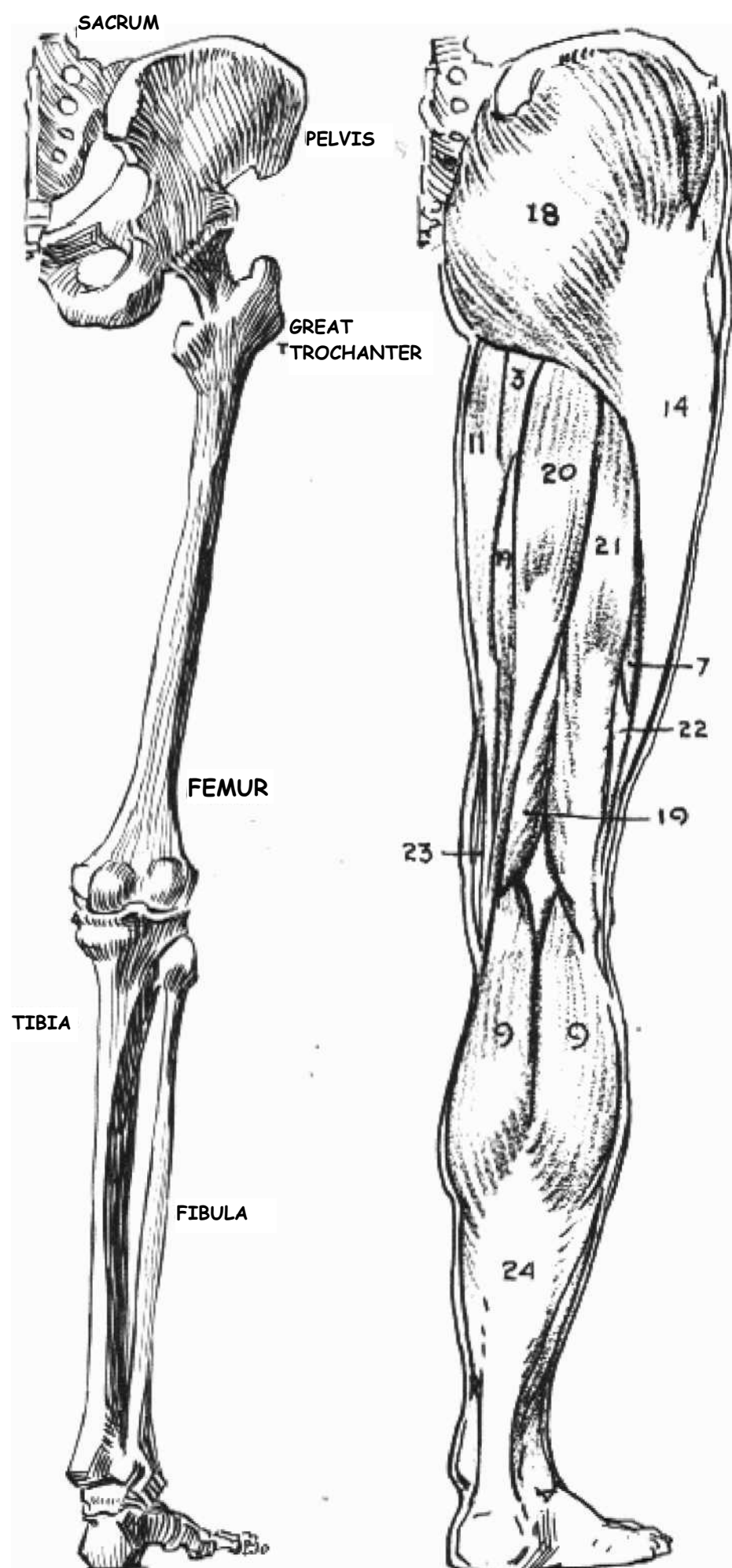
MUSCLES OF THE LEG. FRONT VIEW



MUSCLES OF THE LEG

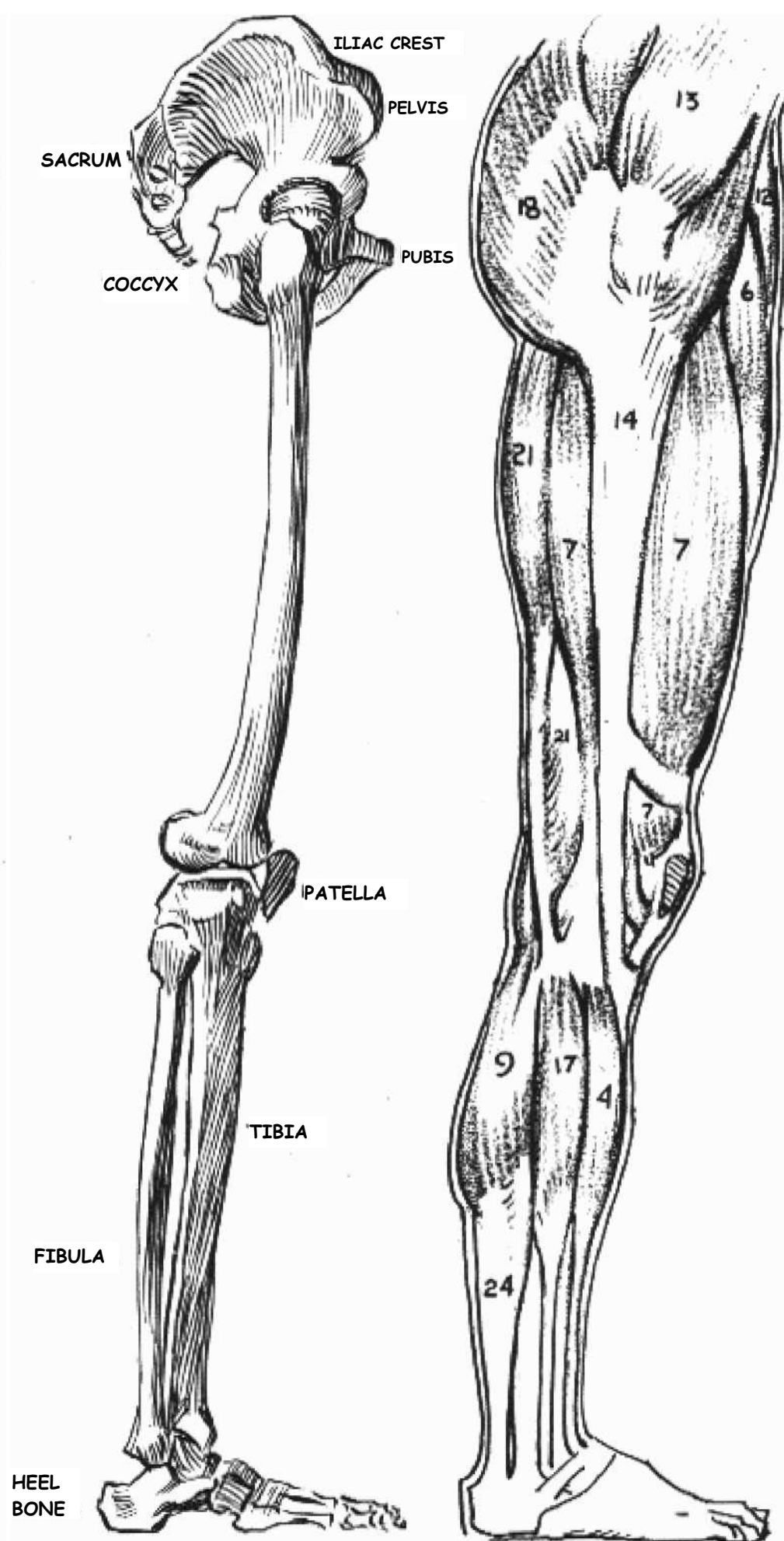
- | | | |
|-----------------------------|-------------------------|-----------------------|
| 1 PSOAS ILIACUS | 11 GRACILIS | 21 BICEPS FEMORIS |
| 2 PECTINEUS | 12 TENSOR FASCIAE LATAE | 22 VASTUS INTERMEDIUS |
| 3 ADDUCTOR MAGNUS | 13 GLUTEUS MEDIUS | 23 SARTORIS |
| 4 TIBIALIS ANTICUS | 14 ILIOTIBIAL BAND | 24 TENDON OF ACHILLES |
| 5 EXTENSOR LONGUS DIGITORUM | 15 BAND OF RICHTER | |
| 6 RECTUS FEMORIS | 16 PATELLAR LIGAMENT | |
| 7 VASTUS LATERALIS | 17 PERONEUS LONGUS | |
| 8 VASTUS MEDIALIS | 18 GLUTEUS MAXIMOS | |
| 9 GASTROCNEMIUS | 19 SEMIMEMBRANOSUS | |
| 10 SOLEUS | 20 SEMITENDINOSUS | |

MUSCLES OF THE LEG HACK AND SIDE VIEW



BACK VIEW

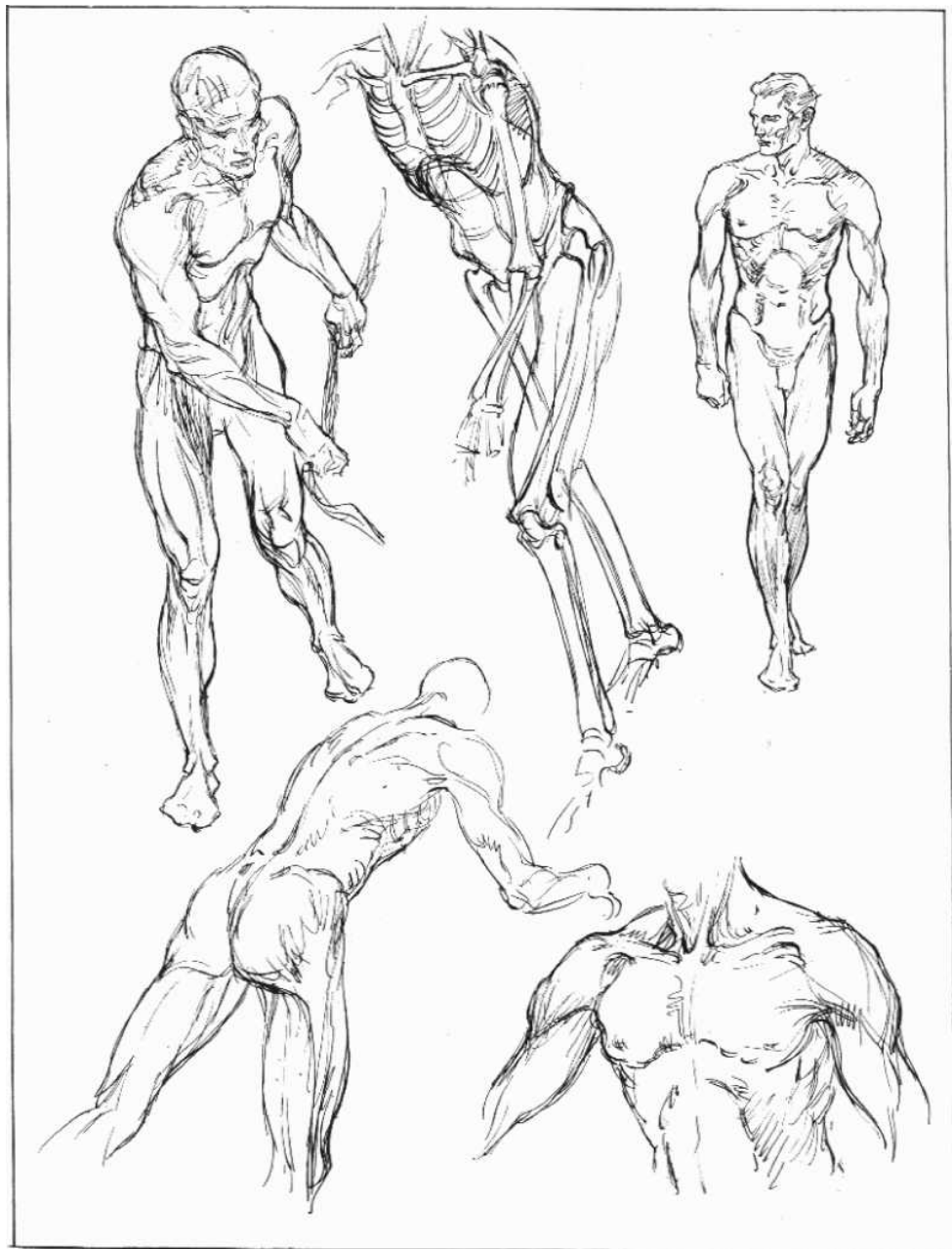
THERE IS NO OTHER WAY TO ACQUIRE A KNOWLEDGE OF ANATOMY THAN TO "DIG IT OUT". STAY WITH IT UNTIL YOU CAN DRAW THE MUSCLES FROM MEMORY. GET FURTHER BOOKS ON THE SUBJECT.
THE AUTHOR RECOMENDS THE BOOKS



OUTER SIDE VIEW

BY GEORGE BRIDGMAN AS EXCELLENT. THERE IS ALSO A VERY FINE BOOK OF DIAGRAMS, "ARTISTIC ANATOMY" BY WALTER F. MOSES. IN THESE BOOKS, THE SUBJECT IS MORE EXPERTLY COVERED, AND MUCH MORE COMPLETE.
"IT PAYS TO KNOW", SO STAY WITH IT!

NOW JUST PLAY WITH WHAT YOU HAVE LEARNED



TRY BUILDING FIGURES WITHOUT MODEL OR COPY



III. BLOCK FORMS. PLANES, FORESHORTENING, AND LIGHTING

The transition from outline and specific construction to the figure rendered in light and shadow is quite a hurdle. Often the student is unable to make this jump. The difficulty arises from a lack of conception of the solid. Yet there are intermediate steps that can make the rendering of the third dimension (thickness) fairly simple.

How can a solid form be set into space? How do we conceive of it so that we know it has bulk and weight—that we can pick it up or bump into it? The answer is that our eye instinctively recognizes the solid by the way light falls upon it. As far as the artist is concerned, when there is no light there is no form. The only reason an outline drawing can suggest the solid is that theoretically a drawing represents the form in a light that comes from directly behind the artist; hence the form casts no shadow visible to us. As the contours and edges turn away from us and the light, they tend to darken until they begin to look like lines, sharp at the edges and softening as they approach the middle or closer part of the form. We call this "Hat lighting." It is the only way that form can be rendered without shadow, but it does include "halftone, which is the next step between the full light and the shadow. The shadow is really there also, but we cannot see it from our viewpoint.

When white paper is used for the drawing, the paper theoretically represents the greatest light - that is, the *plane which is at right angles to the source of light*. In all cases

other than flat-front lighting, the form is rendered by the correct interpretation of the direction of the planes away from the right-angle planes, or the turning away of the form from the source of light.

The first and brightest planes are called the "light planes." The next planes are the "halftone planes/" and the third planes, which are unable to receive direct lighting because of their angle, are called "shadow planes?" Within the shadow planes may be those that are still receiving subdued, reflected light; these are called "planes of reflection." Form cannot be rendered without a clear grasp of this principle. The planes are worked out in the simple order of: (1) light, (2) halftone, (3) shadow - which is the darkest and is at the point where the plane parallels the direction of light and (4) reflected light. This is called "simple lighting." It is unquestionably the best for our purpose. When there are several sources of light, the whole composition becomes a hodgepodge, inconsistent with natural light and highly confusing to the student. Sunlight naturally gives us the most perfect rendition of form. Daylight is softer and more diffused, but the principle still holds. Artificial light, unless controlled and based upon the sun principle, is the fly in the ointment. The camera may be able to get away with four or five sources of light; the chances are that the artist cannot.

Before you plunge into the intricacies of light and shadow, it would be well to know what

is going to happen to form when light strikes it. Since the light can be made to come from any direction, the organization of the light-to-dark may start with any plane as line light plane. In other words, in a top lighting slightly to the front, the plane across the breast would be the light plane. Move the light to the side, and that plane would become a halftone plane. Set the light below, and the same plane is in shadow. Hence *all planes are relative to the light source.*

FORESHORTENING AND LIGHTING

Let us start, then, with the form in the simplest possible terms. By drawing block forms we cut out the extreme subtleties of halftone. Continuing a plane as a single tone on a surface as long as we can before turning it in another direction is simplification, or massing. Actually the figure is very rounded. But rounded surfaces produce such a delicate gradation of light and shadow⁷ that it is difficult to approach without a simplification and massing of these tones. Strangely enough, the simplification is a good deal better in the end than the exact photographic and literal interpretation. It is somewhat like trying to paint a tree by painting every leaf instead of massing the foliage into its big forms and working for bulk rather than intricate detail.

After we have mastered the larger plane, we can soften it at its edges to mold it into the more rounded form, while retaining all we can of the bigness of conception. Or, we can start with a big block, as the sculptor would start with a block of stone or marble. We hew away the excess and block in the general mass that we want. We then subdivide the big, straight planes into smaller ones until the rounded effect has been produced. It is like going around a circle with a series of short, straight lines. You may question why we do not at once proceed to the finished, smooth, and round form. The answer is that in a drawing or painting, something of the individual procedure and structural quality should remain. When it is too much smoothed down and polished, it becomes entirely factual. The camera can do that. In a drawing, however, "finish" is not necessarily art. It is the

interpretation and process of individual conception that is art and that has value. If you include all the literal facts and actualities, the result will be boring. It is your selection of relevant facts that will create interest. As a sweeping conception carries with it vitality, purpose, and conviction. The more detailed and involved we get, the less forceful and powerful is our message. We can take a compass and draw a circle perfectly, but we have left no trace of ourselves in what we have set down. It is the big form that does the job—not the little and the exact.

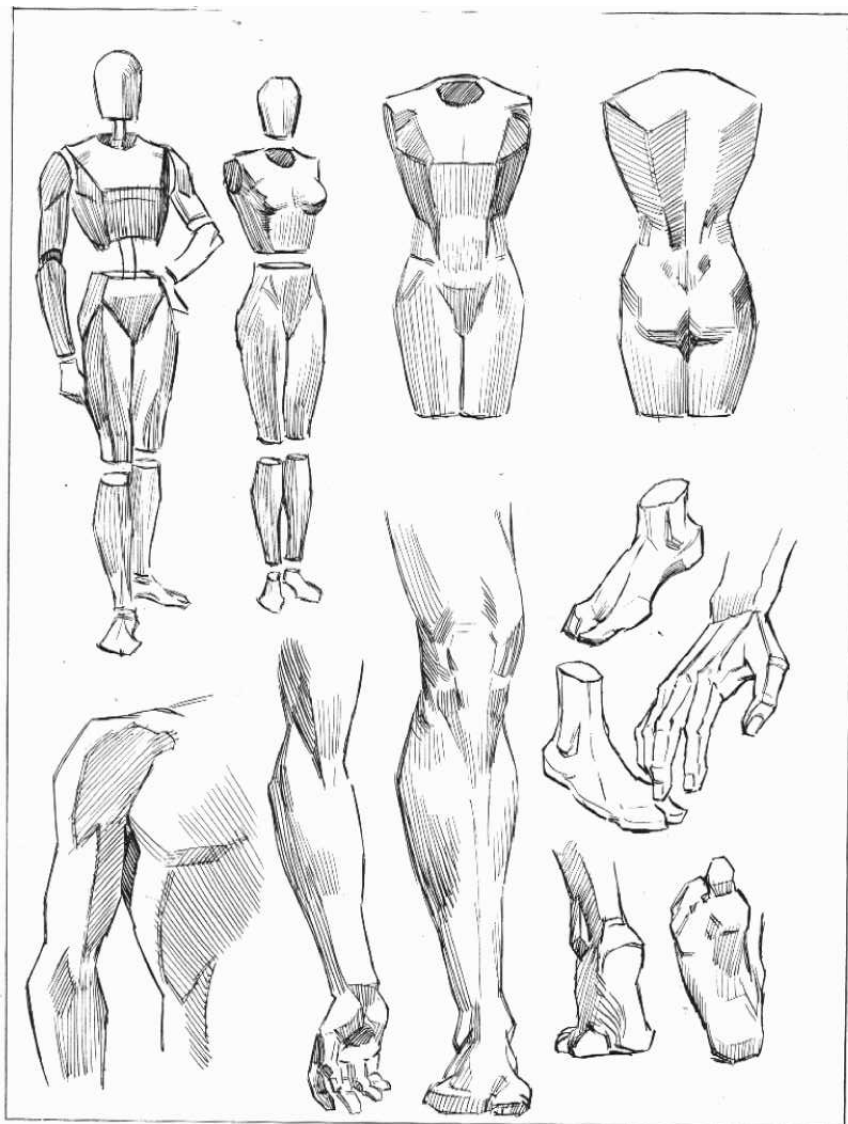
On pages 70 and 71 I have tried to give an inkling of what I mean. Here the surface is conceived of as having mass and bulk. The effect is sculptural. It is looking at our mannikin a little differently. If we are to compose the mannikin of simplified blocks, how shall we shape those blocks? Your way is as good as mine. Shape them any way you will to arrive at a massed or bulk effect. This is the real approach to 'solidity' in your work: actually thinking of the mass, bulk, and weight of it.

With this approach, we take the art-store wooden mannikin and use it as a basis for setting up a figure (page 72). We go a step further with the mannikin on page 73 and attempt to eliminate the stiffness of the jointed parts, still thinking though in terms of masses.

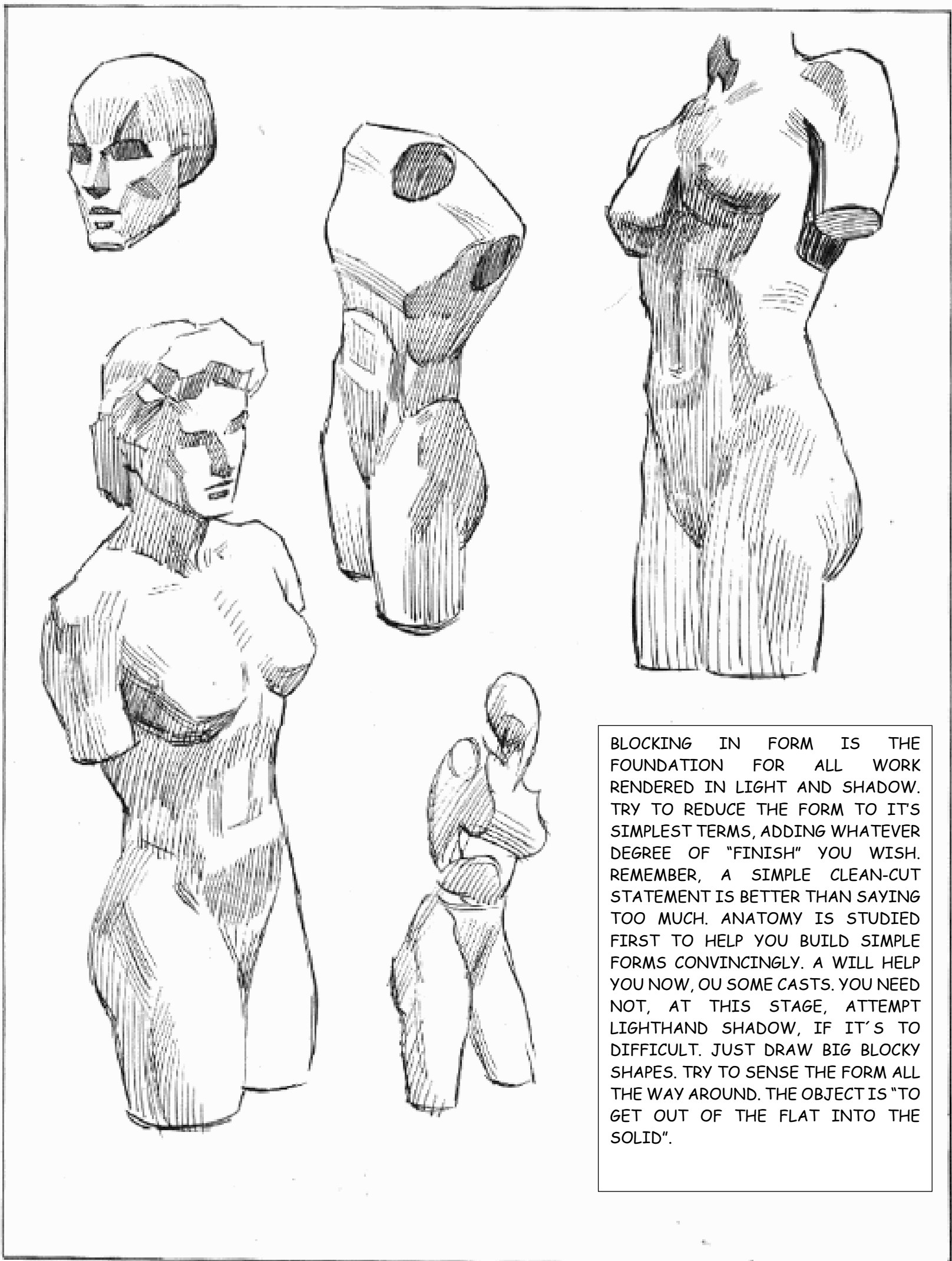
Retaining these terms we take solids (page 74) and tip them, remembering at all times what each section of the mass would be and where it belongs in relation to the whole. We must depend chiefly upon line to render the

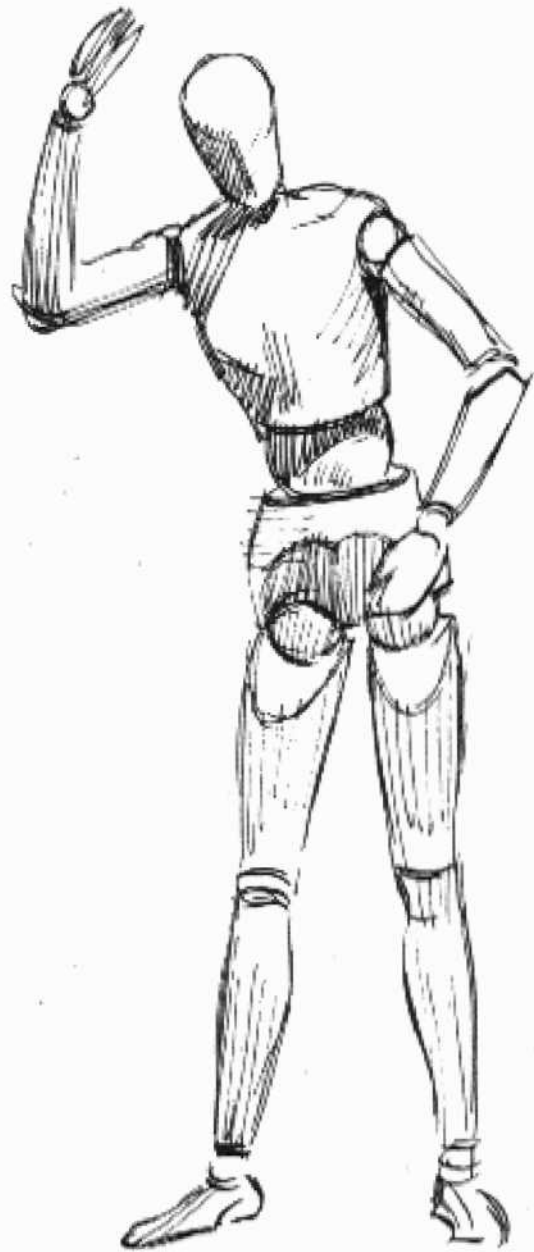
form, or that part of it which goes back into space, as seen by the eye of the observer. This is foreshortening. Actual measurement of length cannot be made, since viewing the form from one point is like looking at a gun barrel aimed directly at you. We must think of the contours and form as sections lined up one behind the other. An outline is rarely sufficient, however, to represent the receding sections; most often halftone and shadow are needed as well, as shown on page 75. Pages 76 and 77 are an interpretation of the rounded figure flattened into planes that go a step further than our simplest block forms. On pages 78 and 79 we place the simplified form of the head under various kinds of lighting.

BLOCK FORMS HELP TO DEVELOP YOUR SENSE OF BULK



FELL FREE TO INVENT YOUR OWN BLOCKS

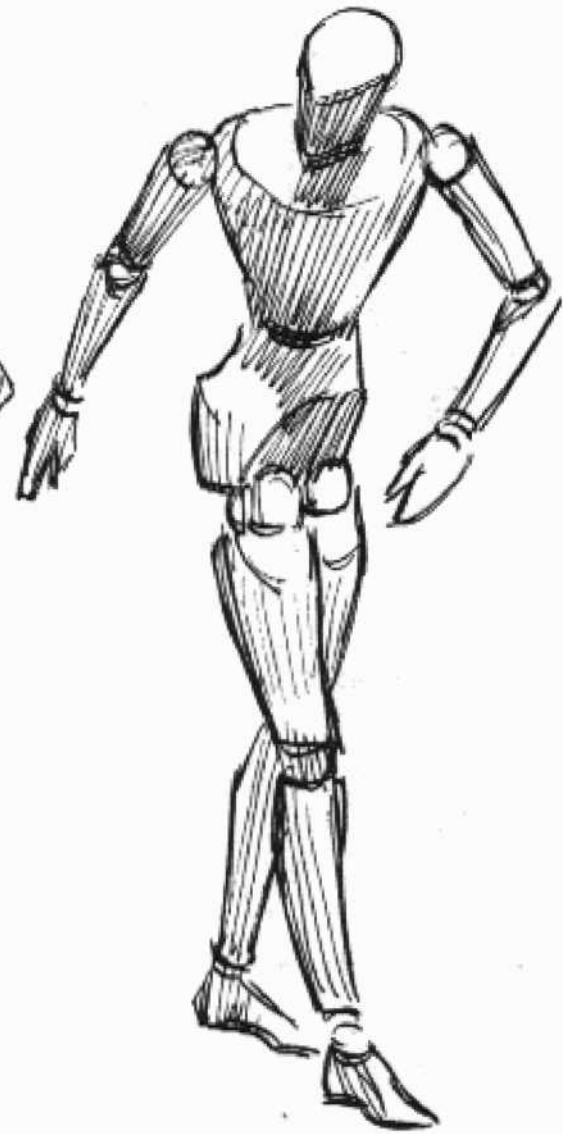




SKETCH THE MANNIKIN



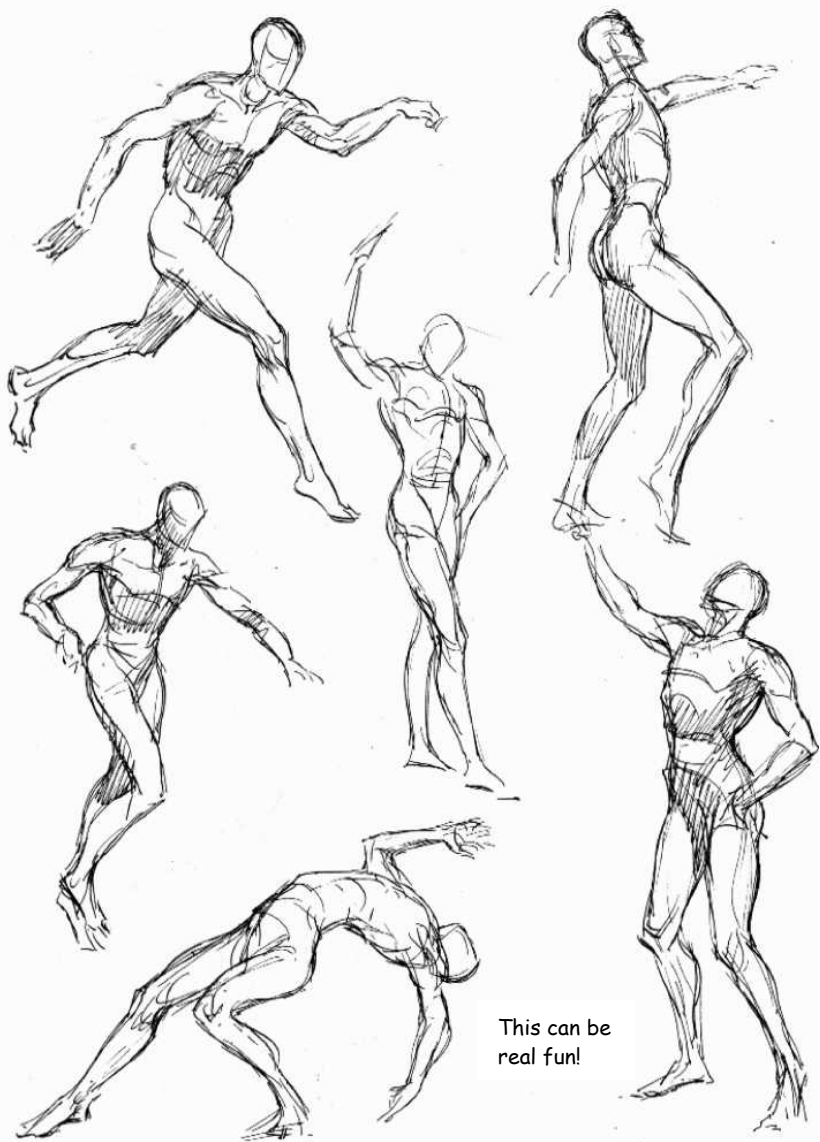
THEN BUILD YOUR FIGURE



WHEN USED WITH A BIT OF ANATOMICAL KNOWLEDGE THE WOODEN MANNIKIN CAN BE A GREAT HELP IN MAKING THE PRELIMINARY SKETCHES LAYOUTS AND COMPOSITIONS. YOUR ART DEALER MAY HAVE ONE OR CAN GET IT FOR YOU.

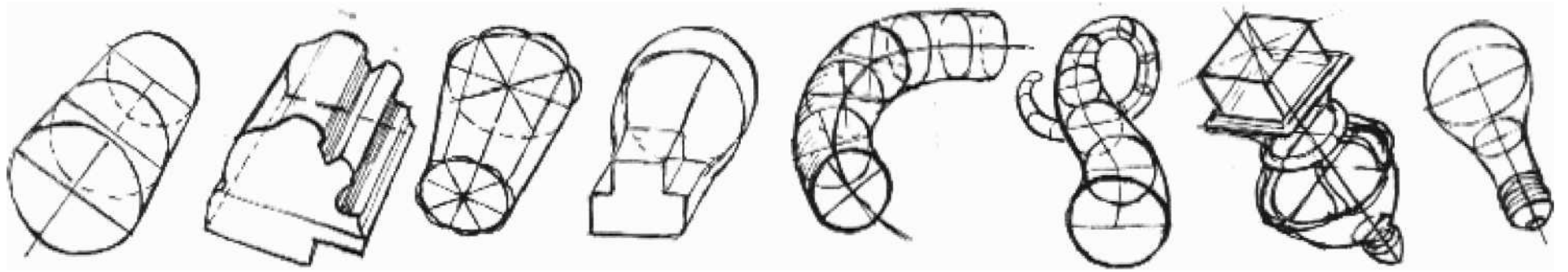


QUICK SKETCHES FROM THE WOODEN MANNIKIN



This can be
real fun!

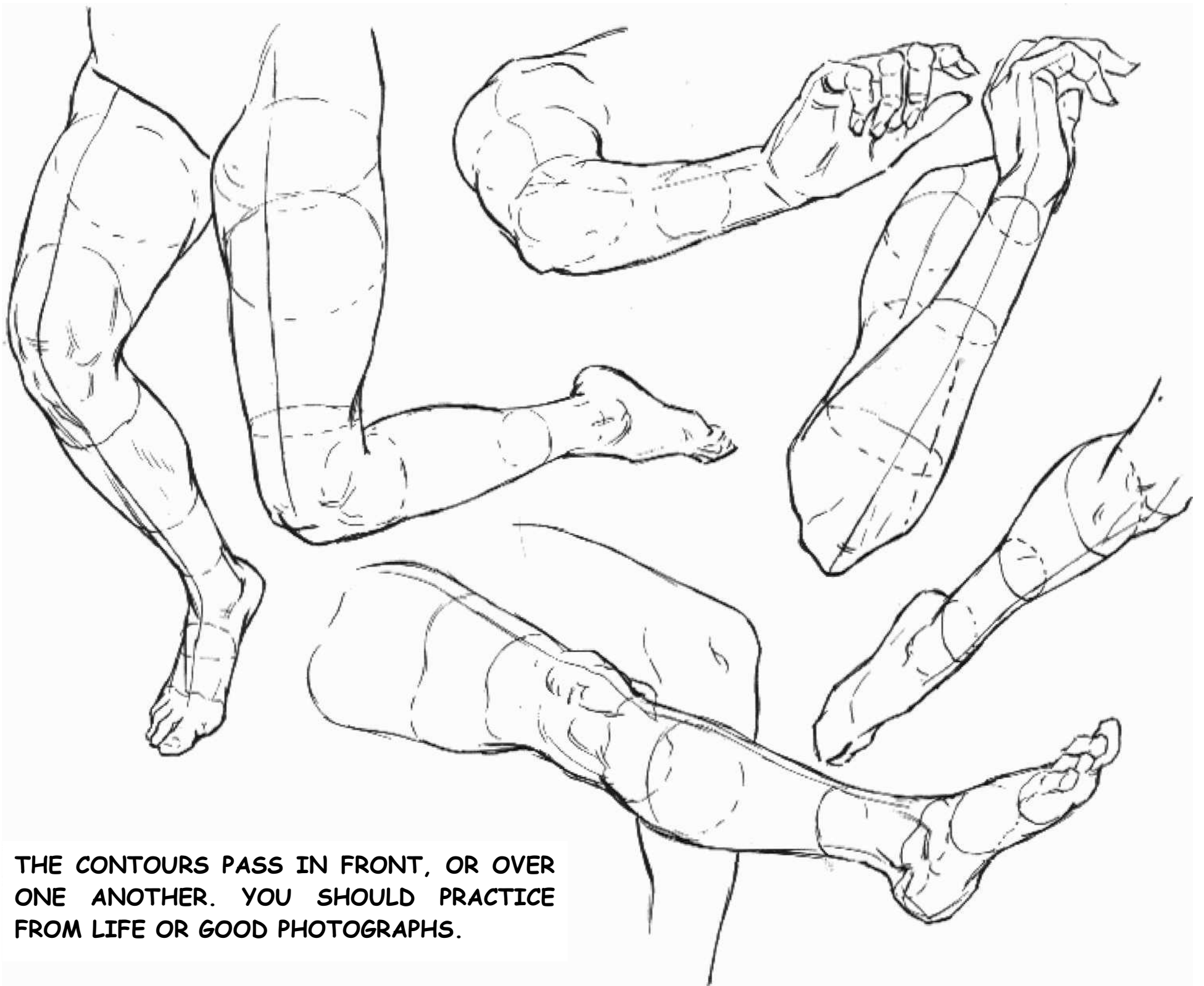
FORESHORTENING



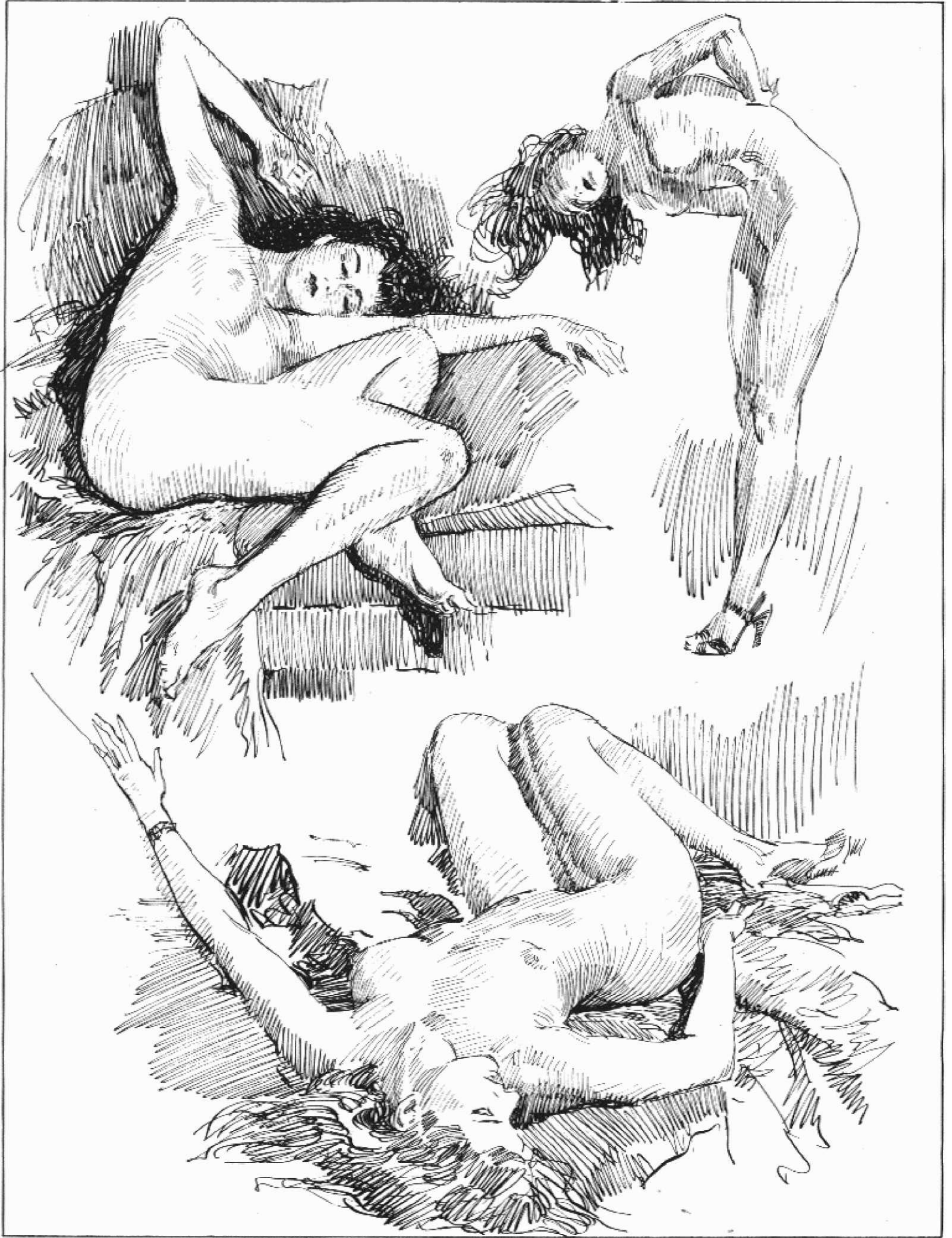
YOU CAN FORESHORTEN ANY FORM BY DRAWING INTERMITTENT CROSS SECTIONS AND CONNECTING.



NO MATTER WHAT THE FORM IS LIKE, IT CAN BE DRAWN THIS WAY* BUT YOU MUST CONSIDER THE COMPLETE FORM, NOT JUST THE VISIBLE PORTION. SENSE THE FORM ALL AROUND



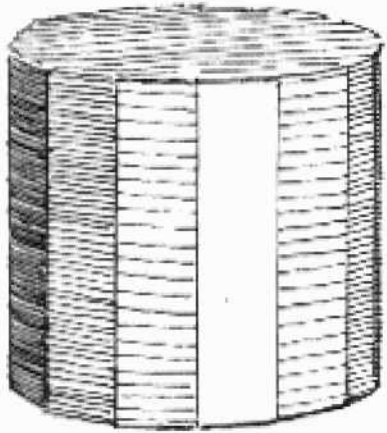
THE CONTOURS PASS IN FRONT, OR OVER ONE ANOTHER. YOU SHOULD PRACTICE FROM LIFE OR GOOD PHOTOGRAPHS.



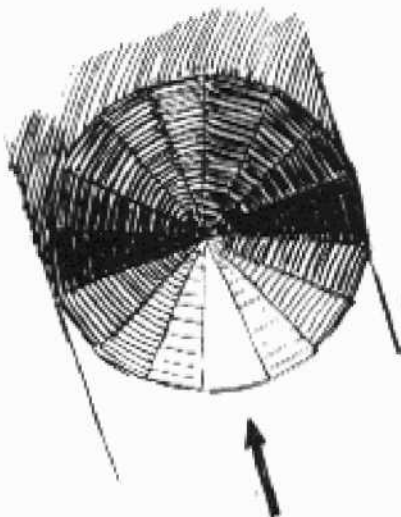
PLANES

PLANES ARE THEORETICAL FLATTENING OF ROUNDED FORMS AS WELL AS ACTUAL FLAT AREAS. IN ART AN EXTREME SMOOTHNESS AND ROUNDNESS OF FORM TENDS TOWARD THE "SLICK" AND "PHOTOGRAPHIC". IT SHOULD BE AVOIDED "LIKE THE MEASLES."

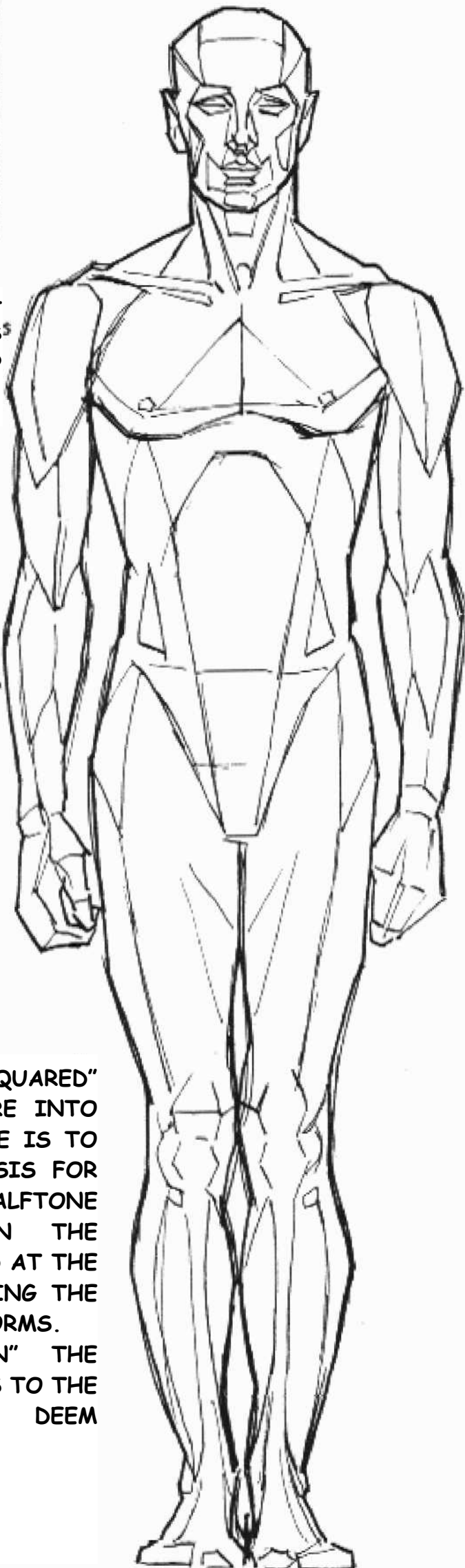
THE USE OF PLANES GIVES MORE OF AN INDIVIDUAL QUALITY. NO TWO ARTISTS WILL SEE PLANES ALIKE. "SQUARENESS" OF ROUNDED FORM IMPARTS A CERTAIN RUGGEDNESS AND VITALITY, A GOOD AXIOM IS, "SEE HOW SQUARE YOU CAN MAKE THE ROUND."



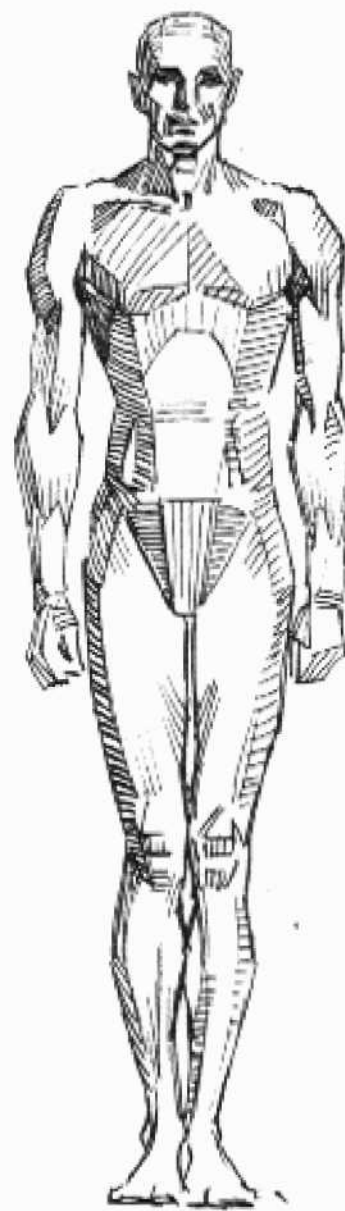
HERE IS A ROUND FORM SET INTO "PLANES" OR AREAS OF LIGHT HALFTONE AND SHADOW.



(DIRECTION OF LIGHT)



HERE WE HAVE "SQUARED" THE ROUNDED FIGURE INTO PLANES. THE PURPOSE IS TO USE THEM AS A BASIS FOR RENDERING LIGHT, HALFTONE AND SHADOW, IN THE SIMPLEST TERMS AND AT THE SAME TIME PRESERVING THE MAIN STRUCTURAL FORMS. WE THEN "SOFTEN" THE EDGES OF THE PLANES TO THE DEGREE THAT WE DEEM SATISFACTORY.



THERE IS NO SET RULE FOR PLANES YOU DRAW THEM AS YOU THINK BEST TO SUIT THE SUBJECT.

THE "LIGHT" PLANES ARE THOSE IN FULL LIGHT. THE "HALFTONE" PLANES ARE THOSE IN HALF LIGHT. THE "PASSAGE TONE" IS THAT WHICH MERGES THE HALFTONE AND SHADOW. THE "REFLECT" IS THE LIGHTEST TONE IN THE SHADOW.

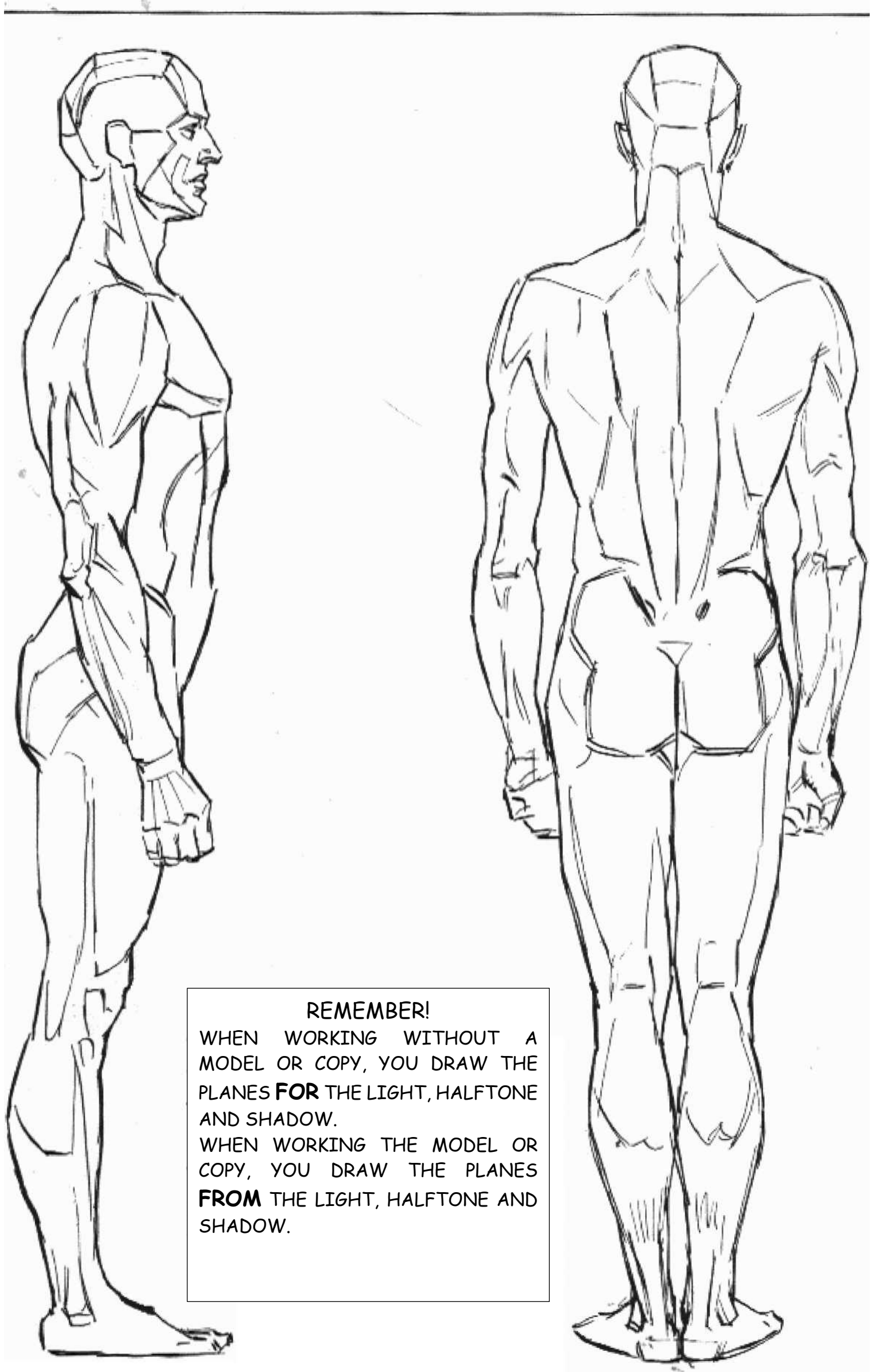


PLANES ARE A "PRELIMINARY CARVING" OF THE SURFACE

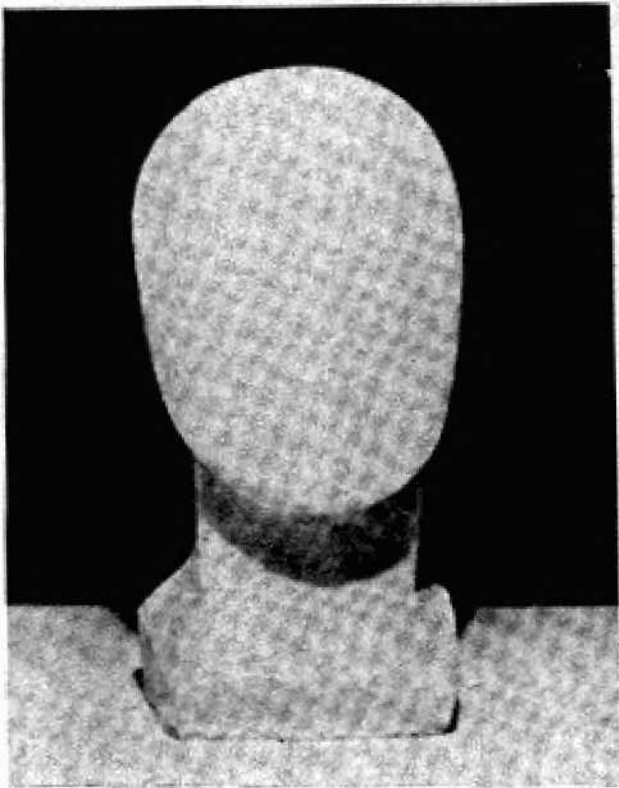
PLANES

THERE. IS NO SET OF PLANES WHICH WILL FIT THE
FIGURE AT ALL TIMES, SINCE THE SURFACE FORM
CHANGES WITH MOVEMENT SUCH AS BENDING AT
THE WAIST, MOVEMENT OF THE SHOULDERS, ETC.
THE PLANES ARE GIVEN MAINLY TO SHOW **HOW**

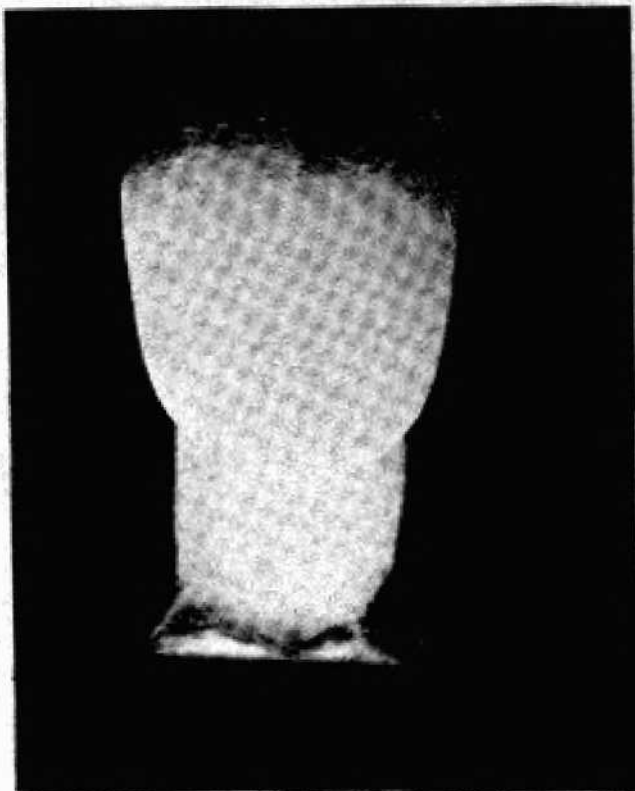
THE FORMS CAN BE SIMPLIFIED - EVEN WHEN
YOU HAVE THE LIVE MODEL OR COPY, YOU
STILL WORK FOR THE MAIN PLANES OF LIGHT,
HALFTONE AND SHADOW. OTHERWISE, YOU MAY
HAVE AN OVERPOWERING CONFUSION OF TONES.



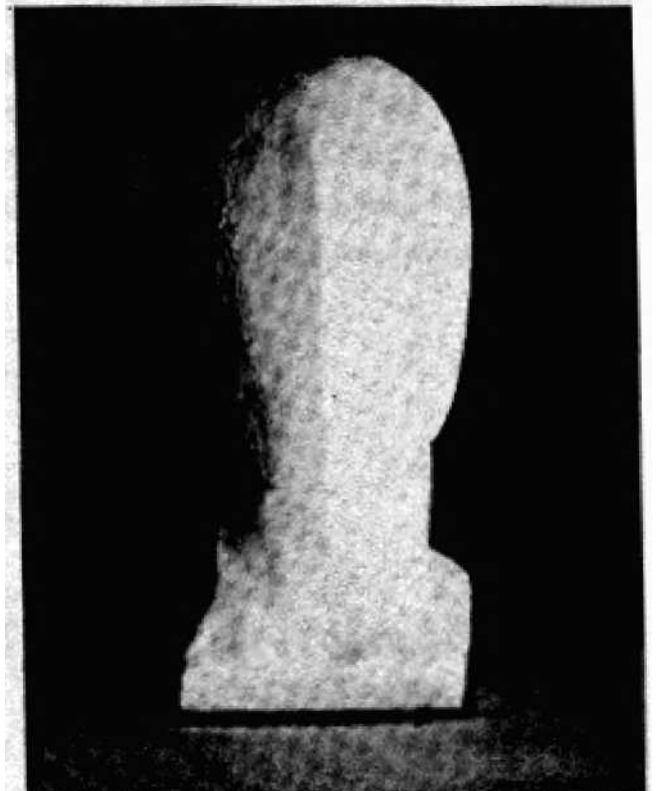
LIGHTING



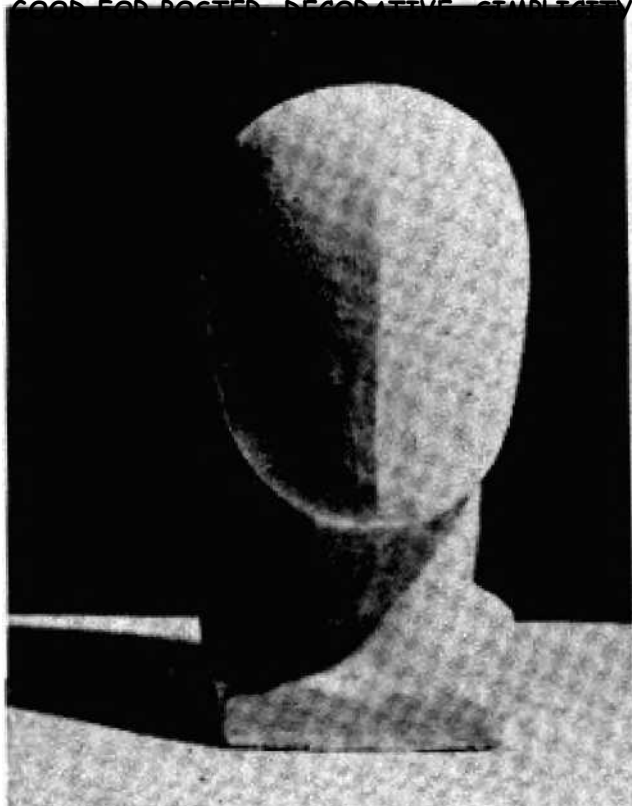
1. "FLAT LIGHTING" - (FROM DIRECTLY IN FRONT
GOOD FOR POSTER, DECORATIVE, SIMPLICITY.



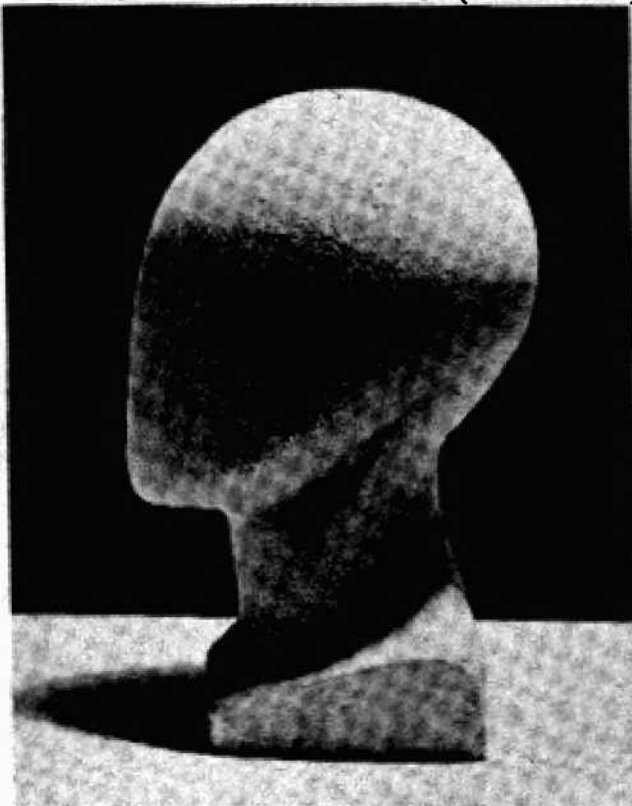
2. "STAGE" - DRAMATIC, WEIRD, GHOSTLY, LIKE
THE LIGHT FROM A CRATER (LOW FRONT)



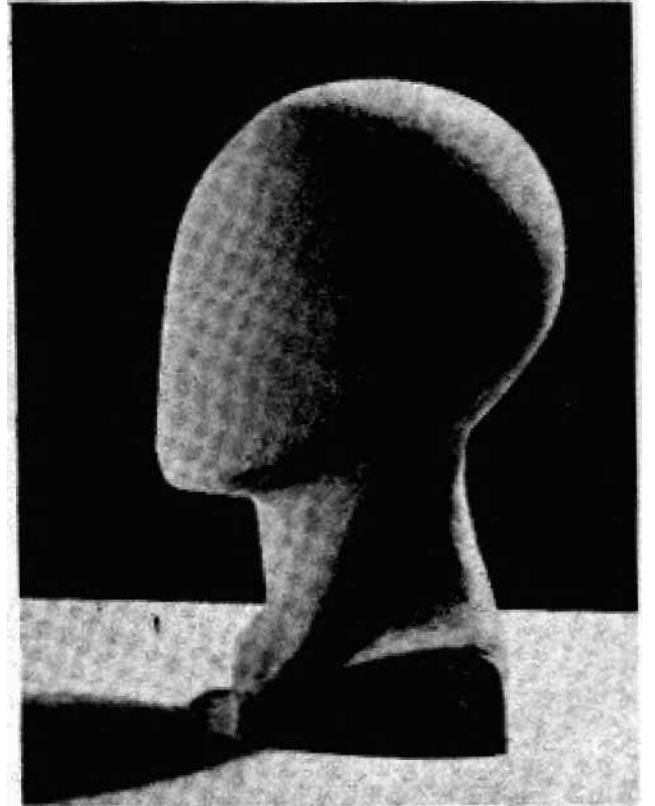
3. "3/4 SIDE": a GOOD LIGHTING. PLACE THE
LIGHT 45° FRONT. USE ONE LIGHT ONLY.



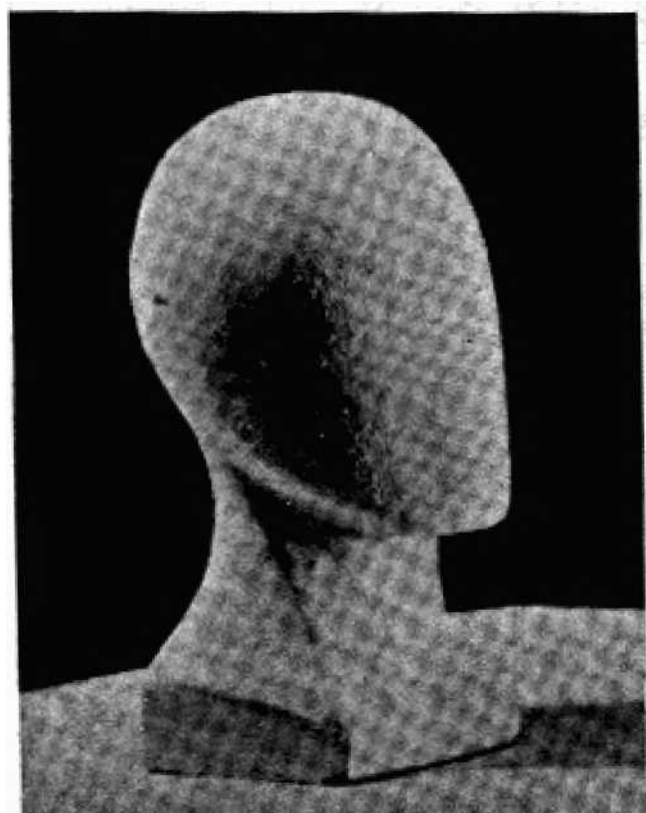
4. "3/4 TOP SIDE" - ONE OF THE BESTS. IT GIVES
MAXIMUM LIGHT, HALFTONE, SHADOW & REFLECT.



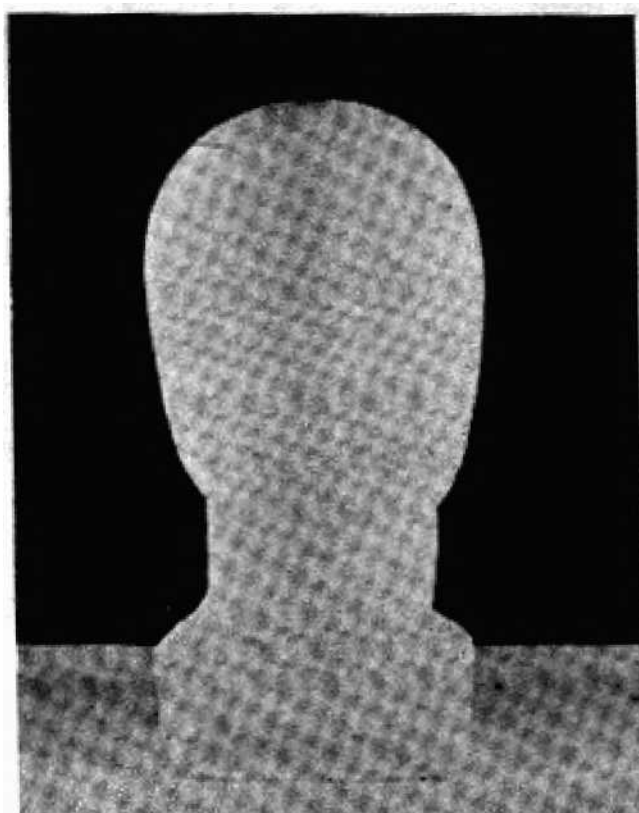
5. "TOP" A VERY BEAUTIFUL LIGHTING. THIS
GIVES GREAT LUMINOSITY TO SHADOWS.



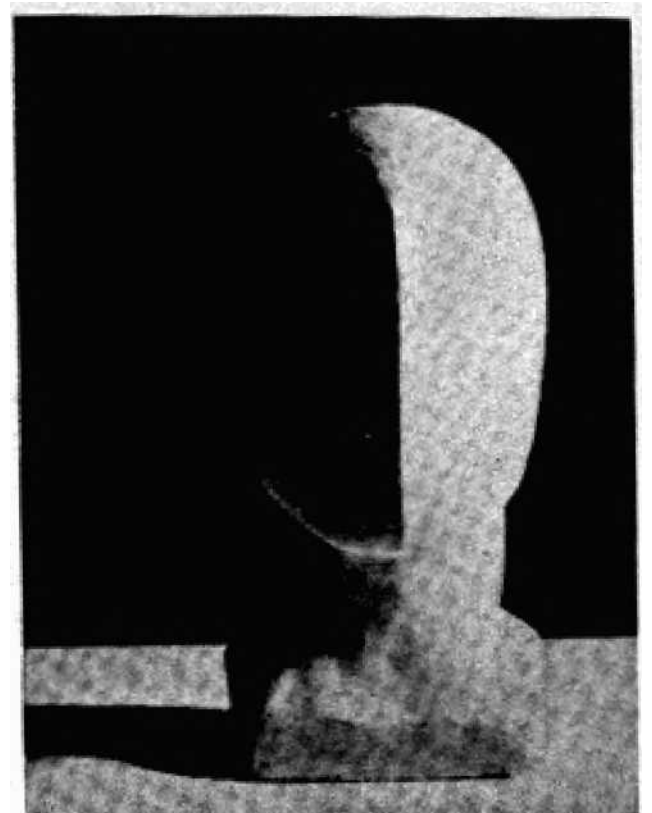
6. "TOP BACK" - WITH REFLECTORS, VERY GOOD
GIVES GREAT SOLIDITY TO THE FORM.



7 "CRISSCROSS", USUALLY BAD, NEVER HAVE
LIGHT EQUAL ON BOTH SIDES. CUTS UP FORM.



8. "ALL FLAT" - PROVING HOW EXCESS LIGHTS
MAY ACTUALLY ELIMINATE SOLID FORM.



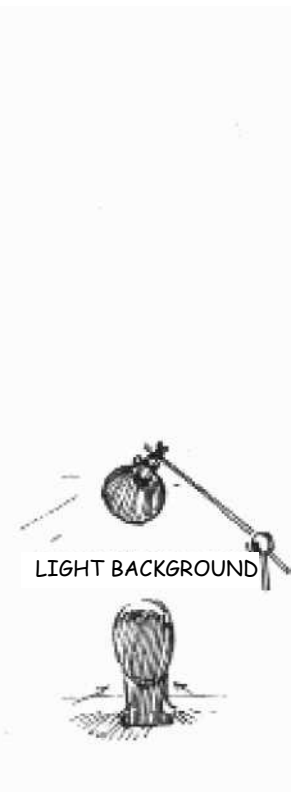
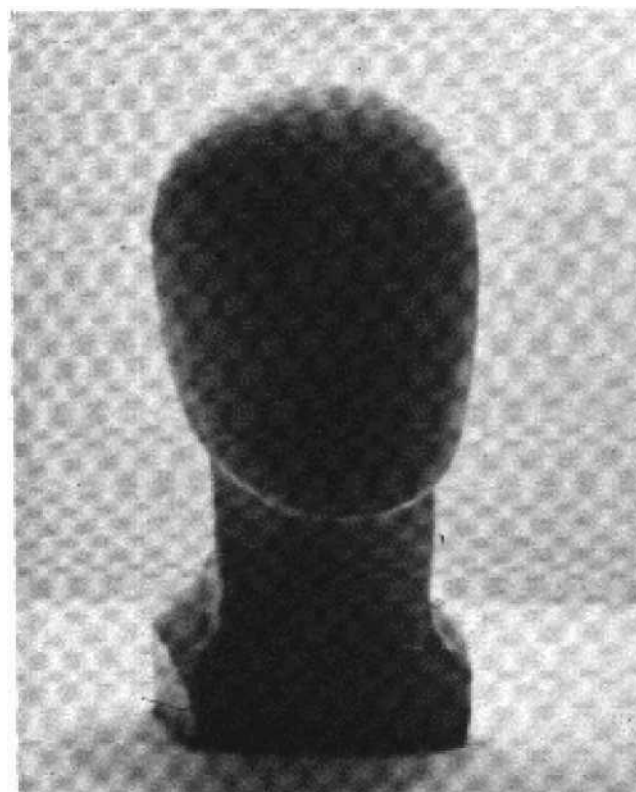
9. "1/2 AND 1/2" BAD AREAS OF LIGHT AND SHADOW
SHOULD NEVER BE EQUAL. GIVE ONE THE EDGE.

LIGHTING

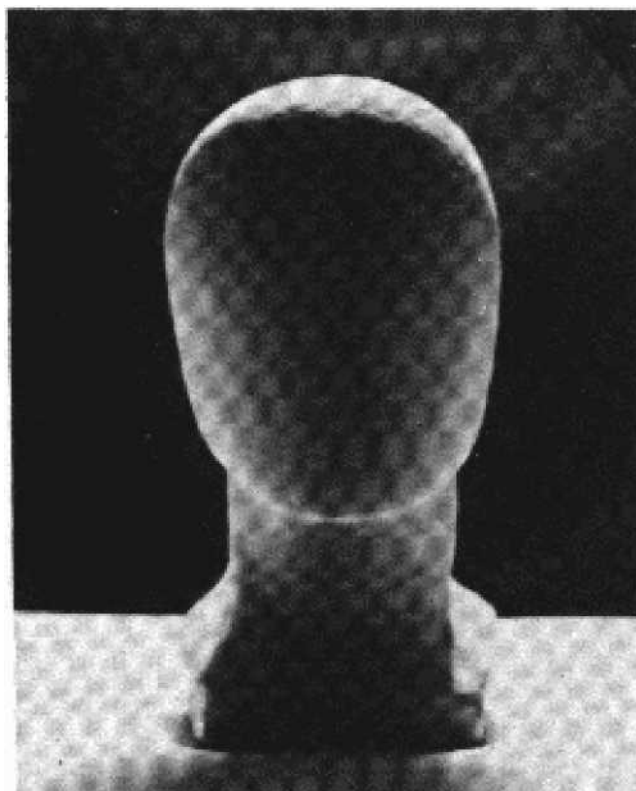
Here the camera lends us a helping hand by showing the 'actual' light as it falls on a simplified form. The form has been rounded to give you the gradation from light through halftone to shadow. Number 1 is a front lighting, corresponding to the treatment of a flat and unshaded outline drawing. The only shadow, under the chin, occurs because the light was raised a little to allow the camera to be placed under it. Camera and light, of course, could not have been placed in the identical spot. Had this been possible, there would have been no shadow. An all-flat or formless lighting may be obtained by piling in equal lighting from every direction (Number 8).

When there is a single source of light on the object, the shadowed side reflects some of the light in a luminous manner. The reflected-light areas within the shadow, however, never become competitive with the areas in light, and the unity of the mass of light as opposed to the mass of shadow is maintained. In drawing nothing within a shadow area should ever be as light as that within a light area, because reflected light is never so strong as its source. One exception might be the use of a mirror. That, however, would be a duplication of the light source rather than reflection (refraction). The dazzling light upon water is another example of refraction.

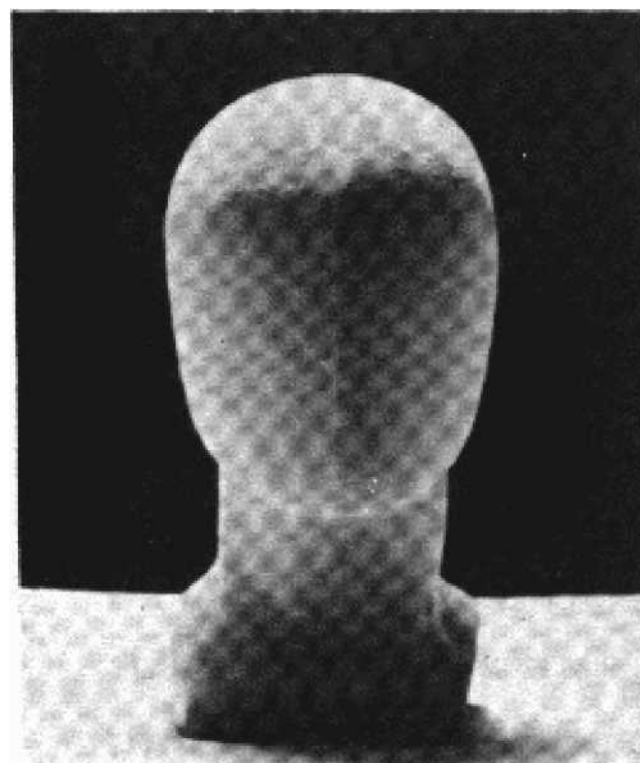
Simple lighting, which means lighting from a single source, and the reflected light of that source, is the most perfect lighting there is. It renders form in its actual contours and bulk. True modeling of form cannot be approached any other way, since to change the normal or true value of the plane is to change and upset the form; if the value is "off," the form is incorrect. Since the photographer may not have reasoned this out, it is better to make your own photographs, or at least supervise the lighting of any photographic copy. The photographer hates shadows; the artist loves them.



**10. "SILHOUETTE" – THE REVERSE OF NO.1
GOOD FOR POSTER, DESIGN & FLAT EFFECTS.**

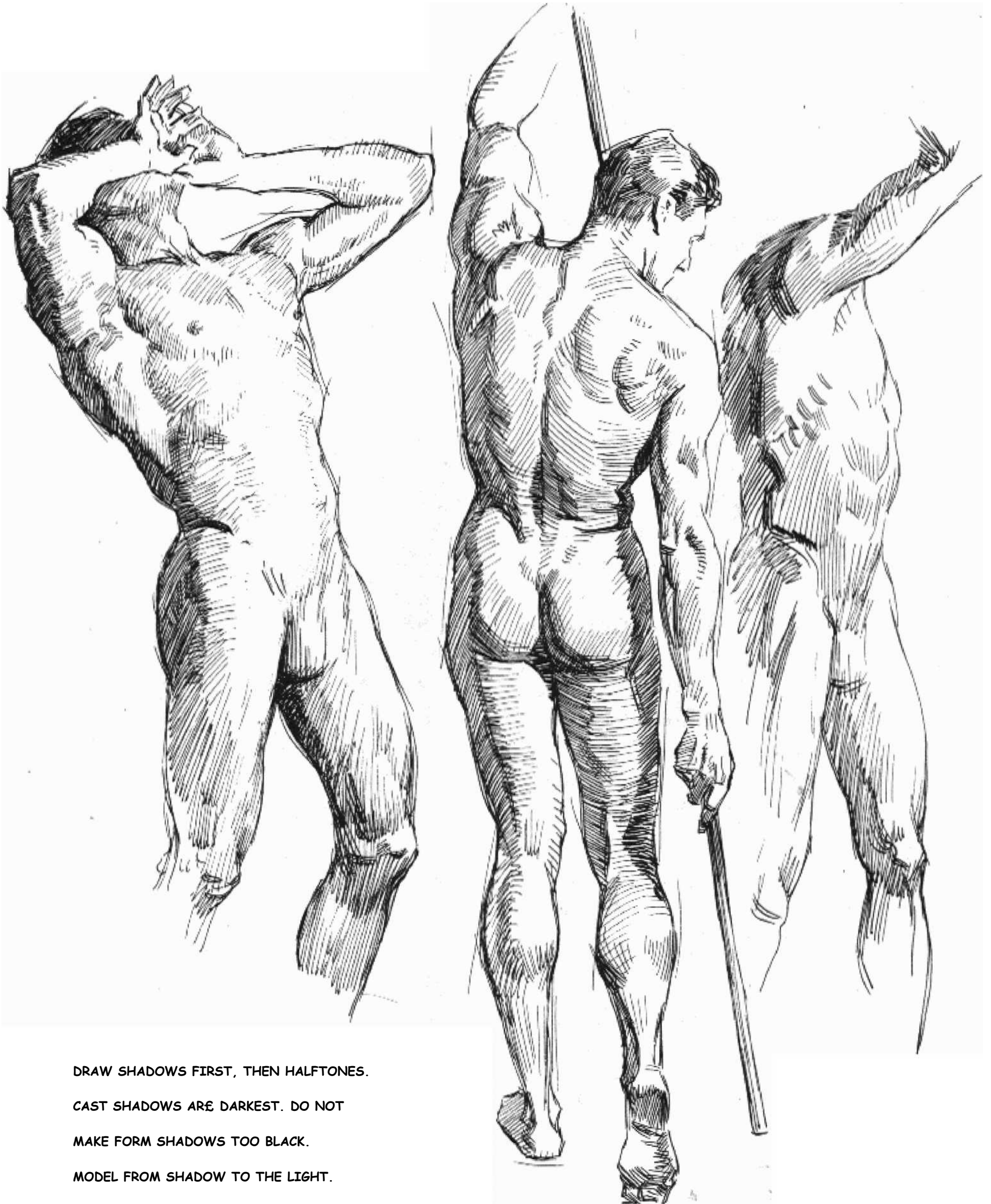


**11. "FRINGE" – LIGHTED DIRECTLY FROM
BACK SLIGHTLY TOP. VERY EFFECTIVE.**



**12. "SKY". TOP WITH A LIGHT GROUND FOR
REFLECTION. NATURAL, VERY GOOD.**

SIMPLE LIGHTING ON THE FIGURE



DRAW SHADOWS FIRST, THEN HALFTONES.

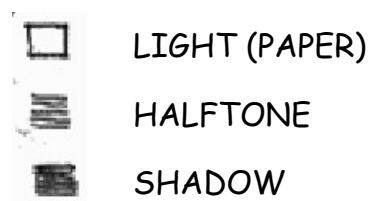
CAST SHADOWS ARE DARKEST. DO NOT

MAKE FORM SHADOWS TOO BLACK.

MODEL FROM SHADOW TO THE LIGHT.

KEEP ALL HALFTONES LIGHTER THAN

SHADOWS. DON'T "OVER MODEL" LIGHT.

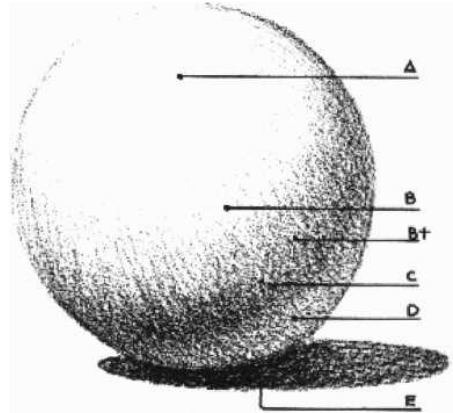


TRUE MODELING OF ROUNDED FORM

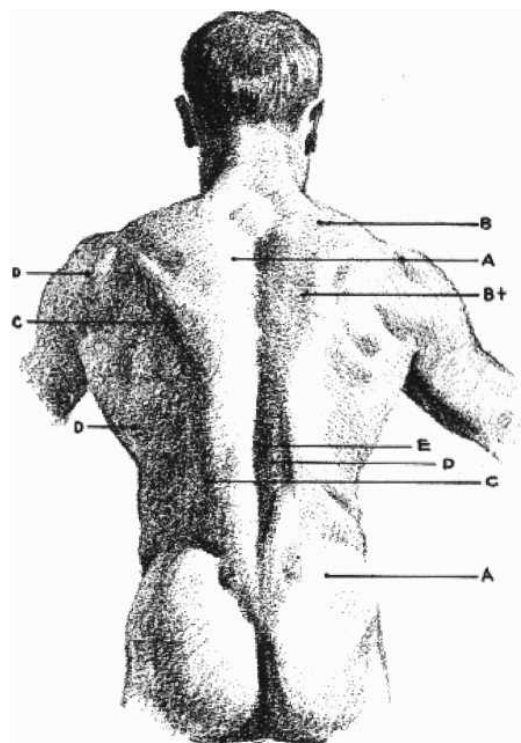
The simplest way to explain the fundamental principle of rendering light and shadow is to think of a ball with light focused upon it just as the sun lights the earth. The area on the ball closest to the light is the high light (A), comparable to noon. If we move on the surface of the sphere away from the high light in any direction, we find that the light begins imperceptibly to fade into the halftone area (B), which may be compared to twilight, and then to last light (B+), and on to night (C). If there is nothing to reflect the light, there is true darkness; however, if the moon, a reflector of the sun's light, comes up, it will reflect light into the shadow (D). When light is intercepted by a body, its silhouette falls upon the adjacent light plane. This, the darkest of the shadows, is called "cast shadow." It is still possible, however, for a cast shadow to pick up some reflected light.

The artist should be able to look at any given place on his subject and determine to which area it belongs — the light, the halftone, the shadow, or the reflected light. Correct values must be given in order to obtain unity and organization of these four fundamental areas. Otherwise a drawing will not hold together. Treatment of light gives a drawing cohesion no less than structural form.

There are many things you can learn from photographs if you use them intelligently. Remember, however, that the range of light to dark is much greater in the eye than in pigment. You cannot possibly put down the full range; you have to simplify.



-  A. HIGHLIGHT = "NOON"
-  B. HALFTONE = "TWILIGHT", B+ LAST LIGHT
-  C. SHADOW = "NIGHT"
-  D. REFLECT = "MOONLIGHT"
-  E. CAST SHADOW = "ECLIPSE"



IV. DRAWING THE LIVE FIGURE: METHODS OF PROCEDURE

Before you undertake to draw from the living model, be sure you have absorbed all the preliminaries so far discussed. These are:

- The proportions of the idealized figure
- The general framework
- The relationship of perspective to the figure
- Movement and action
- The mannikin and simplified building of the form
- The anatomic construction
- The planes by which we build light and shadow
- Foreshortening
- The fundamentals of light and shadow
- The true modeling of form

Now when you have to draw something set up in front of you, you must possess still another fundamental skill—intelligent measurements I say "intelligent" because your aim is not mere duplication.

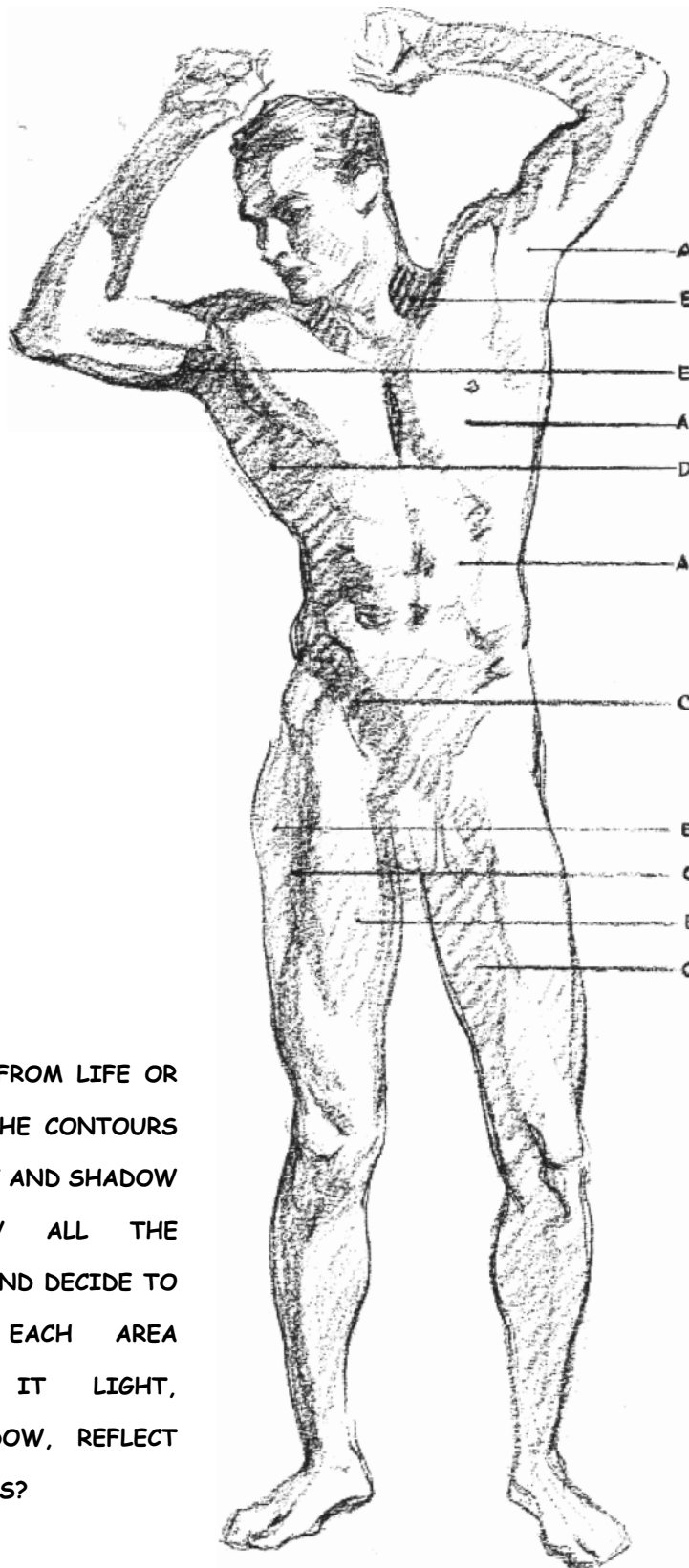
Suppose you begin to draw a husky young man, aims uplifted, whom you want to interpret in terms of light, halftone, and shadow. You have set your light source low and to the right, so that there will be a varied play of light across the form. First, look for the area of greatest light. It is found on the chest under the left arm of the model. Now look for the whole mass of light as opposed to the whole mass of shadows. Sketch in the contours of the figure and block in these masses. (On page 88 you will find the halftones added and the shadows relatively darkened.) I suggest that you use the point of your pencil for the contours and the side of the lead for the massing of the halftone and shadow. When you are drawing with a pen, shadows and halftones can be achieved only by combinations of lines. But a brush or pencil adapts itself to mass. Observe, too, that the grain of your paper will add to or detract from the attractiveness of the texture of the drawing. Because of the method of reproduction, a coated, smooth paper could not be used for the

drawings in this book. Beautiful grays and darks are possible, however, on the smooth papers if the side of a soft lead pencil is used. The halftones and darks may be produced in either pencil or charcoal by rubbing with the finger or a stump of paper. The whole figure drawing may be rubbed with a rag and the lights picked out with a kneaded eraser.

On pages 86 and 87, look over my shoulder as I proceed with my own method for drawing a figure. On page 88 see a plan of approach that I call the "visual survey." It is less complicated than it looks, for I have included visual measurement lines that, ordinarily, are not set down. It is a plan of finding level points and plumb points and the angles established by sighting a continuation of the line to see where it emerges. This is the only plan I know that can be depended upon to offer any degree of accuracy in freehand drawing.

It is easiest to sight in vertical and horizontal lines, so that important points directly across or under each other are quickly "checked." When a point falls outside the figure, such as a hand, angles of points within the figure will help to find it. When you have correctly placed one point, proceed to others, and finally your drawing will check with the model. This principle, also illustrated on page 89, applies to any subject before you and provides a valuable means of corroborating the accuracy of your drawing.

GROUPING SHADOW MASSES

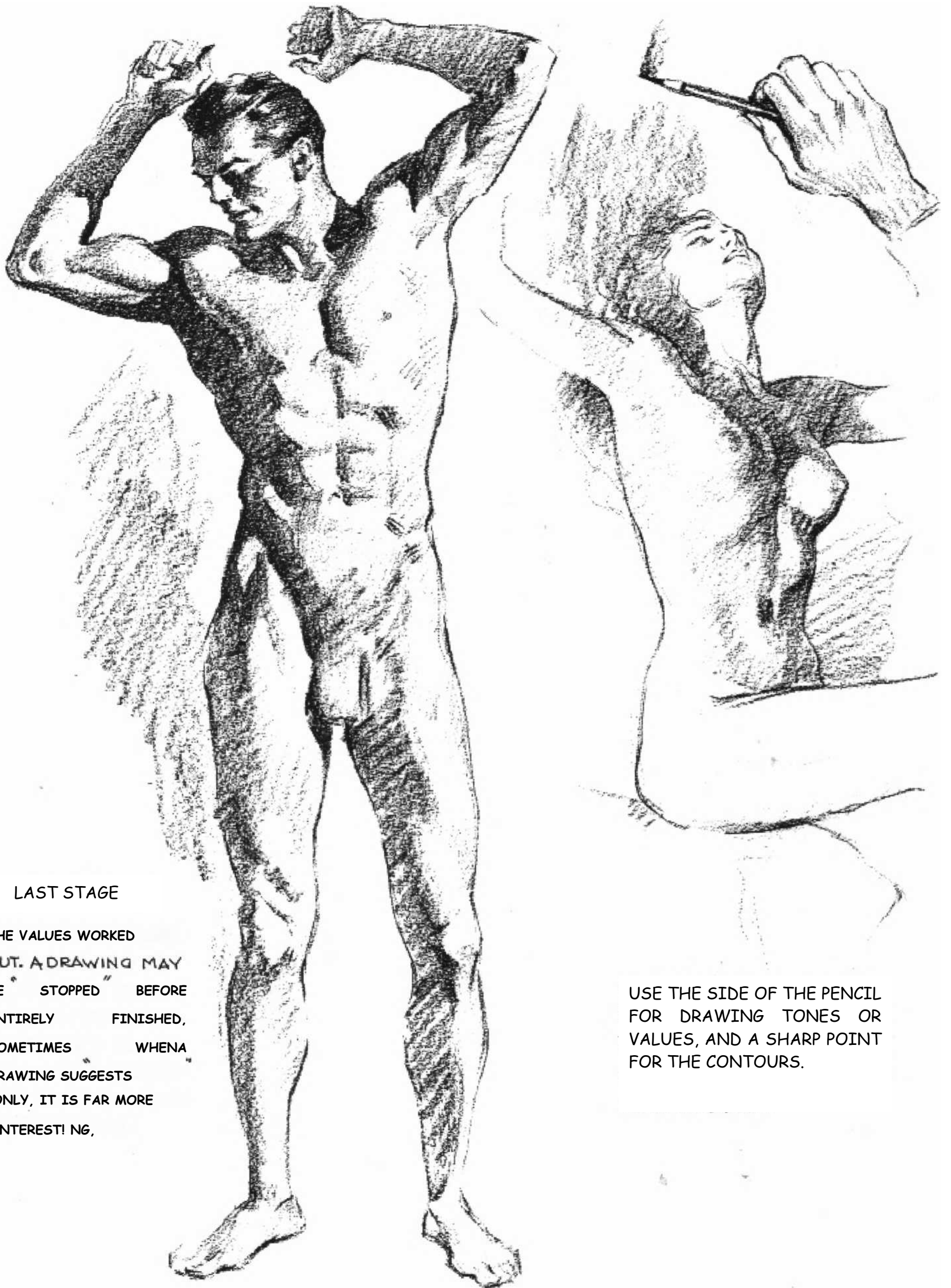


WHEN DRAWING FROM LIFE OR PHOTOS, DRAW THE CONTOURS OF THE HALFTONE AND SHADOW MASSES. STUDY ALL THE SURFACE AREAS AND DECIDE TO WHAT CLASS EACH AREA BELONGS. IS IT LIGHT, HALFTONE, SHADOW, REFLECT OR CAST SHADOWS?

A LIGHT
B HALFTONE
B+ DK. HALFTONE
C SHADOW
D REFLECT
E CAST SHADOW

THE FIRST STAGE

THE MAIN VALUES STATED

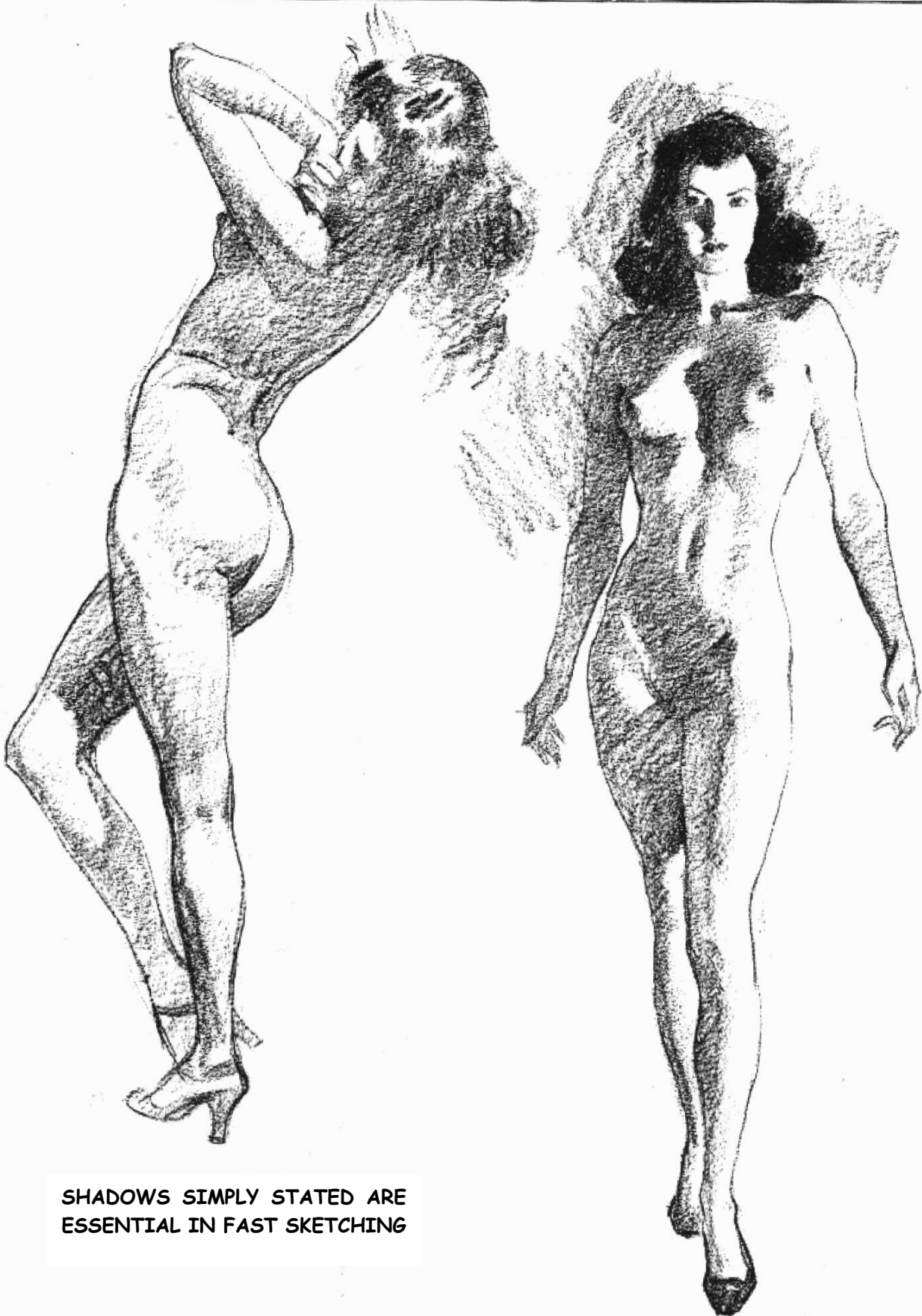


LAST STAGE

THE VALUES WORKED
OUT. A DRAWING MAY
BE STOPPED BEFORE
ENTIRELY FINISHED,
SOMETIMES WHEN A
DRAWING SUGGESTS
ONLY, IT IS FAR MORE
INTERESTING,

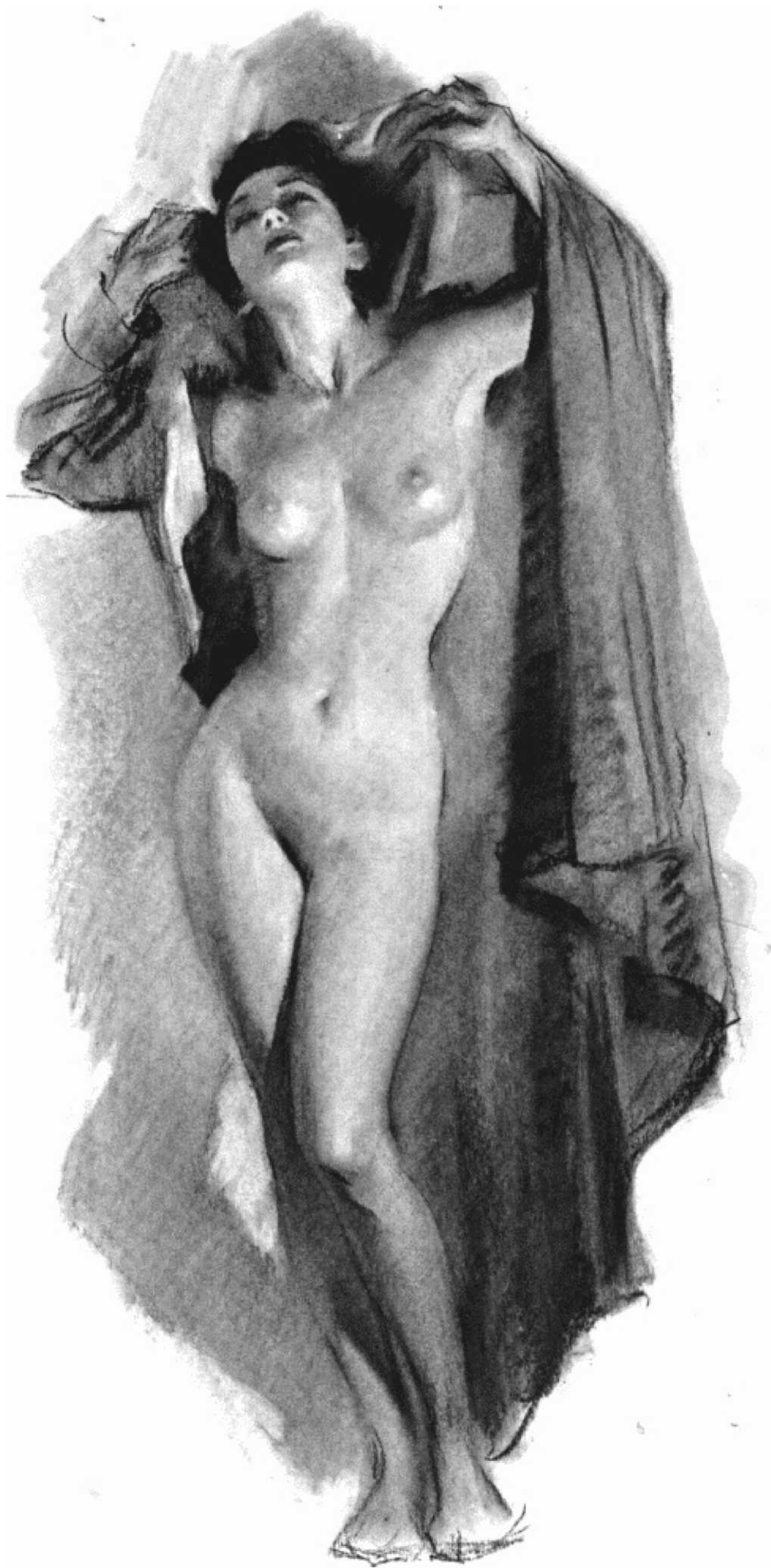
USE THE SIDE OF THE PENCIL
FOR DRAWING TONES OR
VALUES, AND A SHARP POINT
FOR THE CONTOURS.

THE FAST STATEMENT OF VALUES

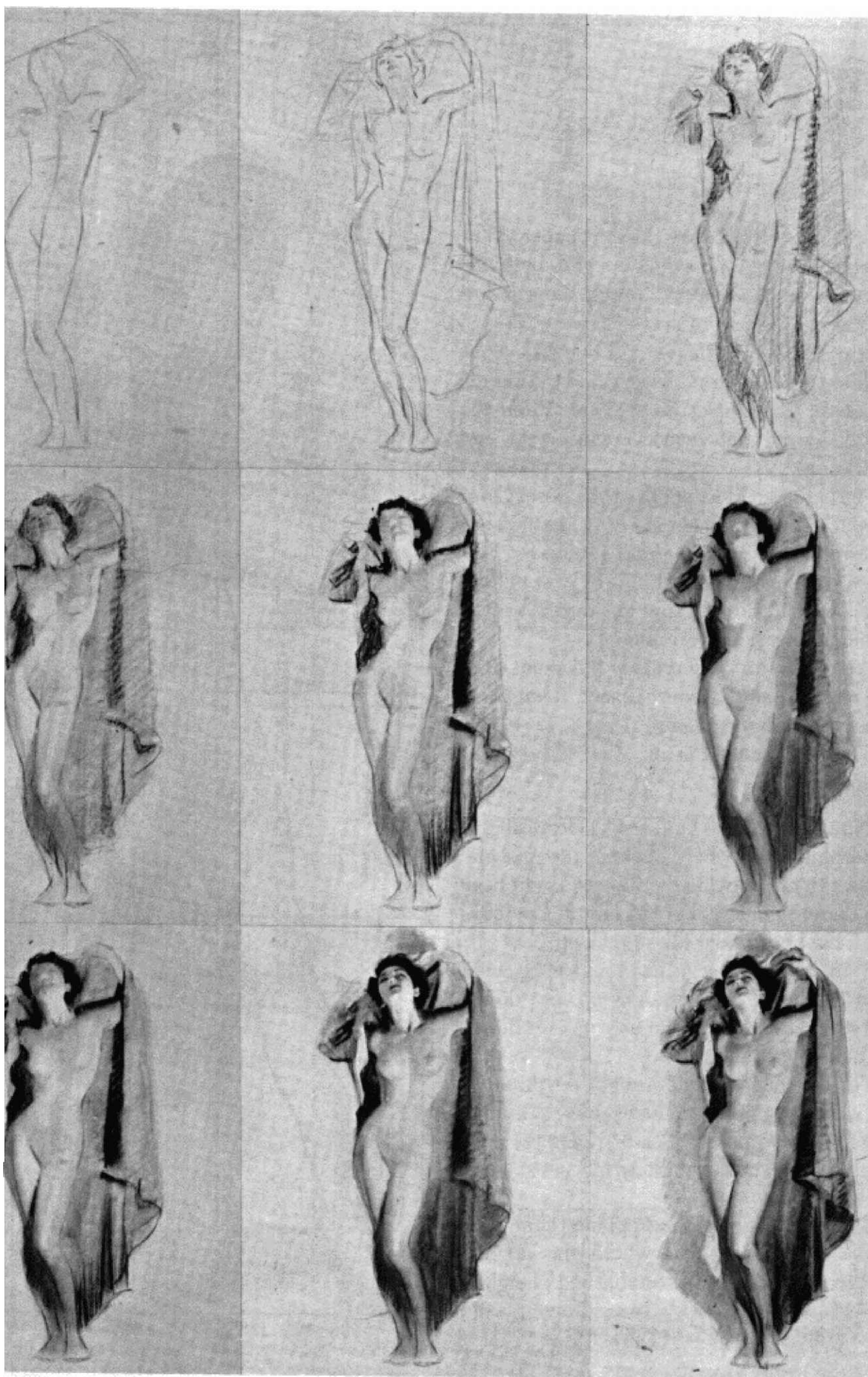


SHADOWS SIMPLY STATED ARE
ESSENTIAL IN FAST SKETCHING

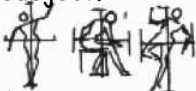
PROCEDURE

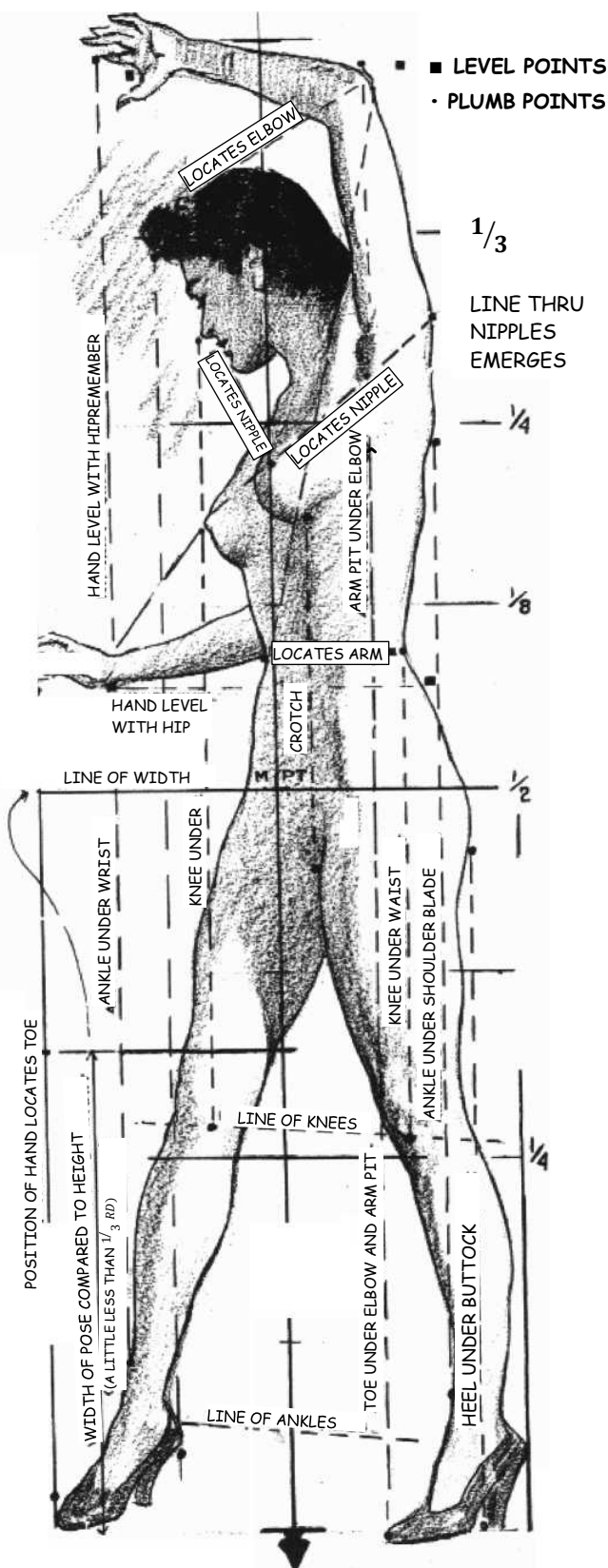


PROCEDURE

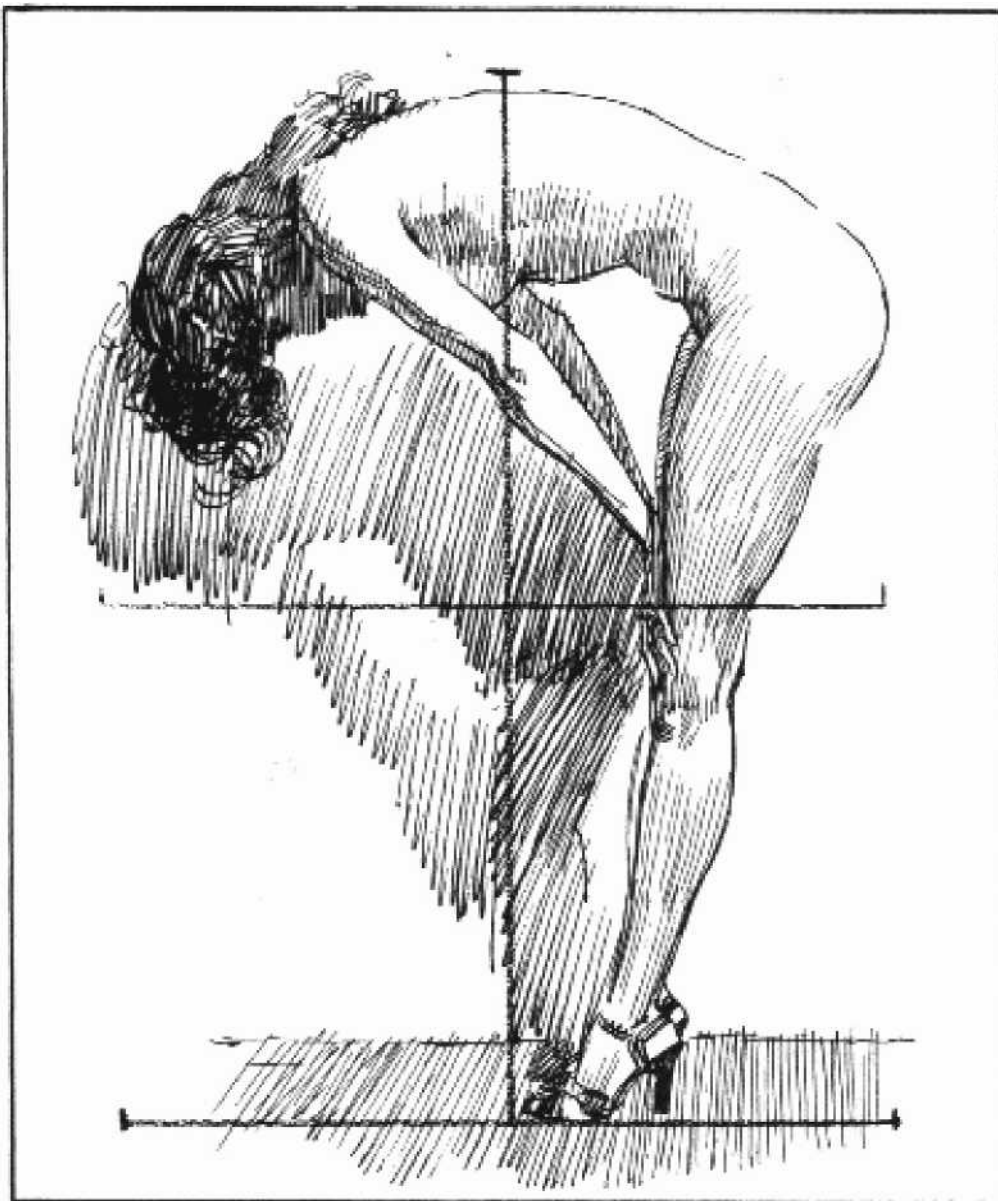
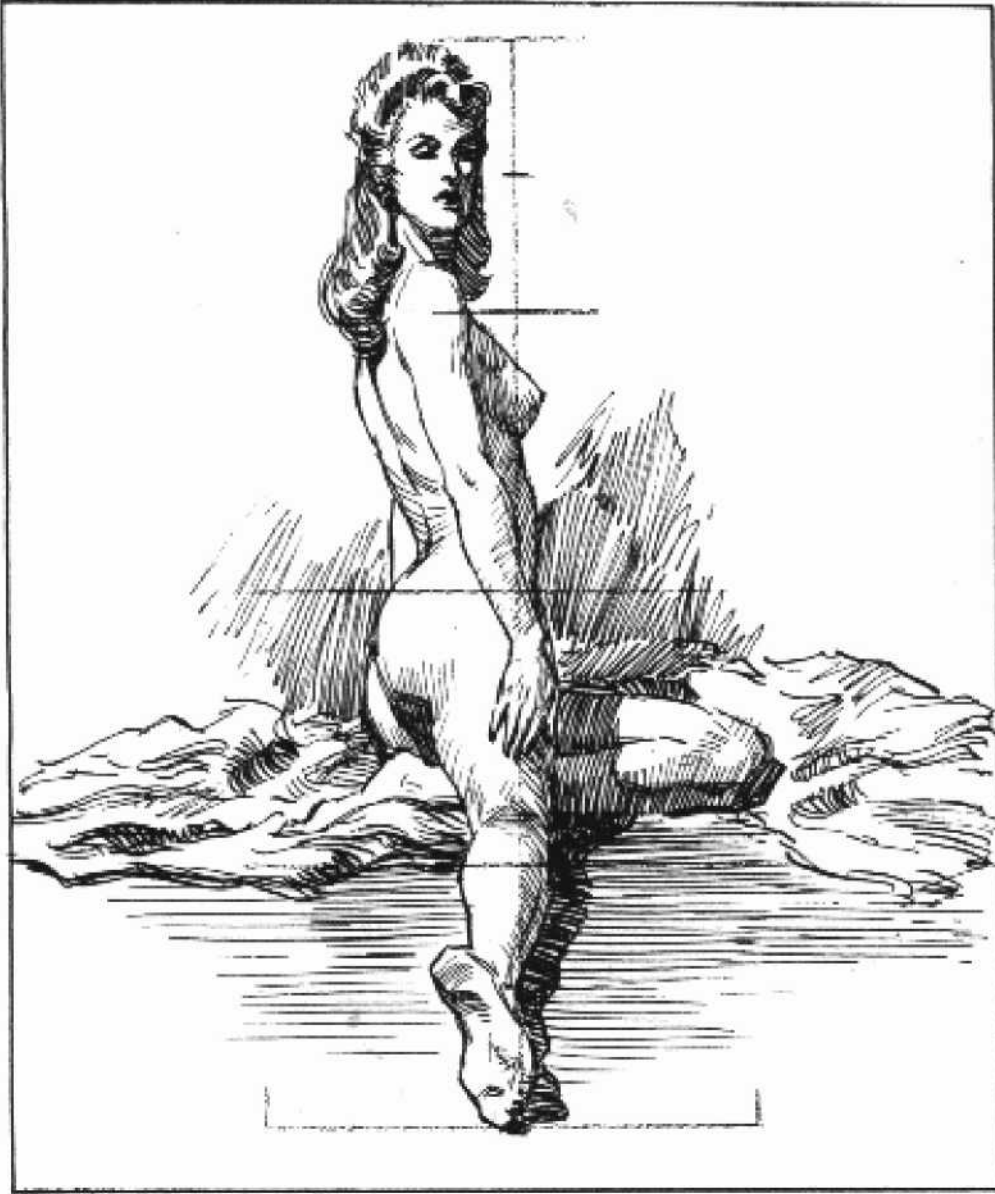


ALWAYS AT ARM'S LENGTH

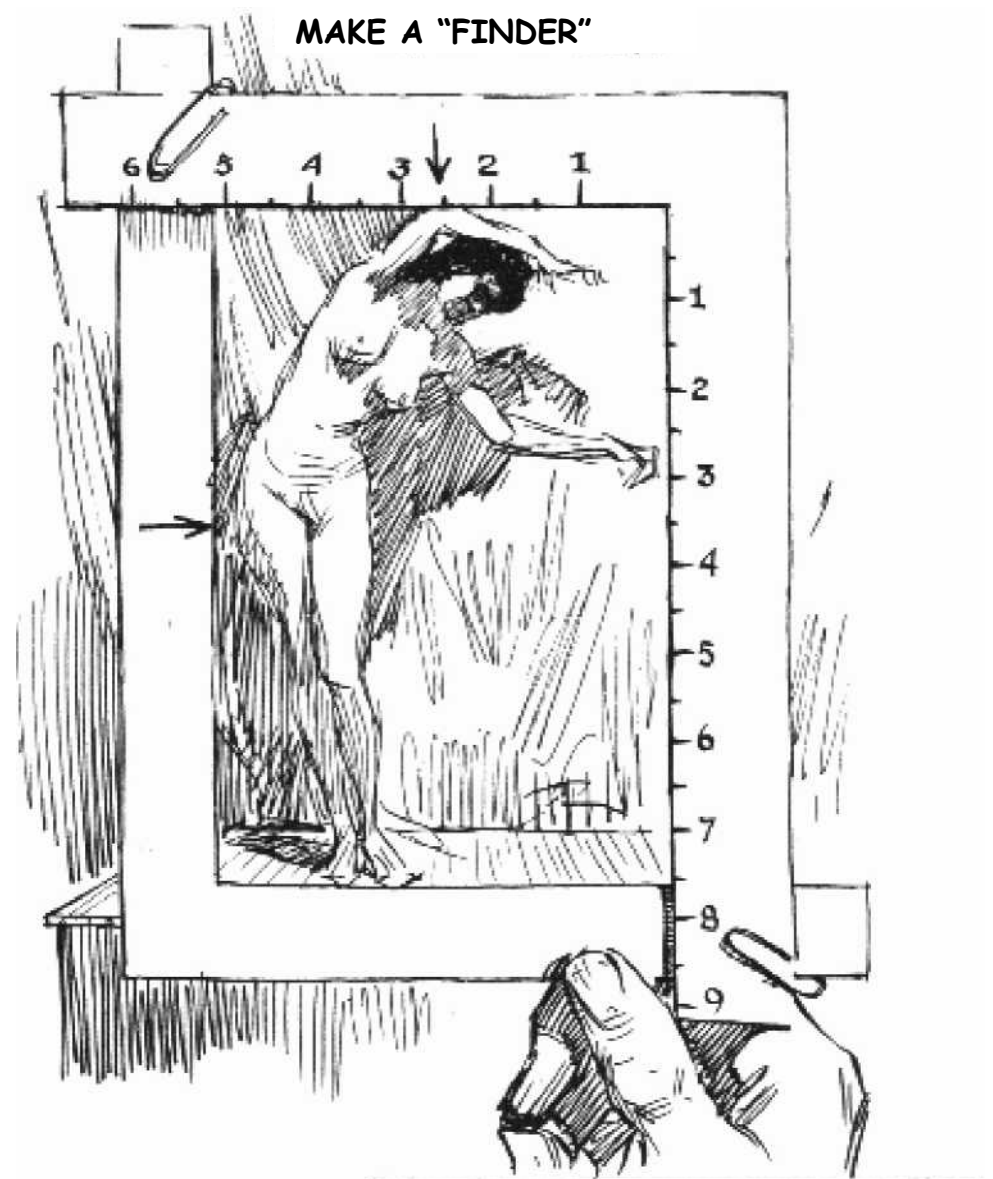
1. Establish two points on your paper as the desired height of pose (top and bottom) Draw a perpendicular through these points as the middle line of subject.
 2. Locate the middle point of line ($1/2$). Now, holding pencil at arm's length, find the middle point on the subject before you. From the middle point get quarter points (up and down).
 3. Take the greatest width of the pose. Compare it to the height. In my drawing it comes just above the right kneecap (about $1/2$) lay the width equally on each side of your middle point up and down. Now locate the middle point cross ways on your model.
 4. Your two lines will cross at this point. It is the middle point of your subject. Remember (this point, on the model.
- 
- You work out from it in all directions.
5. Now, with plumb line, or eye, locate all the important points that fall beneath one another. (In my drawing the subject's right heel was directly underneath her hair at the forehead, the knee under the nipple, etc)
 6. Start by blocking in head and torso and, from the head, sight straight up and down and straight across, all the way up and down the figure,
 7. For the angles, sight straight on through and establish a point on the line where it falls under a known point. (See line of chest and nipples. The known point is the nose* This locates right nipple.)
 8. If you constantly check points opposite, points underneath, and where the angles j emerge, after having established height, width, and division points - your drawing will I be accurate, and you will know it is!



PLUMB LINE



REMEMBER THIS PLAN GIVES THE ACTUAL LIVE PROPORTIONS. MAKE ANY ADJUSTMENTS YOU WISH AS YOU GO ALONG. USUALLY ADD A LITTLE IN LENGTH.



CUT TWO RIGHT ANGLES FROM SOME STIFF CARDBOARD, MARK OFF IN INCHES AND CLIP TOGETHER. THIS CAN BE ADJUSTED. IT GIVES PROPORTIONATE WIDTH TO HEIGHT.



V. THE STANDING FIGURE

Much of the essential equipment for professional figure drawing is described in the preceding chapters. You have now learned a “means of expression”, but your use of that knowledge is just beginning. From this point onward you must learn to express yourself individually, showing your particular taste in the selection of models, choice of pose, dramatic sense and interpretation, characterization, and technical rendering.

Routine knowledge and fact thus become the basis for what is often referred to as inspiration, or spiritual quality, subjects that are little discussed in art textbooks. The truth is that there are no hard-and-fast rules. The best advice is to watch for the individual spark and fan it into flame when you find it. For my part, I have found that most students possess initiative, are open to suggestion, and are thoroughly capable of being inspired to express themselves ably. I believe that when the qualities necessary for acceptable drawing are pointed out, you may be helped tremendously to bridge the gap between amateur and professional drawing.

Two broad approaches are needed: First is the conception, or “What have you to say?” Second is the interpretation, or “How can you say it?” Both call for feeling and individual expression. Both call for initiative, knowledge, and inventiveness.

Let us take the first step. Before you pick up your pencil, or take a photograph, or hire a model, you must understand your problem and its purpose. You must search for an idea and interpret it. If the job at hand requires a drawing designed to sell something, ask yourself the following: To whom must this drawing appeal? Shall it be directed toward a selected or general class of buyer? Are the buyers going to be men or women? Is there a dramatic way of expressing the subject? Will a head or whole figure best serve to emphasize the idea? Should several figures make up the composition? Will a setting and locale help or can the message be conveyed better without these? Where and how will it be

reproduced - newspaper, magazine, poster? You must take into account which advertising medium is to be used. A billboard, for example, will require a simple, flat background and the use of large heads, since the message must be taken in at a glance. Newspaper drawings should be planned for reproduction on cheap paper - —i.e., line or simple treatment without subtlety in the halftone. For the magazine, where the reader has more time, you may use the complete figure and even background, if needed. The tendency, however, is to simplify and to strip drawings of all that is not of major importance.

With the second step you advance to the practical interpretation of the idea. Eliminate what you know to be impractical. For instance, do not approach a billboard subject with several complete figures, for their expressions will not carry from a distance. Granting, then, that you rightly choose large heads, what are the types you want? What are the expressions? What are the poses? Can you do better if you get out your camera and nail down an expression that you know cannot be held by the hour? Can you put Mother over here and have room for the lettering also? Would she be better over there? What will you choose for a background? What will be the style and color of her dress? You begin, at this point, to experiment with thumbnail impressions on a tissue pad until you can say, “That’s it,” and then, with all the vigor that is in you, proceed to prove that “that’s it”.

VARIETY IN THE STANDING POSE

There is no book in the world that will do a job for you. There is no art director who can do your job. Even though the art director may go so far as to lay out the general idea, space, and placement, he still is asking for your interpretation. Again, there is no piece of copy that you can lay down in front of you which will completely answer your needs. Another man's work was done for his own purpose and for another problem. The principal difference between the amateur and the professional is that the latter courageously strikes out in his own way, while the former gropes for a way of expressing himself.

Endless variety in posing is possible. People stand up, kneel or crouch, sit or lie down but there are a thousand ways of doing these things. It is surprising, for example, to observe how many ways there are in which to stand up.

Plan the standing figure carefully, remembering that, although standing still is a static pose, you can suggest that the standing figure is capable of movement. Only when you portray a tense moment demanding rigidity in the figure do you arrest the latent movement. To relieve the static feeling, put the weight on one leg, turn the torso, tip and turn the head, or allow the figure to lean upon or be supported by something. A fairly good rule is never to have face and eyes looking straight ahead and set squarely on the shoulders, unless you are trying for a definite "straight-from-the-shoulder attitude" to suggest defiance, impudence, or a pitting of one personality against another. This attitude reminds one too much of the old photographs in which Grandpa's head was held in a clamp during the process of getting his likeness.

See that either head or shoulders are turned or tipped, or both. With the standing figure everything is relaxation, balance, and a distribution of weight. Any sort of gesture is a relief from hands hanging motionless at the sides. A

self-conscious girl has the feeling that she never knows what to do with her hands. The unimaginative artist, too, does not know what to do with the hands of his figures. But the girl can put her hands on her hips, finger her beads, fix her hair, pull out her vanity case, apply lipstick, smoke a cigarette. Hands can be most

expressive.

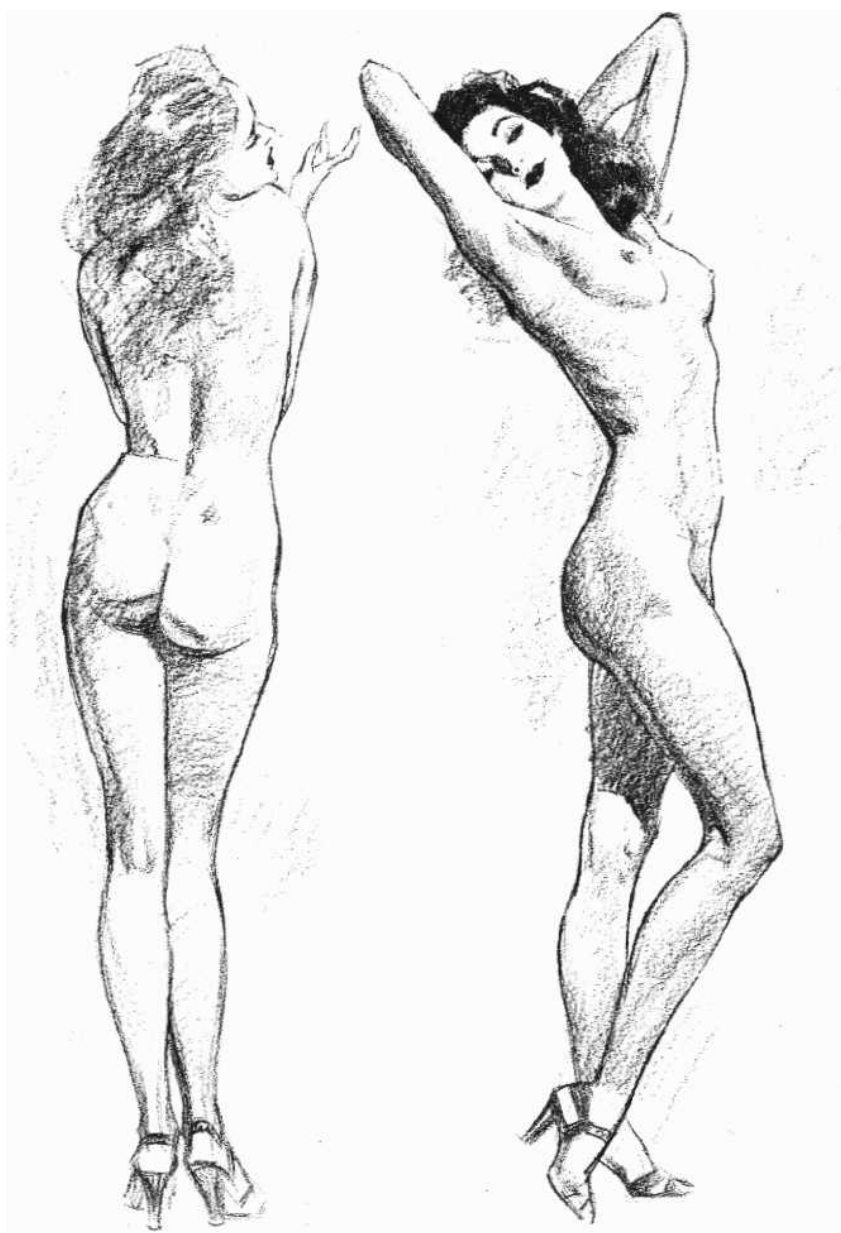
If you show legs, let them be interesting even in the standing pose. Drop one knee. Raise a heel. Do anything except keep them glued to the floor side by side. Twist the body, drop one hip, get the elbows at different levels, clasp the hands, put one hand up to the face, do anything that keeps your drawing from looking like a wooden dummy. Draw a lot of little "funnies" until you find one that is interesting, *Make every standing figure do something beside just standing*. There are so many natural gestures possible, to combine with the telling of a story, to express an idea or emotion, that it should not be hard to be original.

When I illustrate a story, I usually read significant parts of the manuscript to the models. I try to get them to act out situations as naturally as possible. At the same time I try to think of how I would act under the circumstances in the story. There is, of course, the danger of overacting, or of using gestures that go beyond the natural or logical, which is almost as bad as being static.

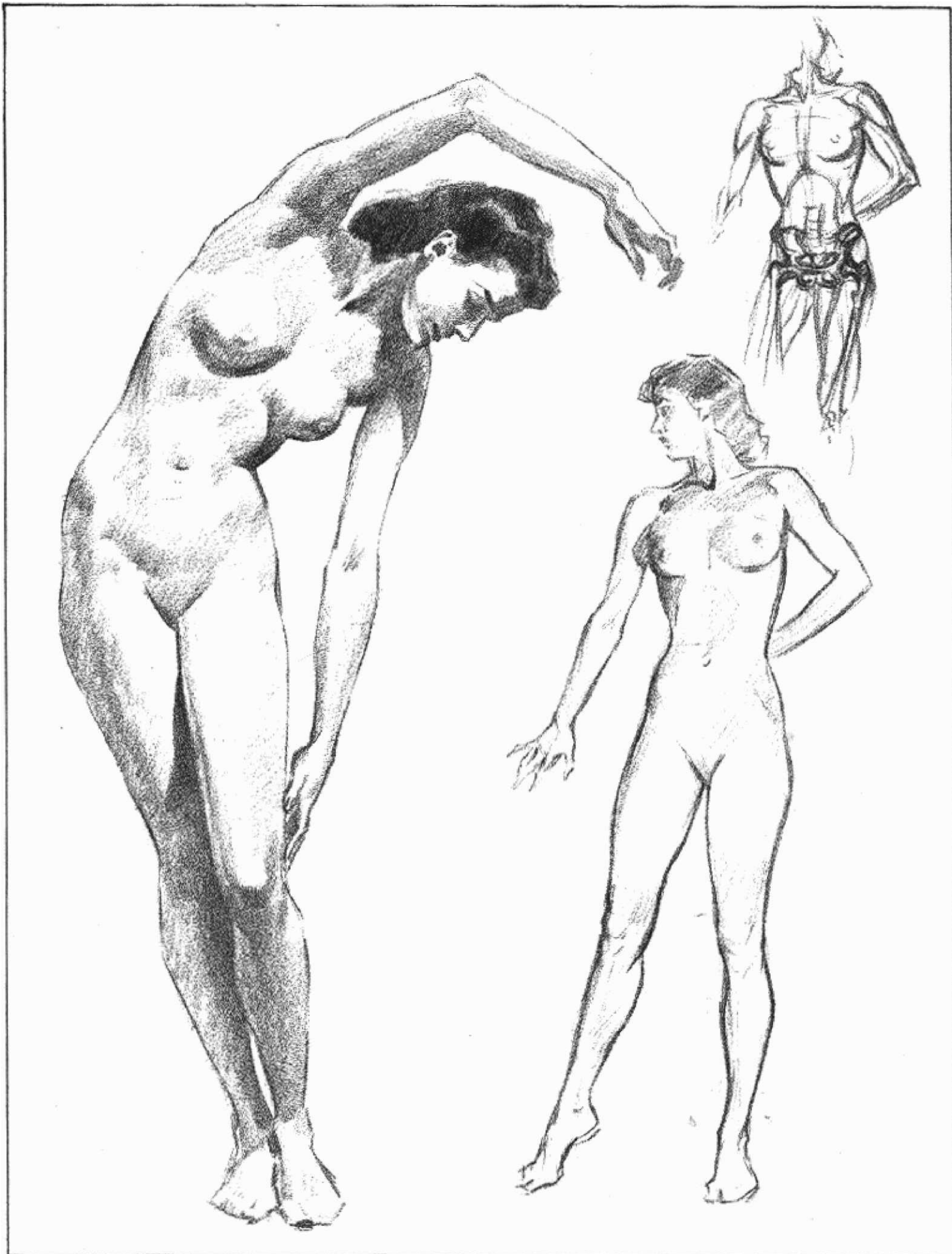
Experiment with the lighting on the model to express best what you have in mind. Give importance to a portion of the figure by getting the strongest and most concentrated light upon it. Sometimes parts of a figure can be lost in shadow to advantage. Sometimes a silhouette may be stronger and more compelling than a brightly lighted subject.

The whole gamut of expression is there for you to choose from. Don't form a few habits that you continually repeat. Try to make each thing you do just as original in conception and execution as you possibly can.

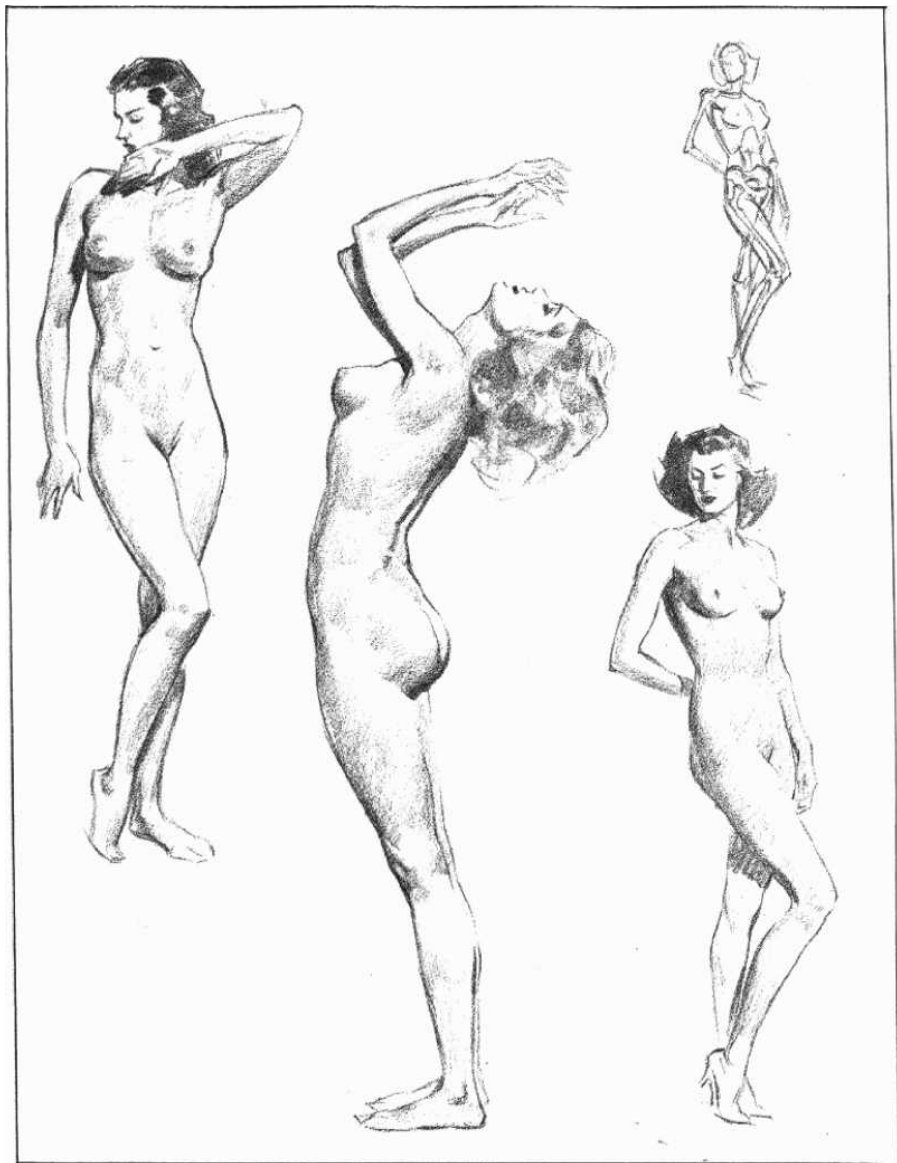
THE WEIGHT ON ONE FOOT



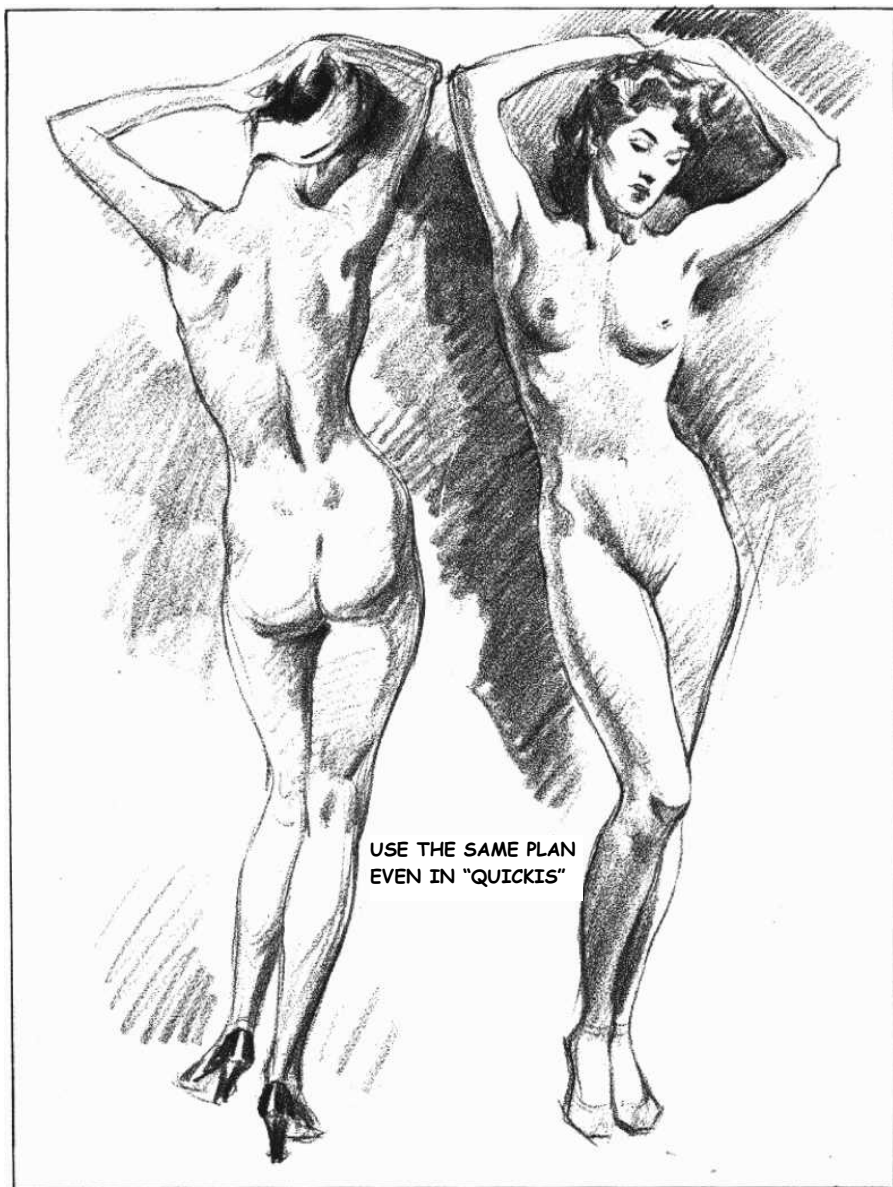
DISTRIBUTED WEIGHT

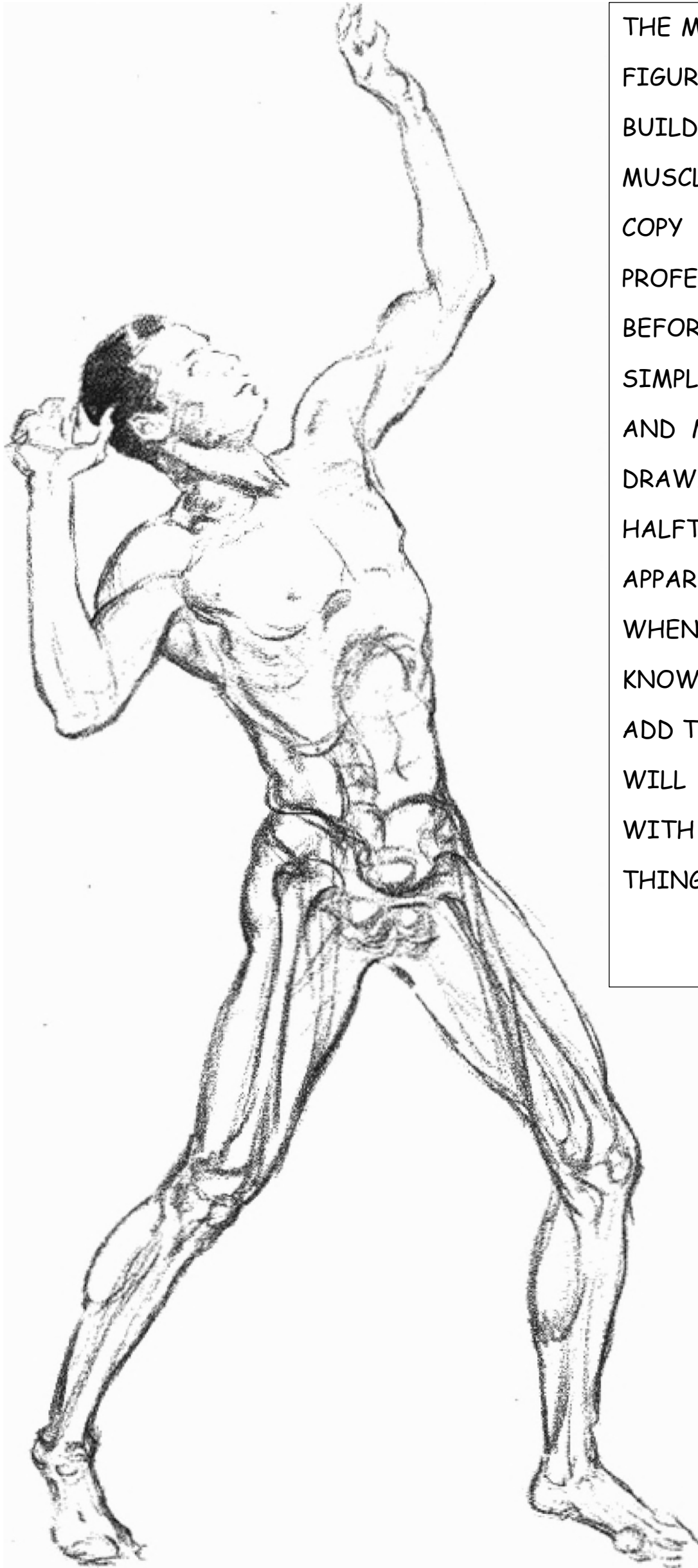


THERE ARE MANY WAYS OF STANDING



THE NEARLY FRONT LIGHTING

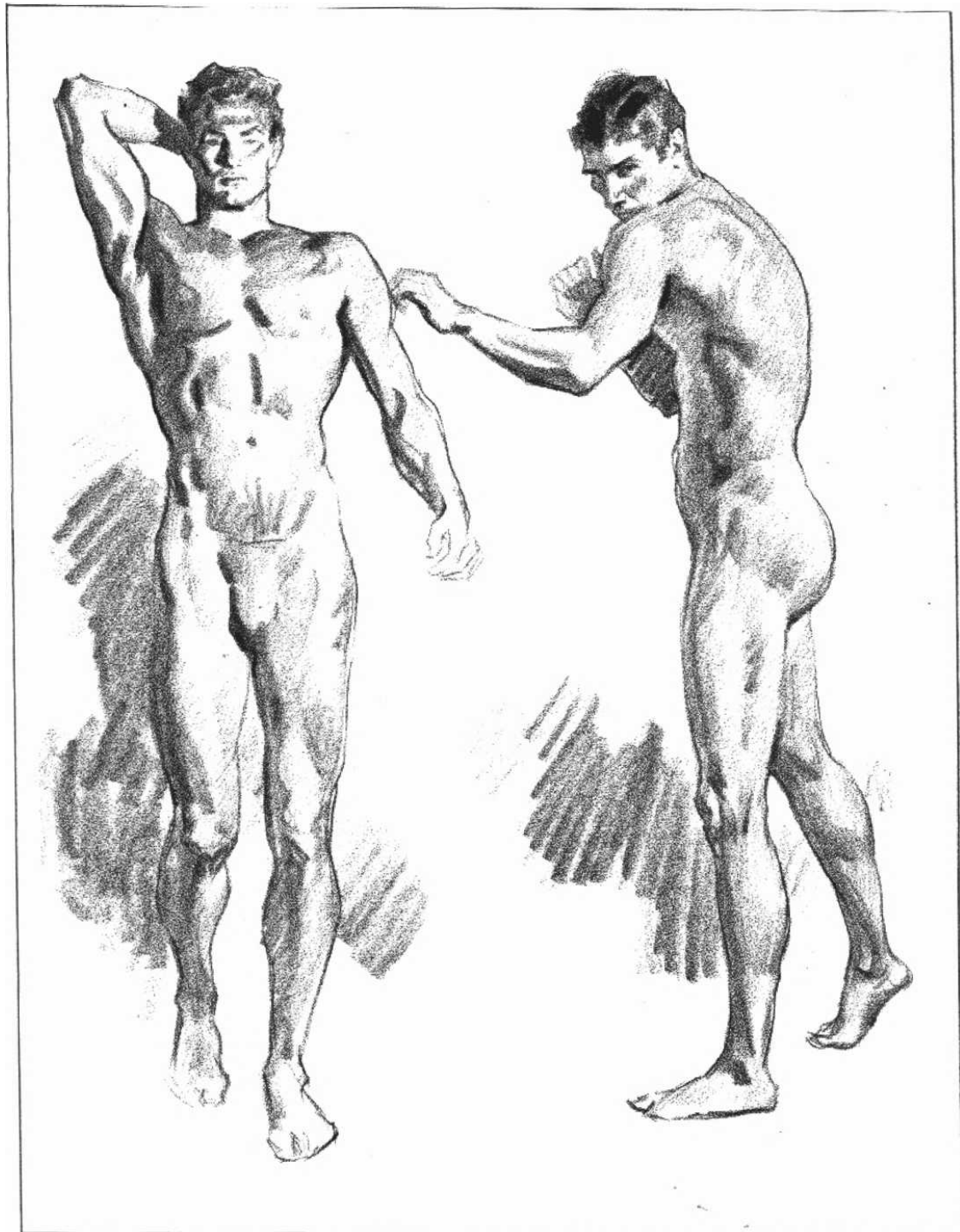




THE MOST CERTAIN WAY TO LEARN TO DRAW THE FIGURE IS TO START WITH THE SKELETON, BUILDING IN THE BONES AND THEN THE MAIN MUSCLES OVER THE BONES. YOU CAN START WITH COPY OF ANY FIGURE, OR A MODEL, MANY PROFESSIONAL ARTISTS BUILD UP THEIR FIGURES BEFORE ADDING THE CLOTHING. TRY IT WITH VERY SIMPLE POSES AT FIRST. EVENTUALLY THE BONES AND MUSCLES WILL BECOME INSTINCT AS YOU DRAW. YOU WILL SEE THEM AS PLANES OF LIGHT, HALFTONE AND SHADOW. KNOW THAT IT IS APPARENT TO ANY ARTIST WHO KNOWS ANATOMY WHEN THE OTHER FELLOW DOES NOT. BE ONE WHO KNOWS. THE STRUGGLE IS TOO HARD ANYWAY TO ADD THE HANDICAP OF NOT KNOWING. YOUR TIME WILL BE TOO PRECIOUS TO HAVE TO STRUGGLE WITH CONSTRUCTION, AS WELL AS ALL THE OTHER THINGS.

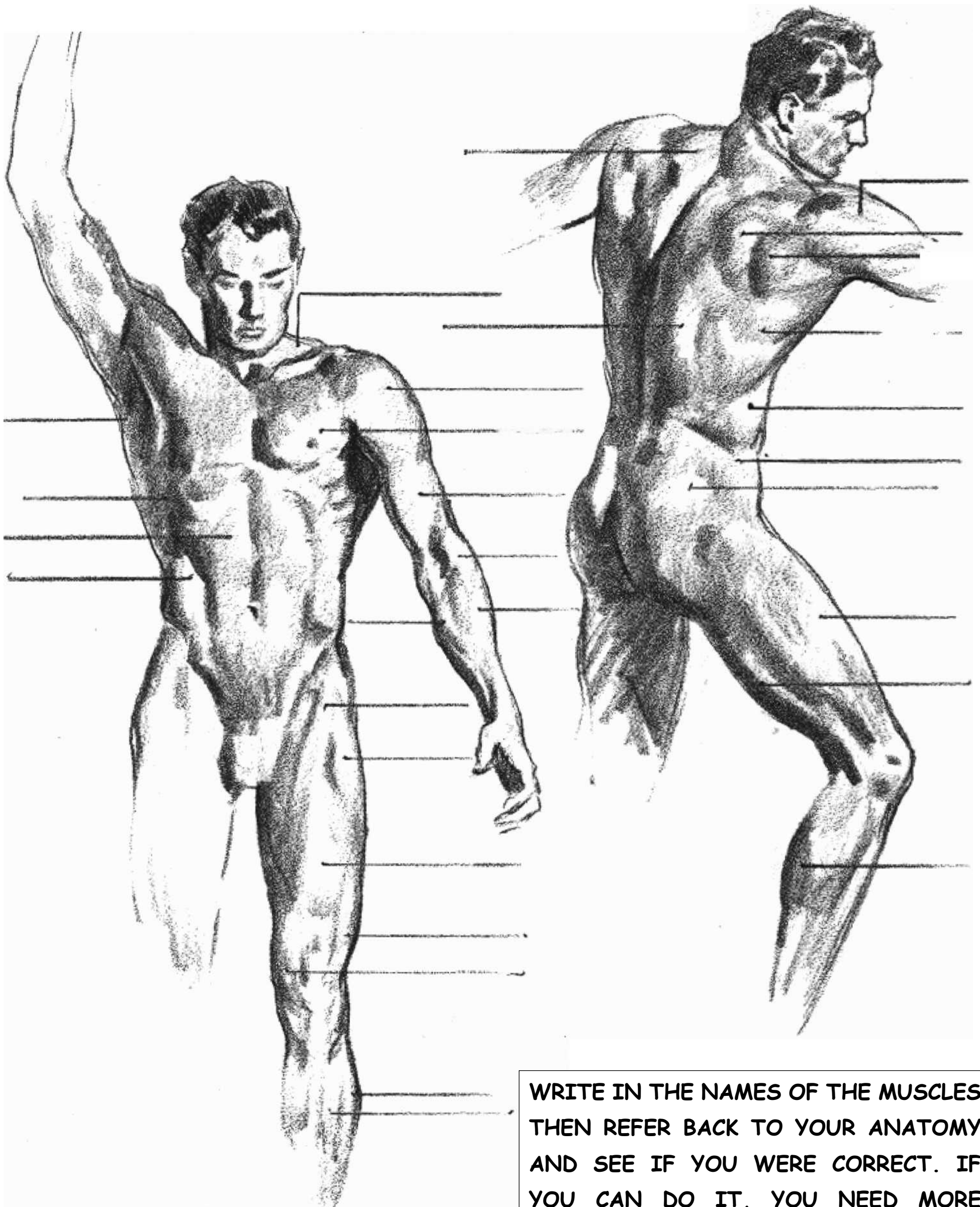


ACCENTING THE FORM



ANATOMY TEST

DO YOU KNOW YOUR MUSCLES?
LET'S FIND OUT, TO BE SURE.



WRITE IN THE NAMES OF THE MUSCLES
THEN REFER BACK TO YOUR ANATOMY
AND SEE IF YOU WERE CORRECT. IF
YOU CAN DO IT, YOU NEED MORE
STUDY. GO BACK AND GET IT THIS
TIME. YOU WILL NEVER BE SORRY!

A TYPICAL PROBLEM

A typical problem worked out with an advertising art director:

"Please rough out some little figures for pose only," an art director says to you, "to show to the Blank Knitting Company, suggesting our next ad. Indicate a one-piece bathing suit. Details of the bathing suit will be supplied later. Use a standing pose. The figure will be cut out against a white background, and the ad is to occupy a half page up and down in the *Satevepost*."

When you have made a series of roughs, show the two you like best to the art director, who takes them to his client. Afterward the art director tells you, "Mr. Blank likes these. Please draw them actual size for the magazine. The page size is nine-arid-three-eighths by twelve-and-one-eighth inches. You are to have the left half of the page up and down. Pencil will do. Use light and shadow on the figure."

Mr. Blank O.K.'s one of your pencil sketches, and the art director says, "Get your model and take some snaps. Our client wants outdoor sunlit lighting and cautions us against getting a squint in the model's eyes."

The next step is to photograph a friend in a

bathing suit. The chances are you will have to idealize her figure when you make your drawing from this photograph. Make her eight heads tall. Raise the crotch to the middle of the figure. Trim the hips and thighs if necessary.

She might be smiling over her shoulder at you. Have her hair blowing, perhaps. Find some use for the hands. Make the whole drawing as appealing as possible.

Since your drawing will be reproduced by halftone engraving, you have a full range of values with which to work. You may use pencil, charcoal, litho pencil, Wolff pencil, or wash. You can rub if you prefer. You also have the choice of pen and ink, brush, or drybrush. The drawing should be made on Bristol or illustration board and should be kept flat. Never roll a drawing that is to be reproduced.