FOREWORD

BY PETER DRAKE

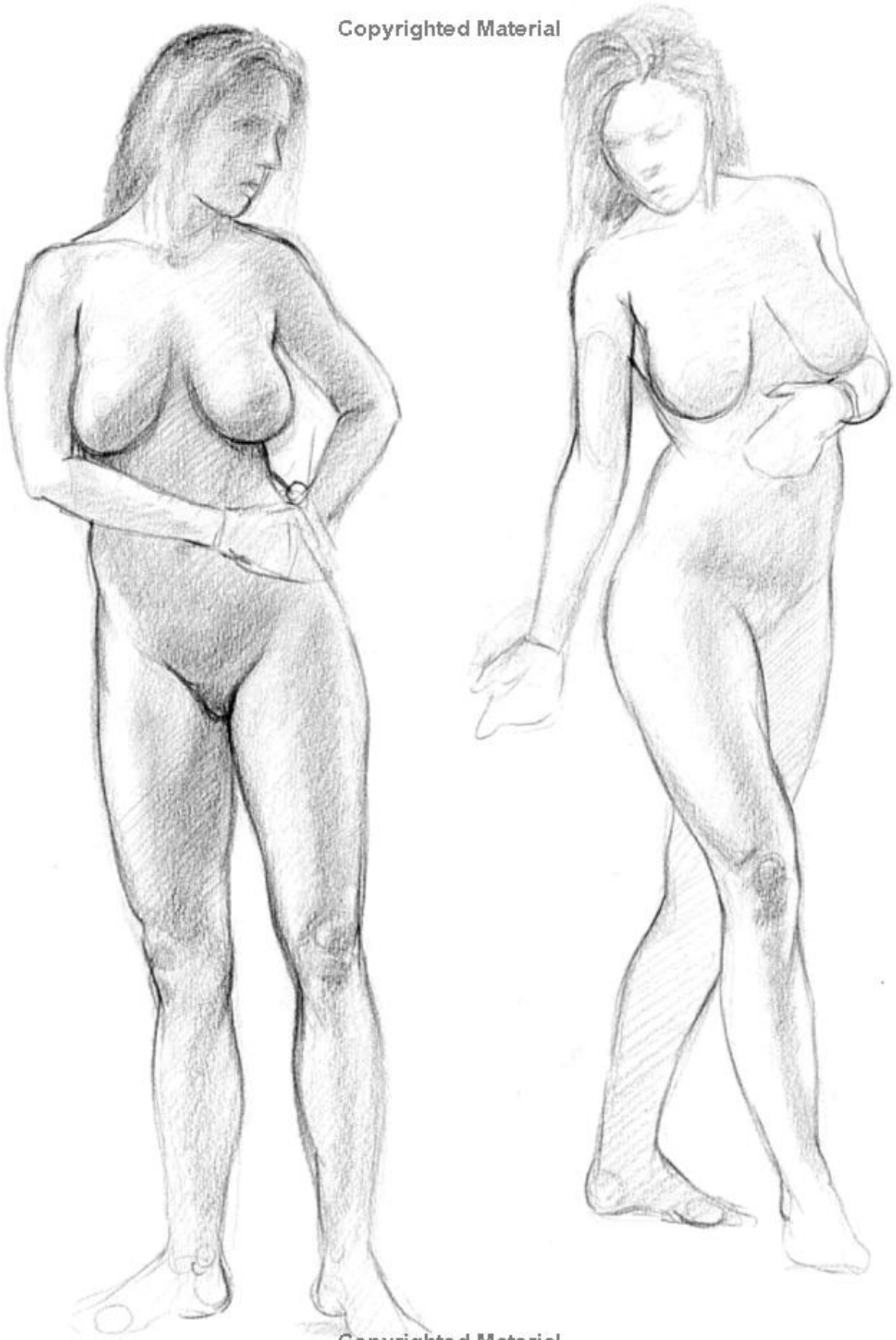
There is an assumption in contemporary art instruction that the authentic can only be found in the work of the outsider or the "deskilled." This is a holdover from early Modernism, which defined itself in opposition to what had become a formulaic French academic tradition. Now the pendulum has swung so far in the opposite direction that the embrace of the deskilled has become all but academic itself. In this move from the deeply rigorous and analytic training that had been the centerpiece of historical art education to our present pluralist state, there lies an equally dubious assumption that rigorous training is beyond the capacity of today's artists. This represents an infantilization of the artist that Roberto Osti's volume on anatomy seeks to redress.

Osti has become one of the leading voices in the application of rigorous anatomical study to progressive figurat ve art. In his teaching, Osti displays all the passion, determination, and enthusiasm for anatomy that you would associate with a Renaissance master. His classes are laboratories for those artists driven to understand the human form from the inside out. For Osti, painting or sculpting the figu e without this depth of knowledge would be like copying a Chinese character without knowing its meaning; yes, it can be done, but why bother? To truly understand the human form and, consequently, the human condition, one has to build the figu e like an écorché, from its deepest attachments to the most superficial fo ms. This kind of training allows artists to work from their imagination without references, freeing them to embrace invention, anatomical anomalies, and, ultimately, their own creative vision. To put it more clearly, training isn't a hindrance in Osti's world; it represents creative freedom.

One of the hallmarks of Osti's teaching is his extraordinary devotion to preparatory drawing for each class. This is something that I have had to adjust myself to every year. It is one thing to prepare exceptional drawings; it is another thing entirely to retrain yourself for teaching by redrawing your own lessons every year. This is the kind of preparation that Osti demands of himself. It is the kind of preparation that makes his classes so dynamic and in demand.

In his own work Osti applies what he teaches. Perhaps more than any living artist, Osti represents that ideal commingling of an immersion in an analysis of the human form with a level of invention that releases him from the mimetic role of painting's history. In pieces like *Shaman in Spring* (2008), Osti re-enlivens representation by applying an almost scientific analysis of an ima inary being. The plausibility of the anatomical structure of the image allows the viewer to imagine a world where werewolves and humans gather and the need to understand werewolf anatomy is as essential to life as human anatomy.

Peter Drake is Dean of Academic Affairs at the New York Academy of Art.



INTRODUCTION

This book is about learning to see; it is about acquiring skills conducive to the active interpretation of the human form, an approach that can be extended and applied to the physical world that surrounds us.

Drawing or painting the figu e using a mimetic approach—that is to say, drawing without understanding but just by imitation—is comparable to copying the words of a book without understanding their meaning.

The artist with a good knowledge of anatomy will be able to create more beautiful and accurate artwork because he or she will have the means to better understand the forms of the body.

We draw what we know; the more accurate and extended is our knowledge of the subject, the more accurately we can visually represent it. The artist with theoretical and technical training in anatomy, when examining the human figu e, will not just see nameless and localized bumps but specific fo ms interacting with adjacent forms creating fl ws, rhythms, and harmonies. The artist will understand specific characte istics of each anatomical structure by its function, leading to solid, harmonious, three-dimensional representations of the human figu e.

The protean quality of the human figu e makes it a very intimidating yet stimulating subject to depict; the body is standardized and idealized in its anatomical representations, but it presents itself in an incredible number of variations in real life. It changes with age, gender, weight; with the light; at rest or in movement; in health or illness, making it an arduous task to capture it graphically.

The conceptual approach to the human body will permit us to focus on only a limited number of specific aspects of the body at a iven time, making it possible for us to understand its language. This book is therefore organized into a series of progressive and interconnected conceptualizations of the human body. Each one will deal with limited aspects of the figu e: the volumes, the structure, the anatomy, and so on. The chapters are organized according to an analytical progression that goes from very synthetic forms (the basic volumes) to realistic rendering.

Each chapter will explore specific aspects co - nected with the human form, limiting the amount of information discussed and making it easier to assimilate it. Specific e ercises at the end of each chapter will guide the student to the practical application of the notions discussed.

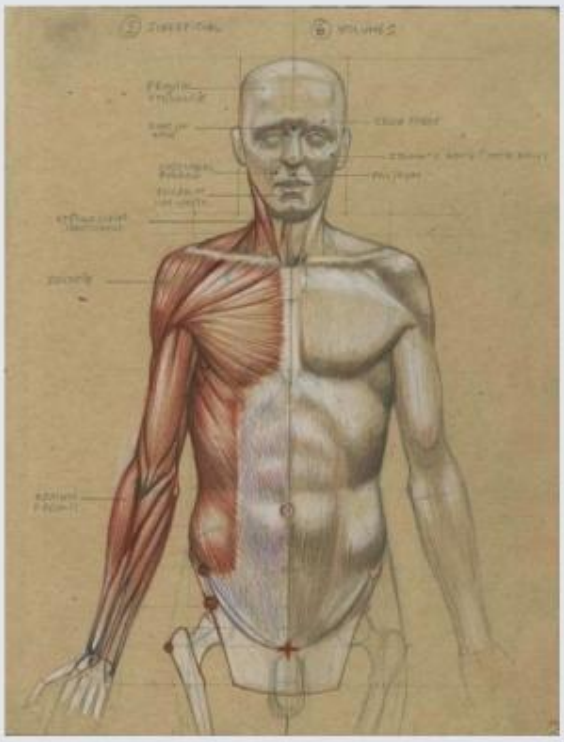
By the end of this book, readers will be able to understand the human figu e from a variety of points of view—volumetric, structural, anatomical—and will be able to analyze its planes and patterns. They will also learn the basics of various drawing techniques, enabling them to transition from "looking" to "seeing."

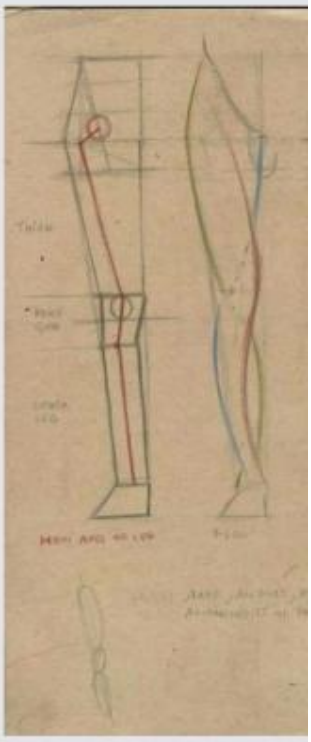
Drawing the Figure

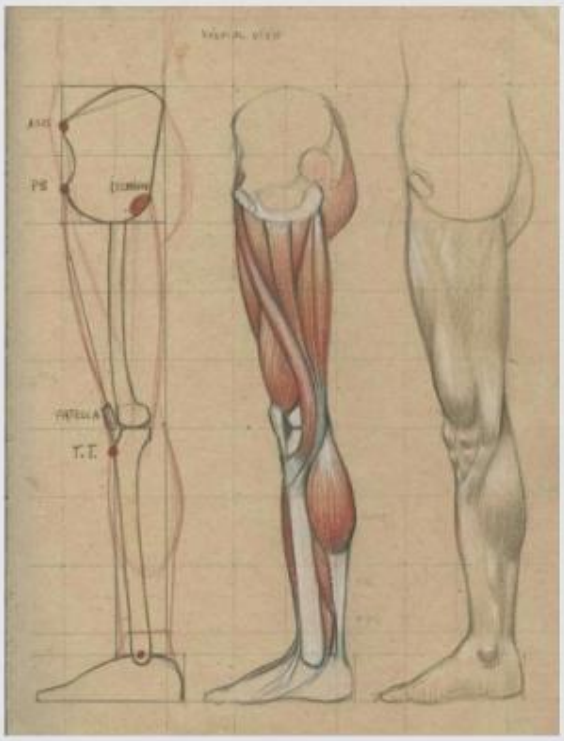
KEEP AN ANATOMY SKETCHBOOK

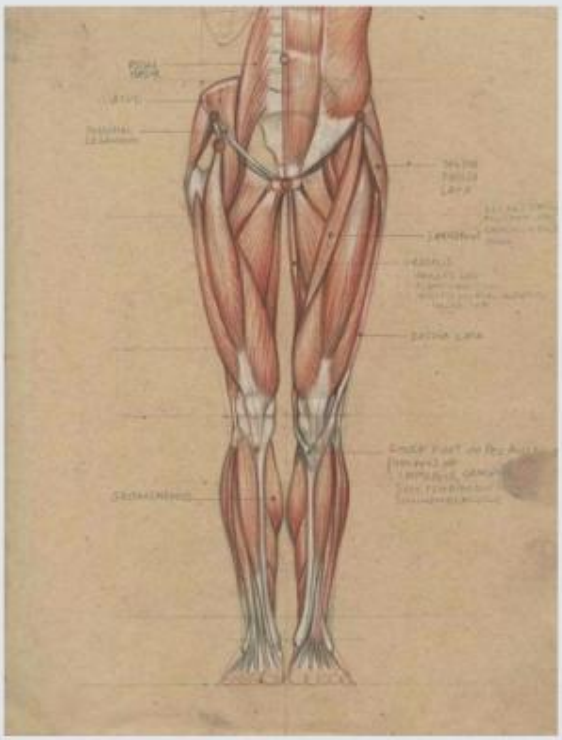
In between the chapters of this book, you'll find a series of tips on d awing the figure, each illust ated with drawings of my own. To begin this series, let's discuss what I think is an essential practice for any artist studying anatomy: keeping a sketchbook.

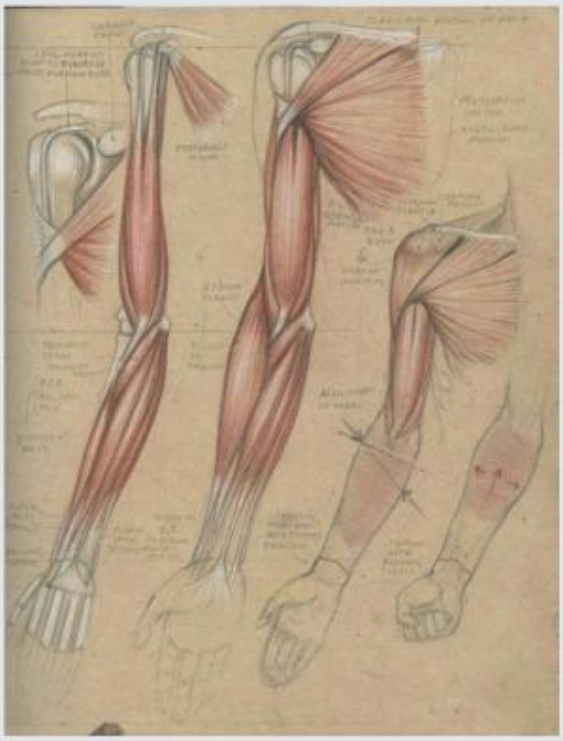
Keeping a sketchbook devoted exclusively to your anatomy studies is a great way to organize your notes and observations. In fact, I'd even call it essential. Every time I teach an anatomy class, I create a new sketchbook filled with visual and written notes, which I find is a ery good way of discovering better, clearer ways of presenting the material. For your sketchbook, make sure to buy one of good quality, with paper that can withstand erasing, reworking, and watercolor or ink washes. Use the sketchbook only for your notes on anatomy and for the exercises given at the end of each chapter of this book. Once you start using a sketchbook, you'll feel compelled to add more and more drawings, and you'll have fun seeing your book develop and grow along with your knowledge of anatomy and figure drawing. The images here are taken from some of my own sketchbooks.

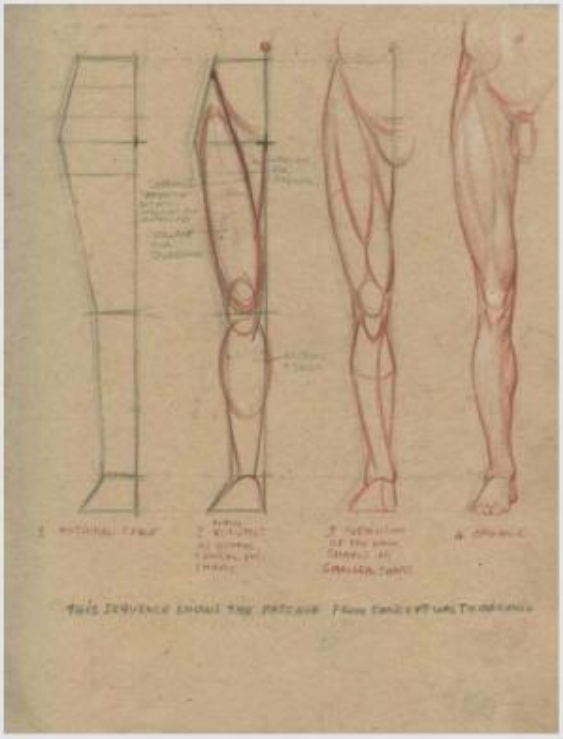


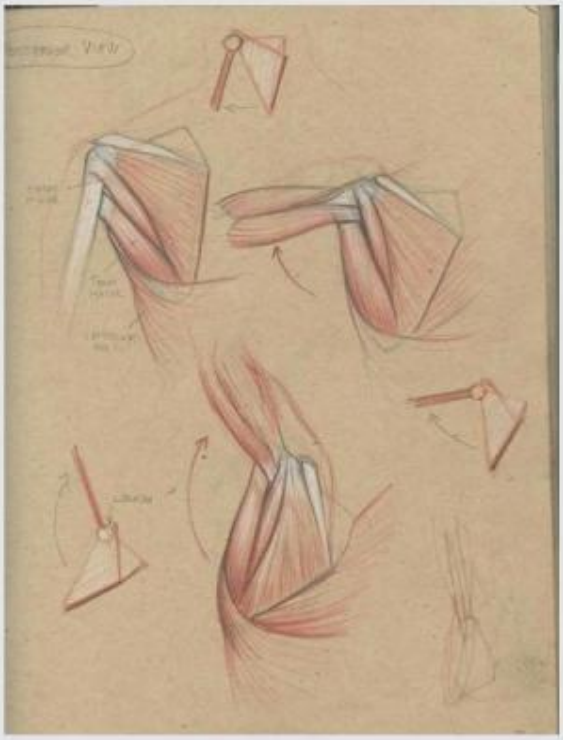


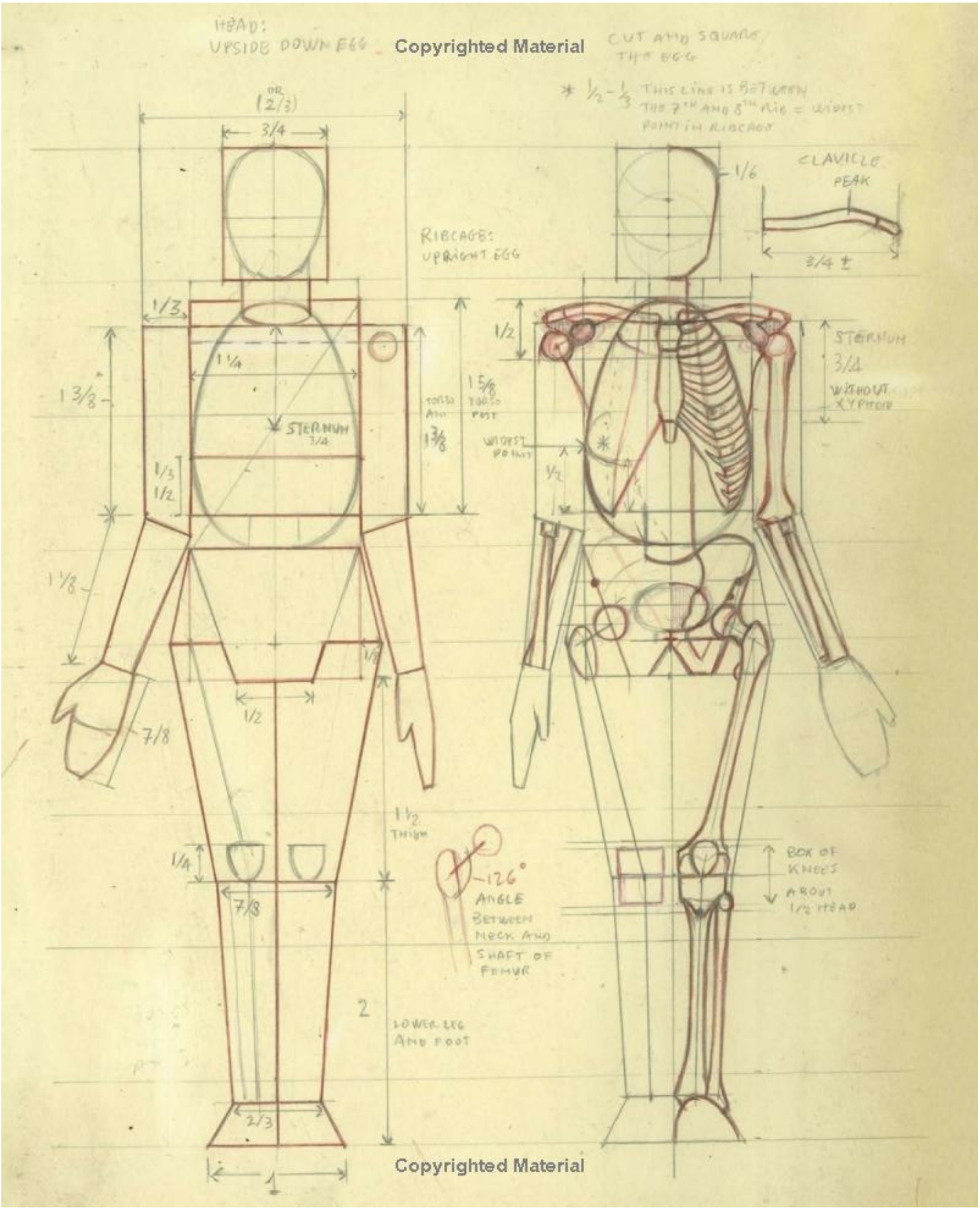










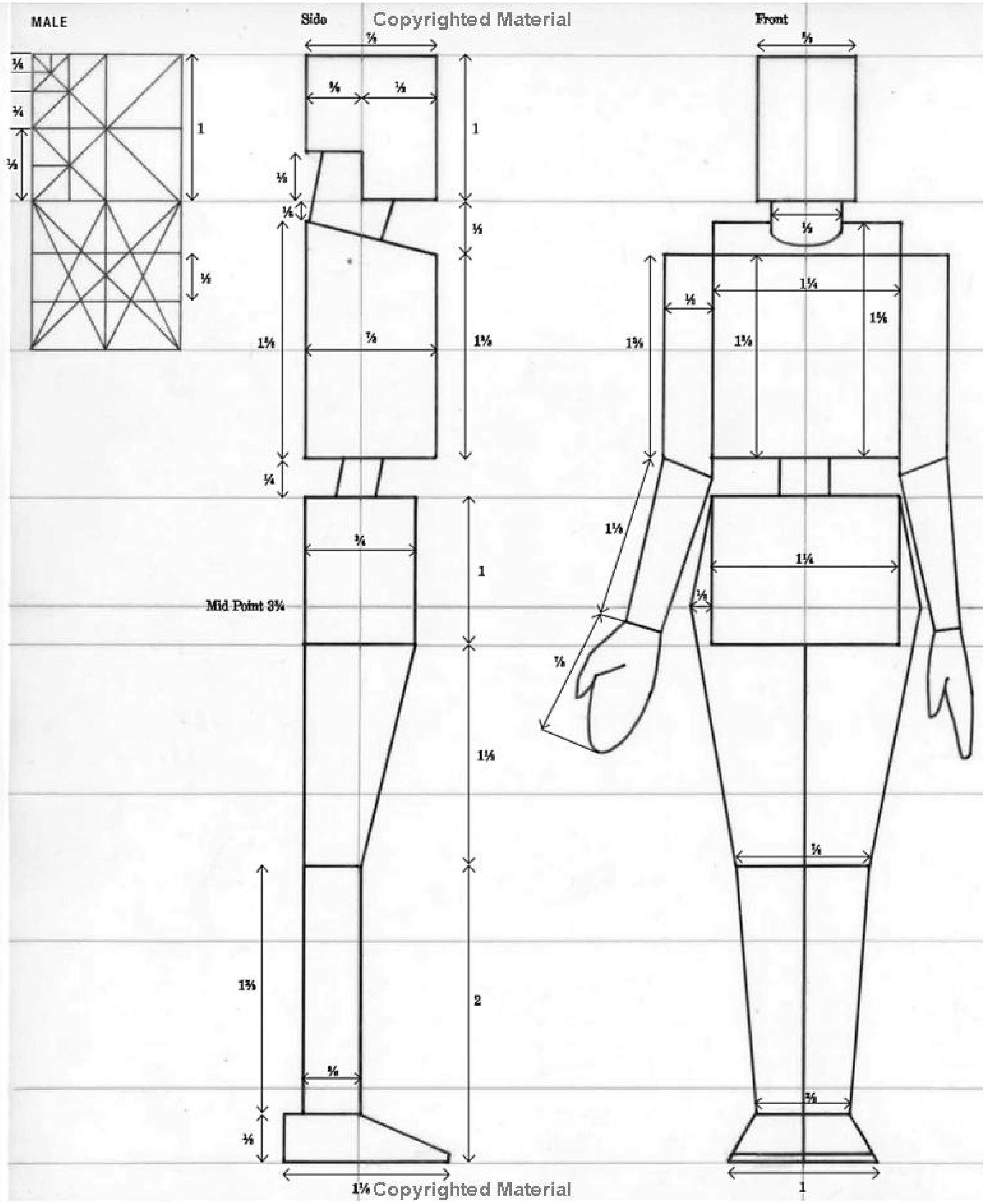


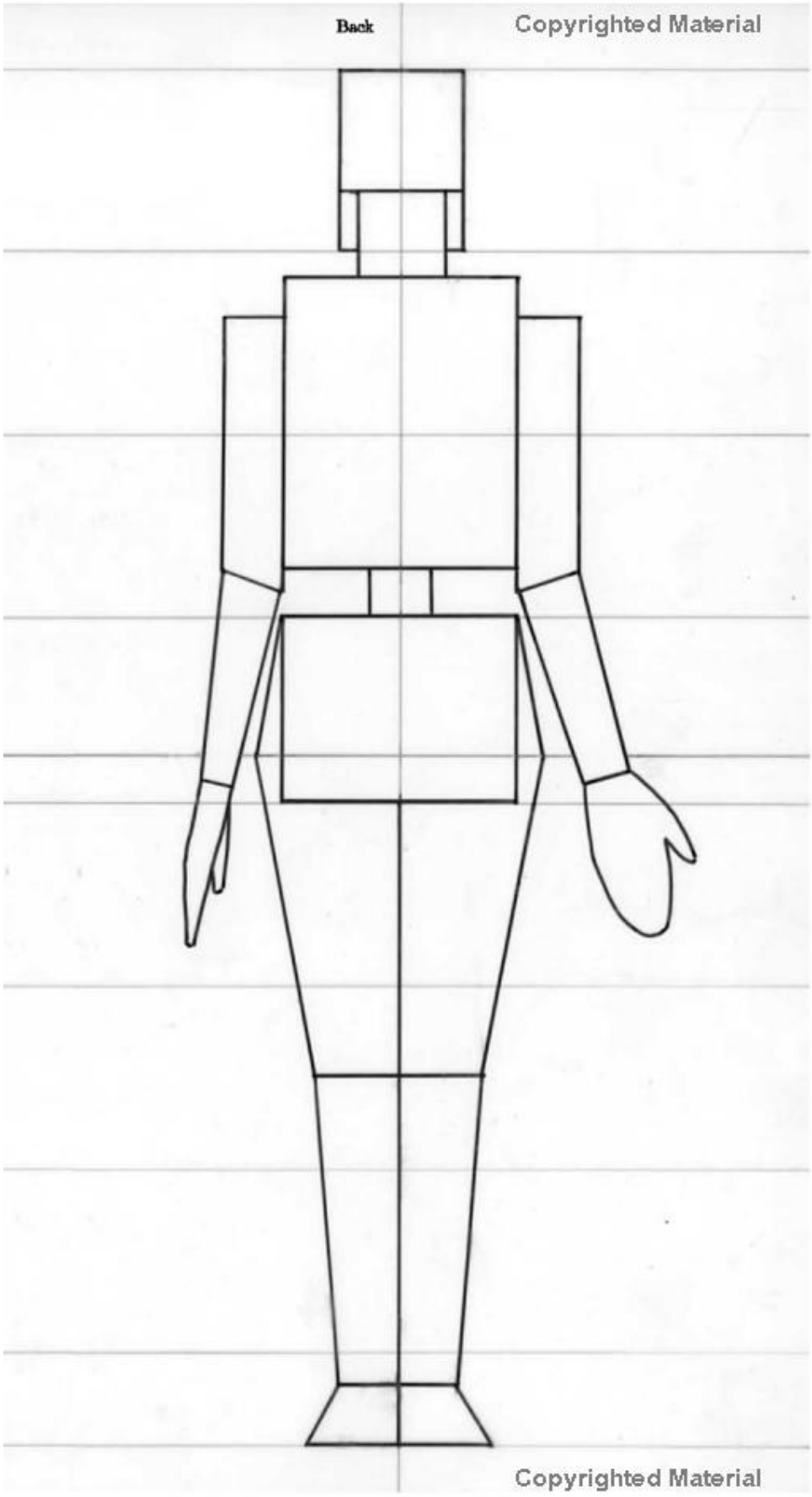
Chapter 1

THE STEREOMETRIC APPROACH TO ANATOMY

Stereometry is one of the fundamental approaches to the study of structural anatomy. In the stereometric approach, the figure is conceived as a collection of geometric solids, such as cubes, spheres, cylinders, tetrahedrons, and so on. The approach has its roots in the early Renaissance, when artists started using mathematics, geometry, and perspective to create more realistic artworks. For example, the Italian painter Piero della Francesca, who was an accomplished mathematician, structured his works according to mathematical ratios, as did his countrymen Paolo Uccello and Leonardo da Vinci. The German artist Albrecht Dürer, who developed stereometry to a very high level, applied geometry and mathematics to the study and depiction of the human figure.

Stereometry reduces the various sections of the body to basic volumes that are easy to measure and to relate to each other. At first, we will use stereometry only to establish proportional



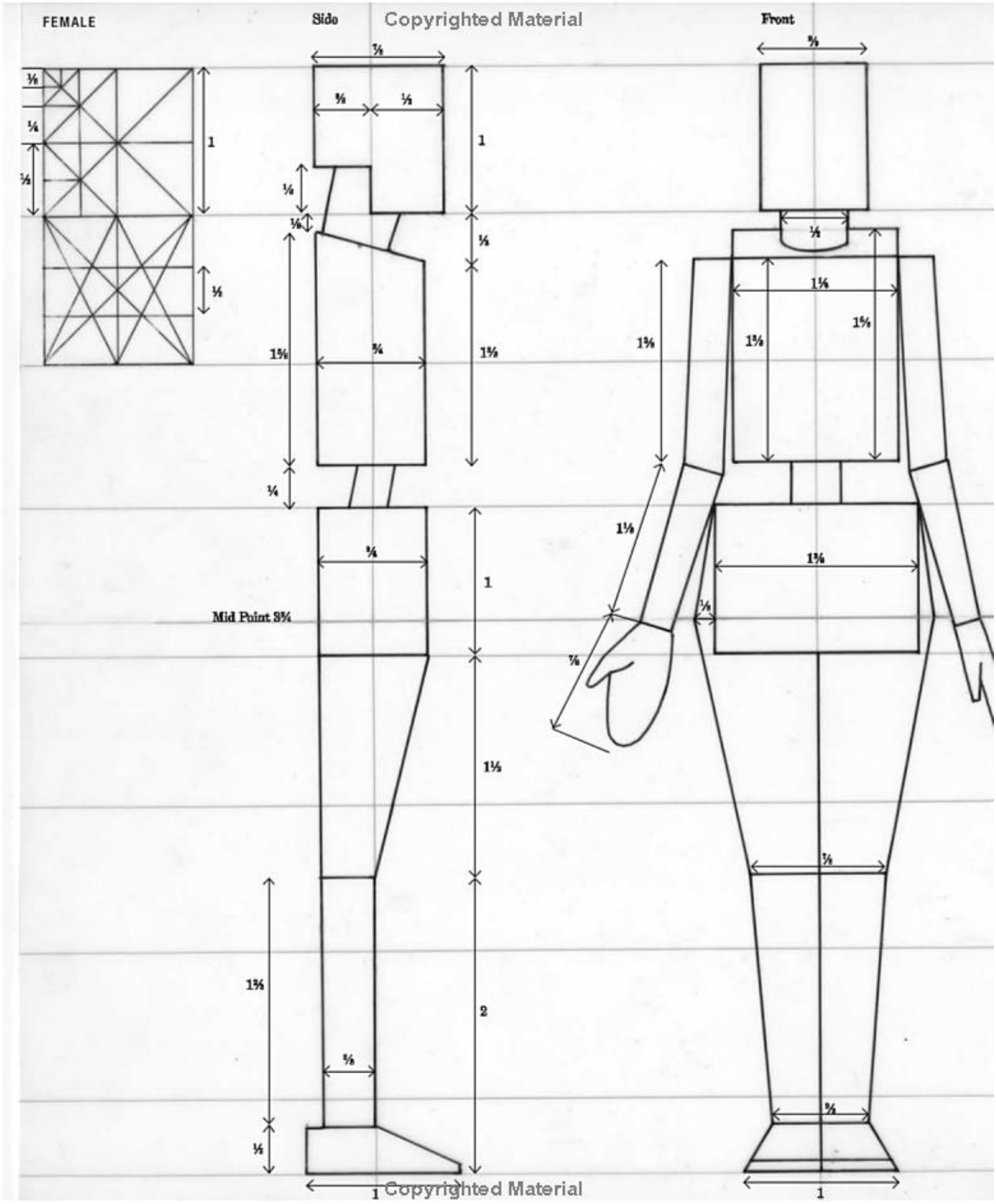


relationships between various segments of the body. Later, we will practice drawing the figu e from life using the specific p oportions of the actual model, which can vary significantly f om person to person. But the basic concept of analyzing the proportional relationship between the various segments of the body will be the same.

The figu es here and on pages 18 and 19 show stereometry applied to the male and female figu es, as seen from the side (also called the lateral view), front (the anterior view), and back (the posterior view). Here and elsewhere in the book, I use the classic head-to-body ratio of 1:7 ½—that is, a ratio in which the height of the entire body, from the crown of the head to the soles of the feet, is 7 ½ times the height of the head. (Another commonly used head-to-body ratio, 1:8, is discussed in the sidebar on page 22.)

As you look at these figu es, note the differences in proportions between the male and female bodies. In the upper left corner of each figu e, you see a scale of two gridded squares that will help you easily determine the specific measu es of

STEREOMETRY OF THE MALE FIGURE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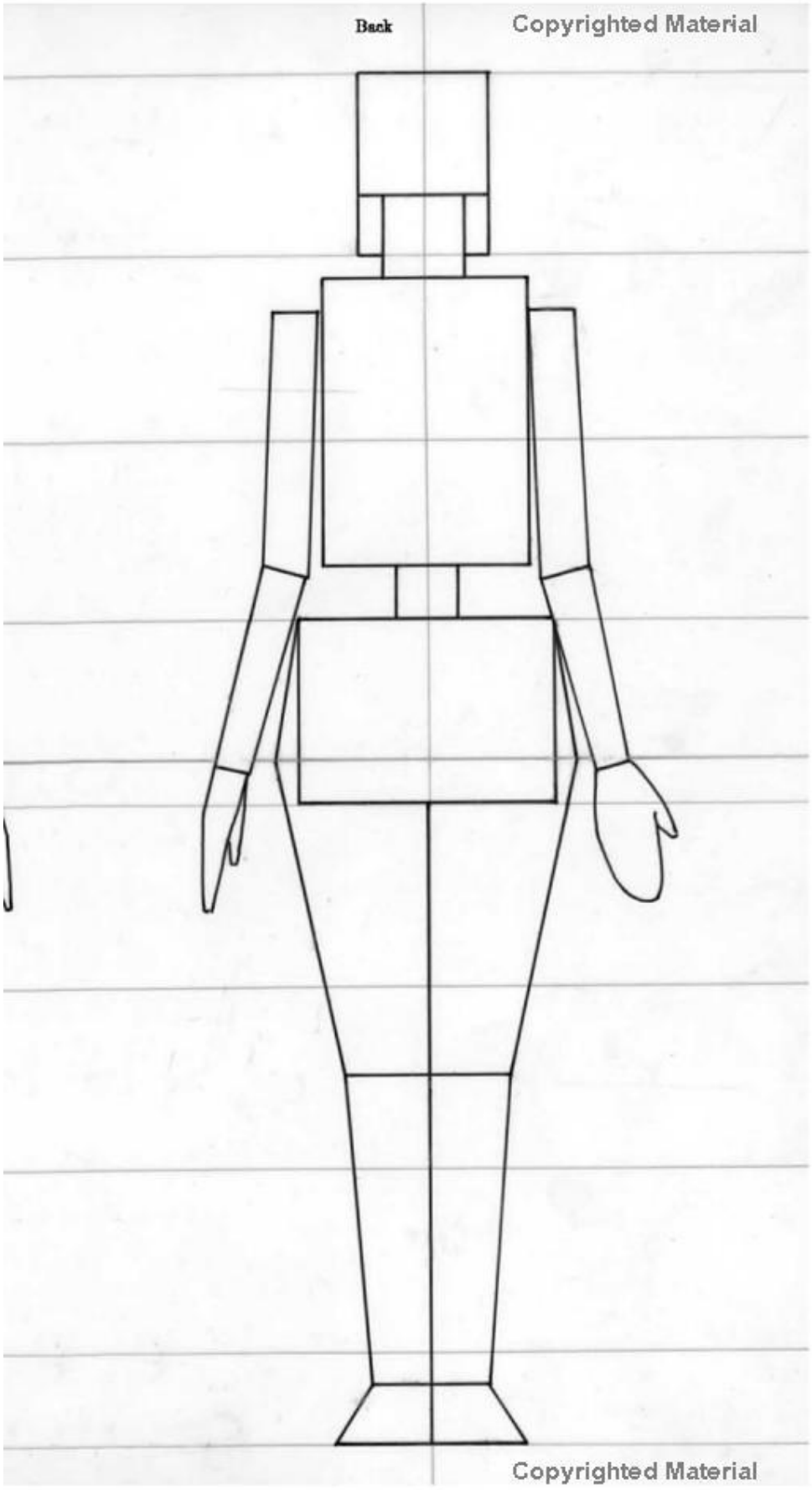
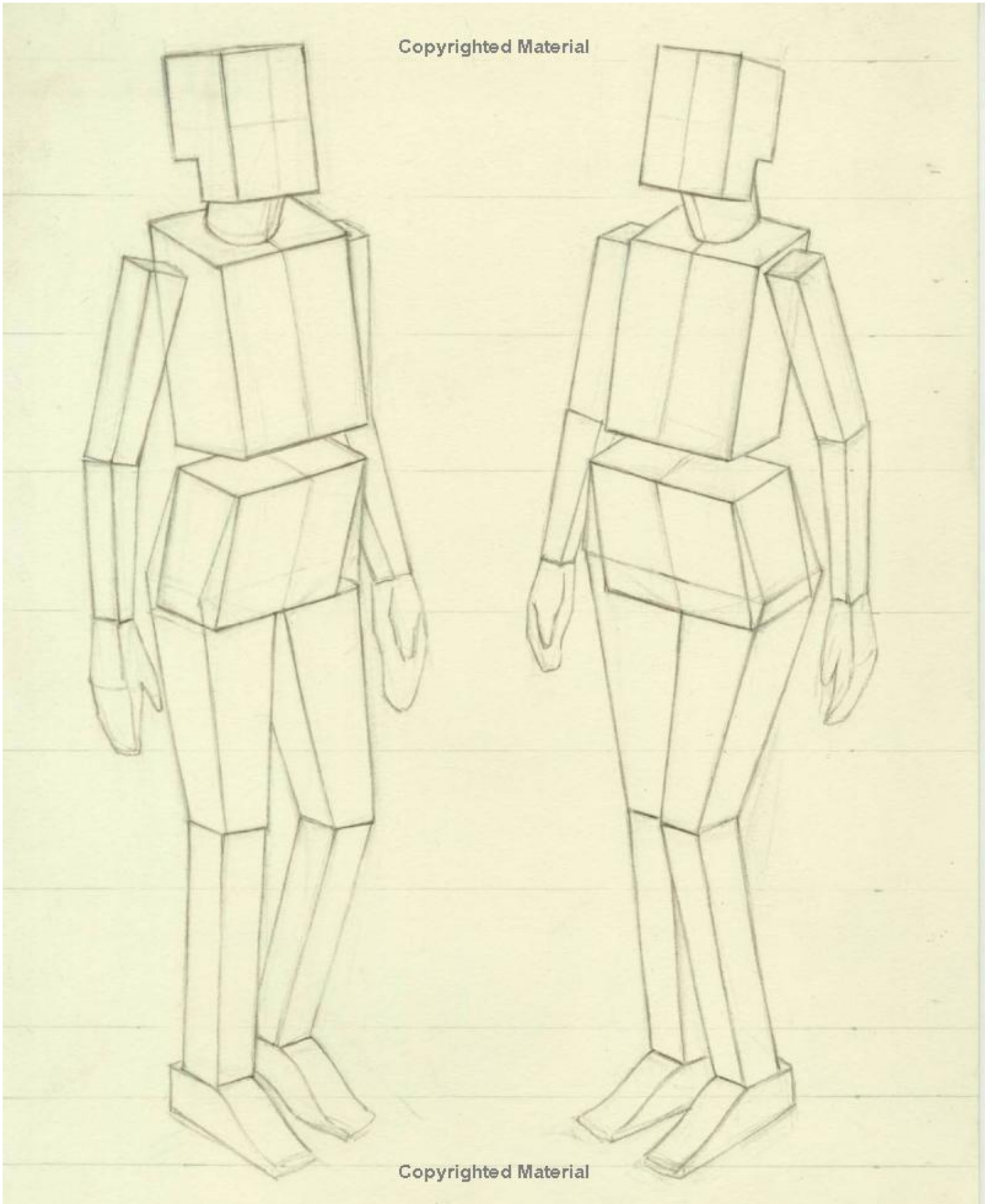
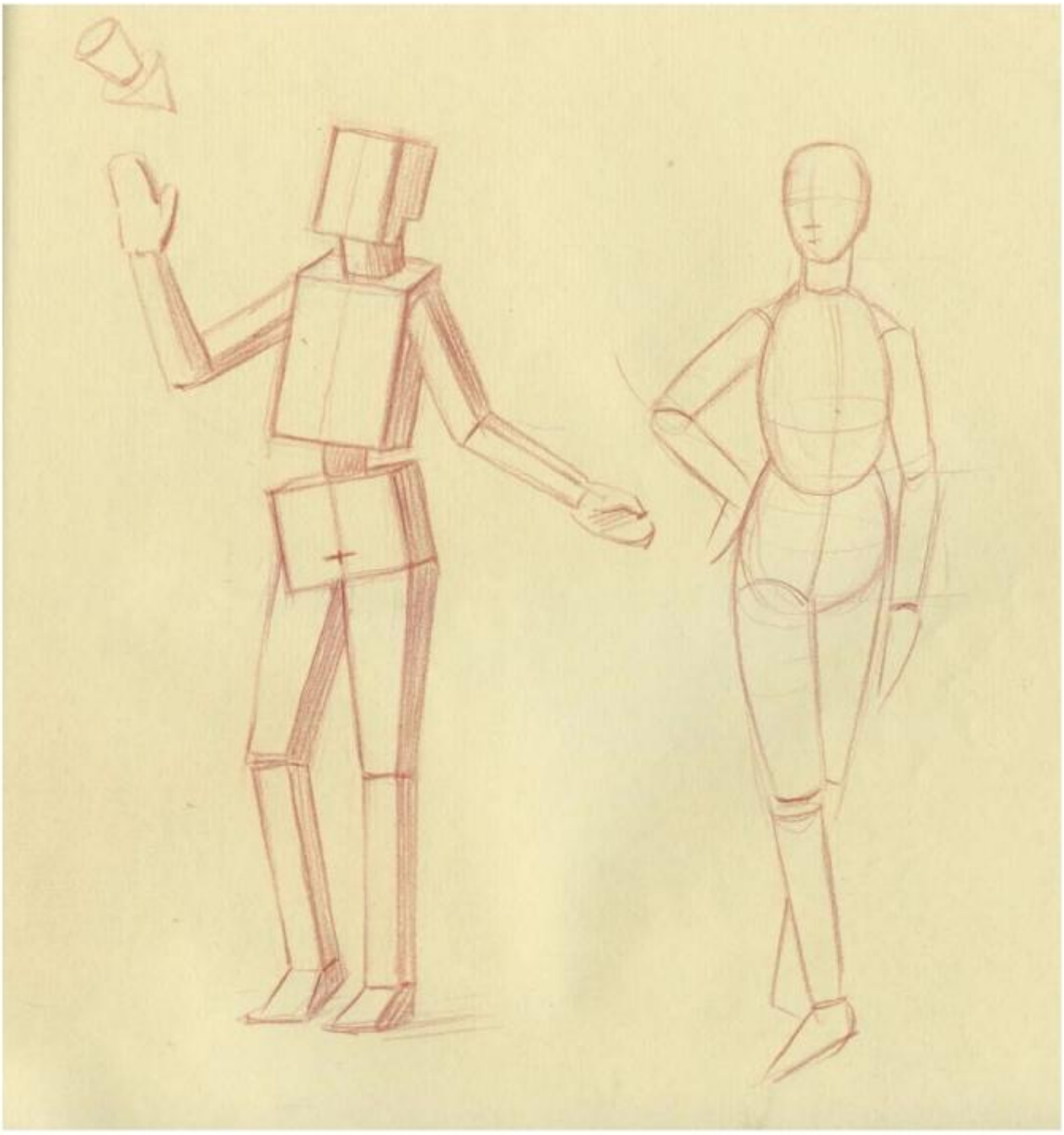


the various segments of the body without using awkward mathematical calculations that might hinder drawing. Use a divider or a compass to compare measurements.

In the stereometric rendition of the male proportions (previous pages), notice that while the ribcage and the hips have the same width in the front and back views of the body, the depth of the ribcage is greater than the depth of the hips in the side view. These are the typical proportional relationships between the ribcage and hips of the male skeleton. In the rendering of the female proportions, at left, the ribcage is narrower than the hips in the front and back views, but the depth of the ribcage is the same as the depth of the hips in the side view. Proportionally, men's ribcages are generally bigger than women's, and women's hips are generally bigger than men's.

STEREOMETRY OF THE FEMALE FIGURE





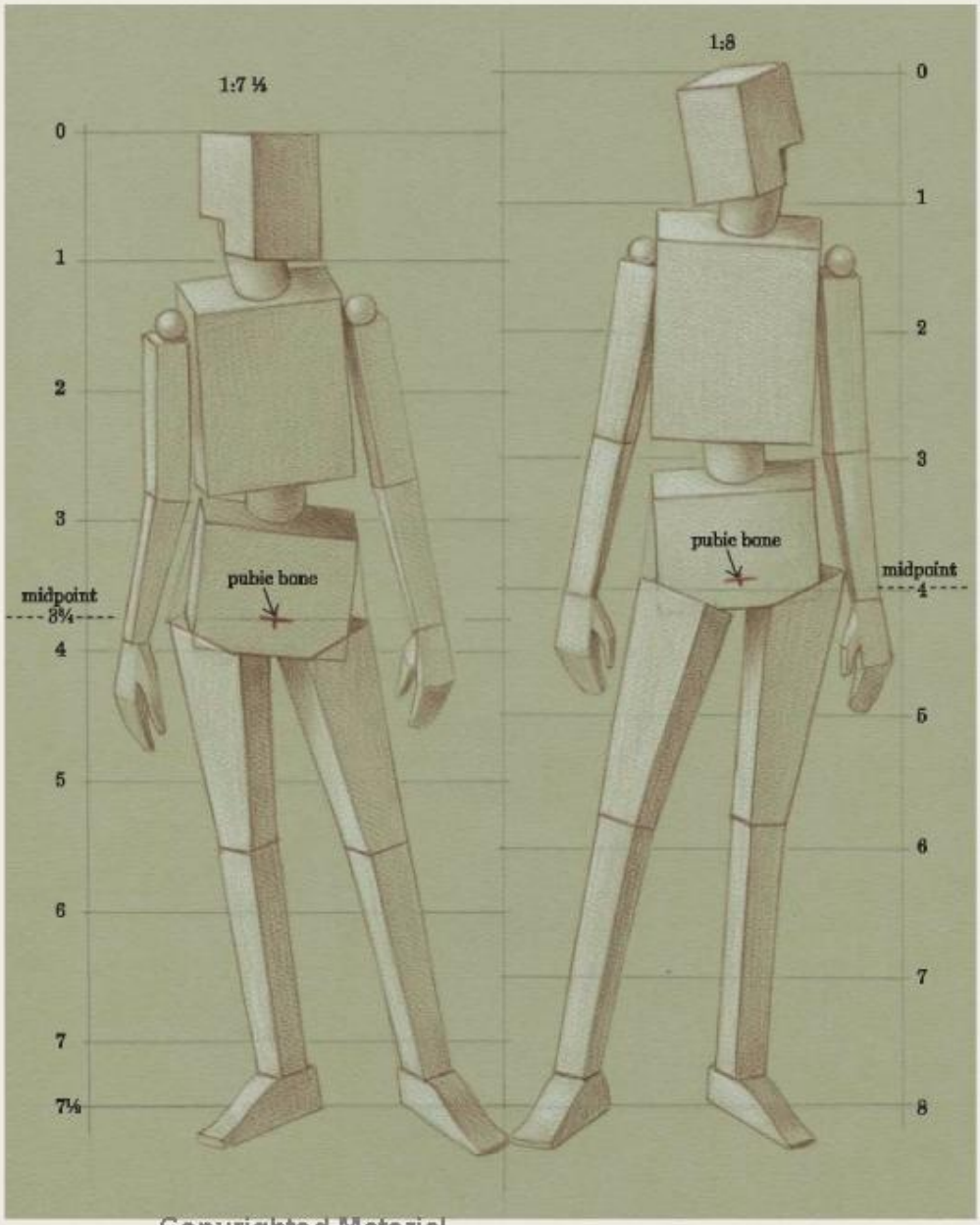
opposite
BASIC STEREOMETRIC RENDERINGS OF MALE AND FEMALE BODIES

above
USING ANGULAR OR ROUNDED FORMS TO INDICATE GENDER

A DIFFERENT HEAD-TO-BODY RATIO

Most of the drawings in this book are based on the head-to-body ratio of 1:7 ½, but the method I use can be applied to any system of proportions. The drawing shows, on the left, the proportions of a body based on a head-to-body ratio of 1:7 ½. On the right is a stereometric figure whose proportions are based on a ratio of 1:8. The background lines make it easy to compare the proportional relationships between the various segments of the body. The decision to use the 1:7 ½ or 1:8 or any other ratio is purely a personal choice, based on your aesthetic preferences or on specific artistic needs such as fashion design or creating characters for graphic novels or comics. Any set of proportions provides an excellent way to observe the body, to find the proportional relationships between the body's various segments, and to understand its essential forms. Eventually, you will want to move from the theoretical to the real, finding the specific proportions of the model you are portraying—1:7 ¼, 1:6 ¾, 1:8 ⅓, or whatever they may be.

TWO COMMON HEAD-TO-BODY RATIOS COMPARED

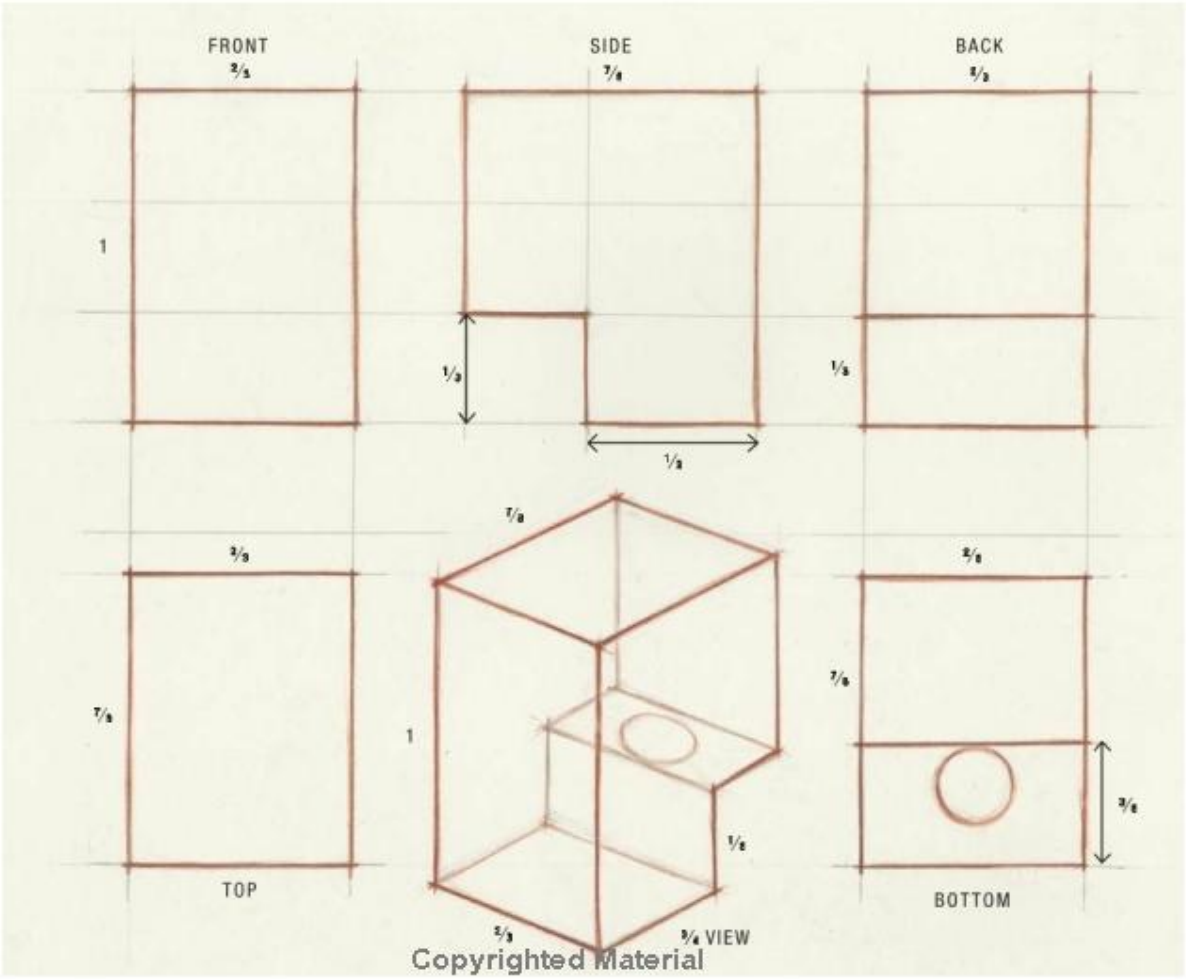


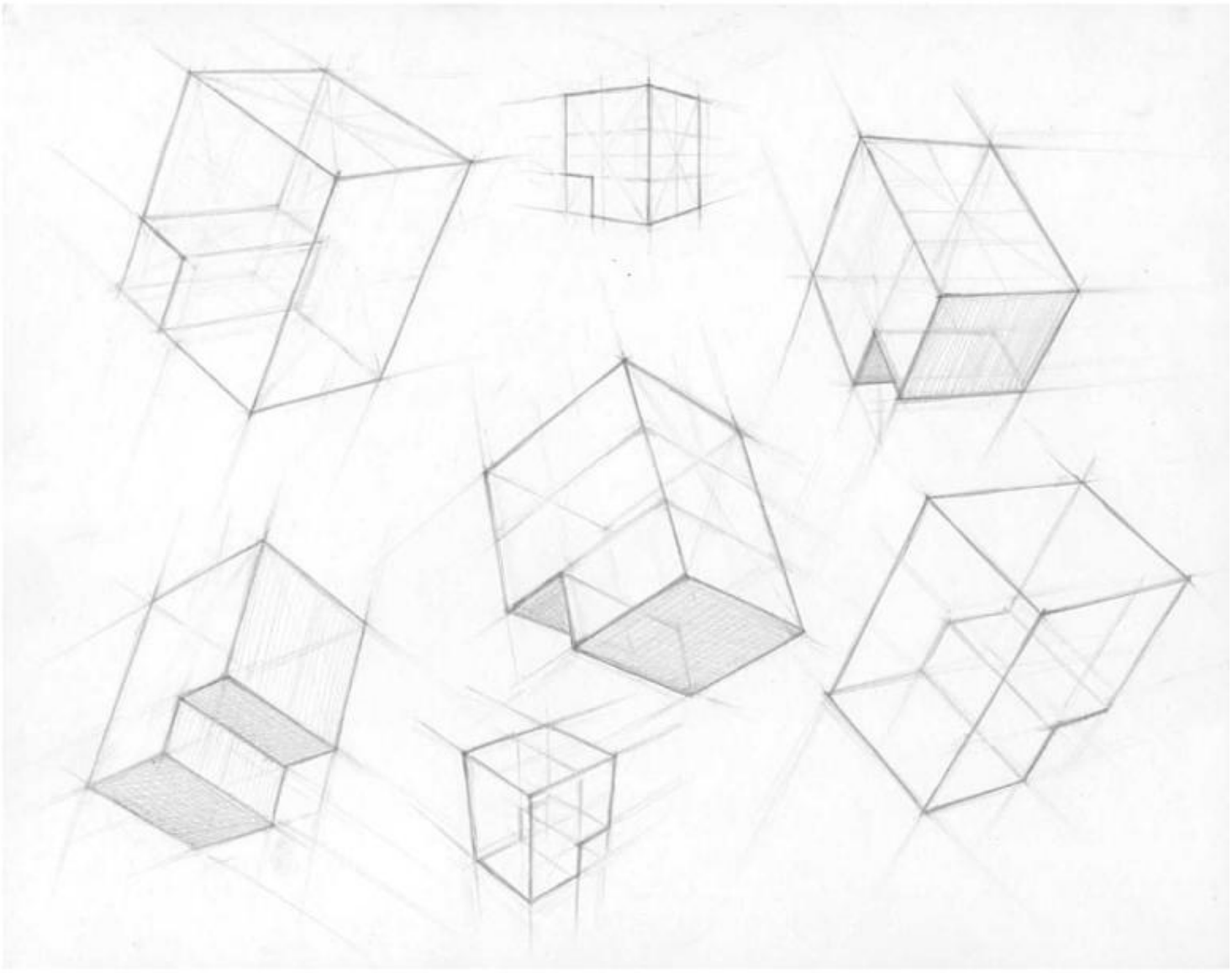
PROPORTIONS OF THE HEAD

Let's practice using the stereometric conceptualization of the figu e by fi st focusing on just one segment—the head. The figu e below gives you a thorough picture of the proportions of the head. When referring to it, remember that the measurements are proportional; "1" simply stands for the height of the head. Any element of the head is a fraction of that measure. Try to memorize the proportions. Even if you cannot recall them exactly, remember that the biggest measure of the head is always the height from top to bottom, that the depth is the second-biggest measure (almost the same as the height), and that the width is third biggest. Another measure you may want to memorize is the measure between the base of the skull and the bottom of the box of the head. It is one-third of 1.

Now try to imagine the blocks representing the head from as many different points of view as you can think of. Draw each of them freehand, trying to be as precise as possible regarding the proportional relationship of the various parts. Draw them as if you could see through them, as in the figu e on page 24. This will help you think of the objects as three-dimensional and will improve your drawings.

STEREOMETRIC REPRESENTATION OF THE HEAD





STEREOMETRIC REPRESENTATIONS OF THE HEAD FROM VARIOUS ANGLES

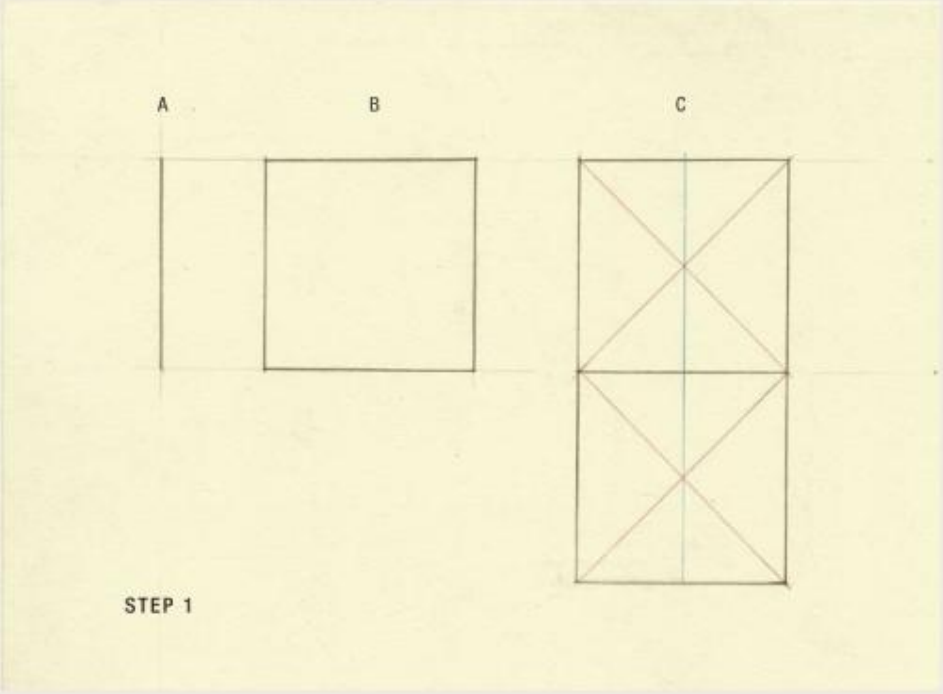
CREATING A STEREOMETRIC CHART

To reiterate an important point: When we talk about the proportions of the body and say that the measure of the head is "1," we're *not* talking about an actual measurement but rather about the vertical length of the head *in relation to* the lengths of other parts of the body. In a given drawing, painting, or sculpture, a figur 's head may measure 1 inch from crown to chin, or 13.6 centimeters, or 3 ½ feet, or whatever measure the artist decides on. The measures of all the other parts of the body will be established in relation to the measure of the head.

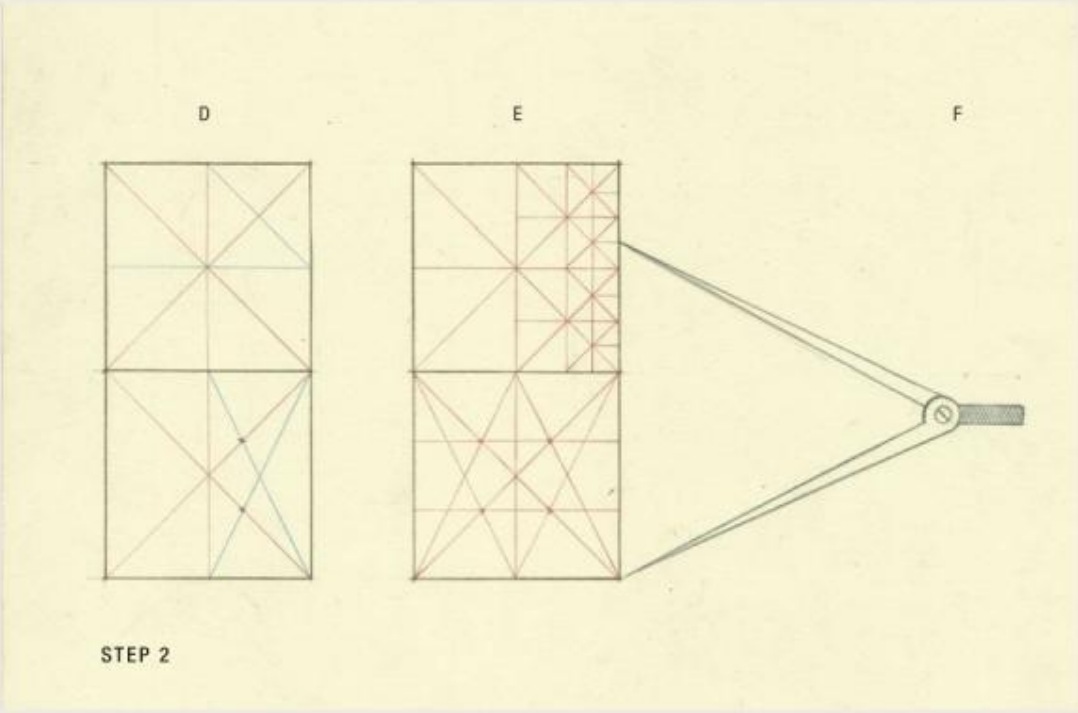
Now imagine the mathematical difficulty of h v-ing to determine the precise lengths of other body parts for a figure with a head that measures, s y, 13 ⅝ inches. To find the correct proportion for the anterior measure of the torso, you would have to calculate the value of 1 ⅜ of 13 ⅝ inches. And then you'd have to do the same kind of calculation for all the other body parts. You can see how this would be a pretty uninspiring approach to drawing the figure

A scale for the creation of a stereometric rendition of the body will solve this problem, permitting you to easily determine fractions and multiples of "1." To make one, you will need a pencil (grade H), a ruler, a triangle, and a proportional divider. (A compass can be used instead of a divider.) Draw your scale in the upper left corner of an 11 X 14-inch piece of illustration board (hot press or plate finish) as shown in the charts on page 16–19. The figures below and on the following page explain the process for creating a stereometric scale.

STEP 1: Begin with a line (*A*) that is the same height as the height of the head you will be drawing. For this demonstration, I am using a one-inch-long line (1 = 1 inch) to make the process easier, but the size of the



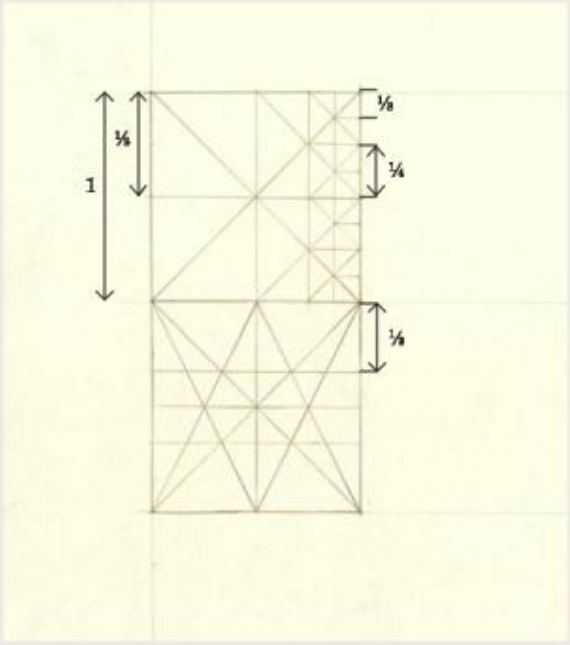
STEP 1

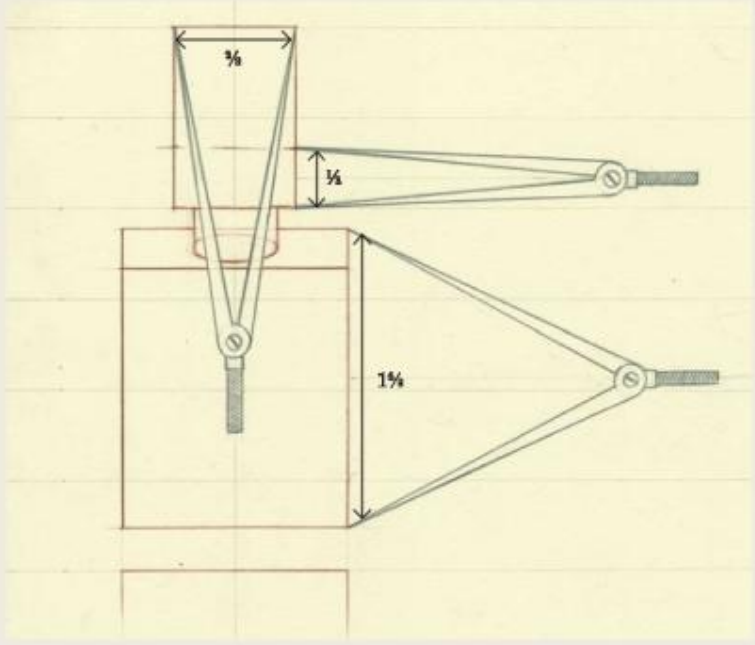


STEP 2

head can be any measure you choose. Using this measure, draw a square (*B*) and then another of the same size below the first one (*C*), drawing the diagonals (red lines) as shown and then dividing the two squares with a vertical line that goes through the centers determined by the diagonals (blue line).

STEP 2: Using a triangle and a ruler, divide the top square horizontally (horizontal blue line). You have now divided the original square into four smaller squares and determined the measure of ½. You can now keep subdividing the small squares into smaller and smaller squares using the diagonals (*D*, upper square). Then divide the lower square with diagonals as shown in the image (blue lines). The point of intersection between the red diagonals and the blue diagonals will give you the measure of ⅓ (*D*, lower square). Diagram *E* shows the completed scale, with the upper square divided into smaller and smaller squares (½, ¼, ⅛) and the lower square divided into thirds. Using the divider or compass (*F*) you can use the scale to find the measure you need to determine the size of any segment of the body.





COMPLETED STEREOMETRIC SCALE

Now that you have built the scale, you can start drawing stereometric visualizations of the body, recreating the charts of male and female stereometric figures found on pages 16–19. For now, pick just one (male or female). To begin, draw an 8-inch vertical line about 2 inches from the left side of the illustration board. (Leave 1½ inches above the line and 1½ inches below the line.) Divide that line in eight segments of 1 inch each. Now divide the bottom segment in half and discard the lower half. You now have a line divided into eight segments: The first s ven should each be 1 inch, and the bottom segment should be ½ inch. This line represents the 7½ heads ratio used throughout the book. Repeat the process, drawing the same line on the right side of the board and dividing it into eight segments and dividing the bottom segment in half. Using a ruler, now draw parallel horizontal lines connecting the marks on the two parallel vertical lines. This will give you a grid of nine parallel horizontal lines enclosed by the two parallel vertical lines on the sides.

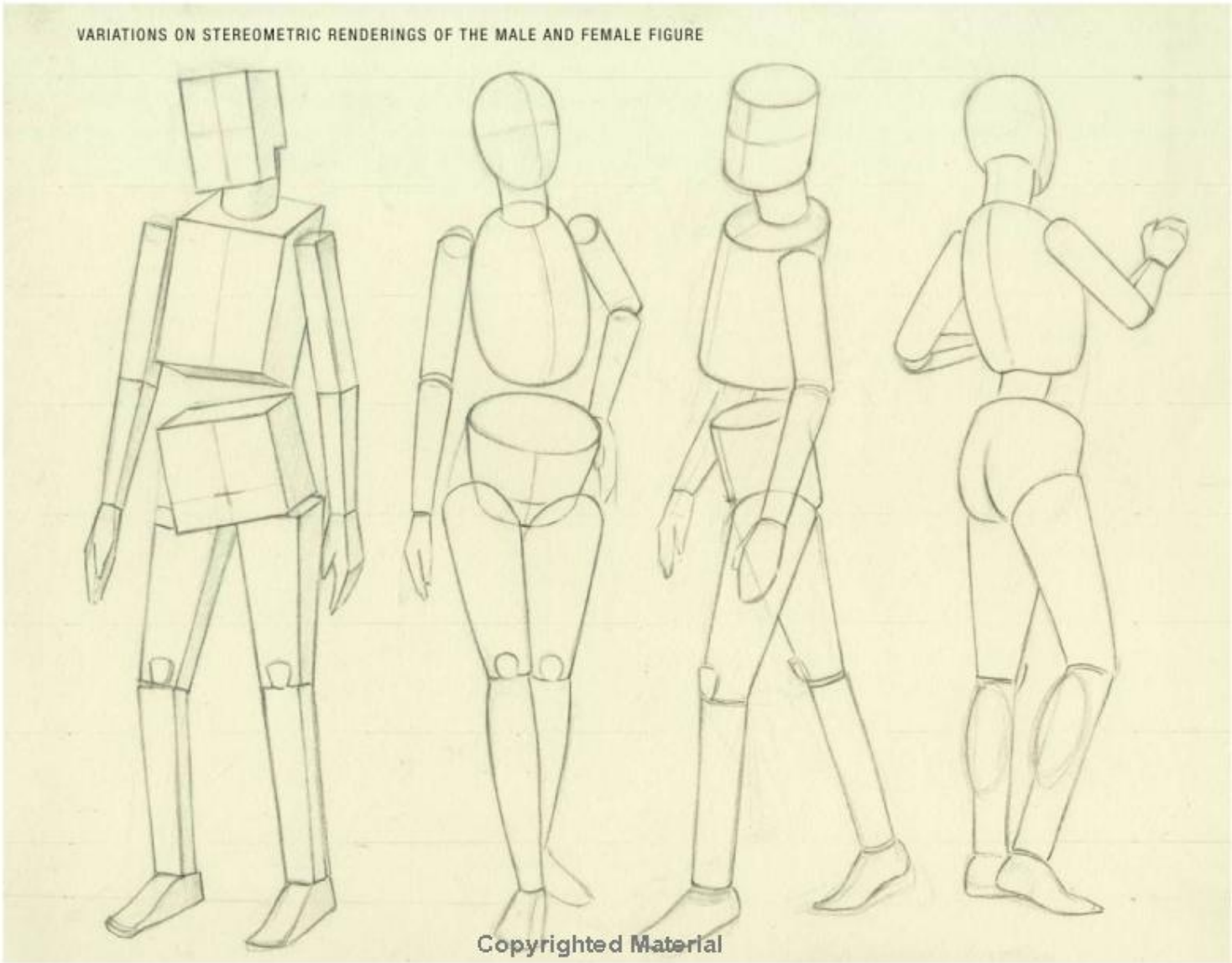
USING THE PROPORTIONAL DIVIDER

Now, using the stereometric scale and the proportional divider, draw the complete stereometric figure. With the divider, take the measurement you need from the scale, as shown in diagrams *E* and *F* in step 2, opposite, and use it to establish the size of the various segments of the figure. Because the value of the head (1) here is equal to 1 inch, you can use a ruler to check whether you are doing a good job determining the proportions of the various segments of the body. Next, you can create a scale where the value "1" is any measurement you decide the height of the head should be.

USING FORMS THAT ARE MORE ORGANIC

Drawing the figu e using the basic stereometric approach, which employs boxlike shapes, is useful when you are becoming acquainted with the proportional relationships of the various segments of the body. But using only box-shaped volumes can be slow and impractical. The figu e below shows how you can create simpler conceptualizations of the body that are easier to draw and bring you closer to the organic forms of the human body. Note how the oviform shapes render the figu es more humanlike and fluid The figu e on the far right shows how you can also start hinting at more specific olumes, such as the forms of the calves and the buttocks. The figu e also shows how you can indicate gender-specific p oportions: Whether you are using angular or rounded forms, make the ribcage and hips the same width when drawing a male form; when drawing a female form, make the hips wider than the ribcage.

VARIATIONS ON STEREOMETRIC RENDERINGS OF THE MALE AND FEMALE FIGURE



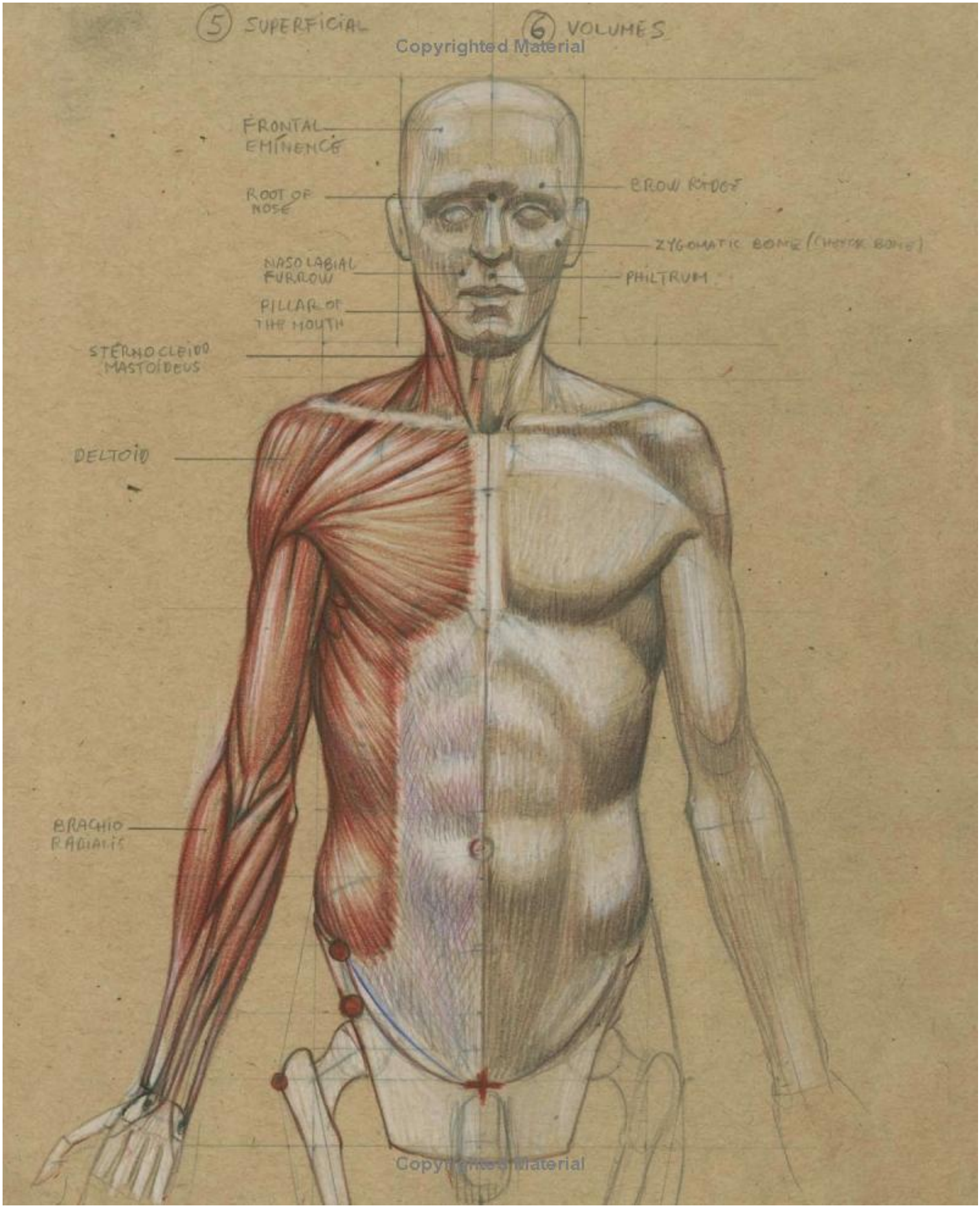
STUDIO

BASIC HUMAN ANATOMY

AN ESSENTIAL VISUAL GUIDE FOR ARTISTS

ROBERTO OSTI

BASIC HUMAN ANATOMY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BASIC HUMAN ANATOMY

AN ESSENTIAL VISUAL GUIDE FOR ARTISTS

ROBERTO OSTI

FOREWORD BY PETER DRAKE

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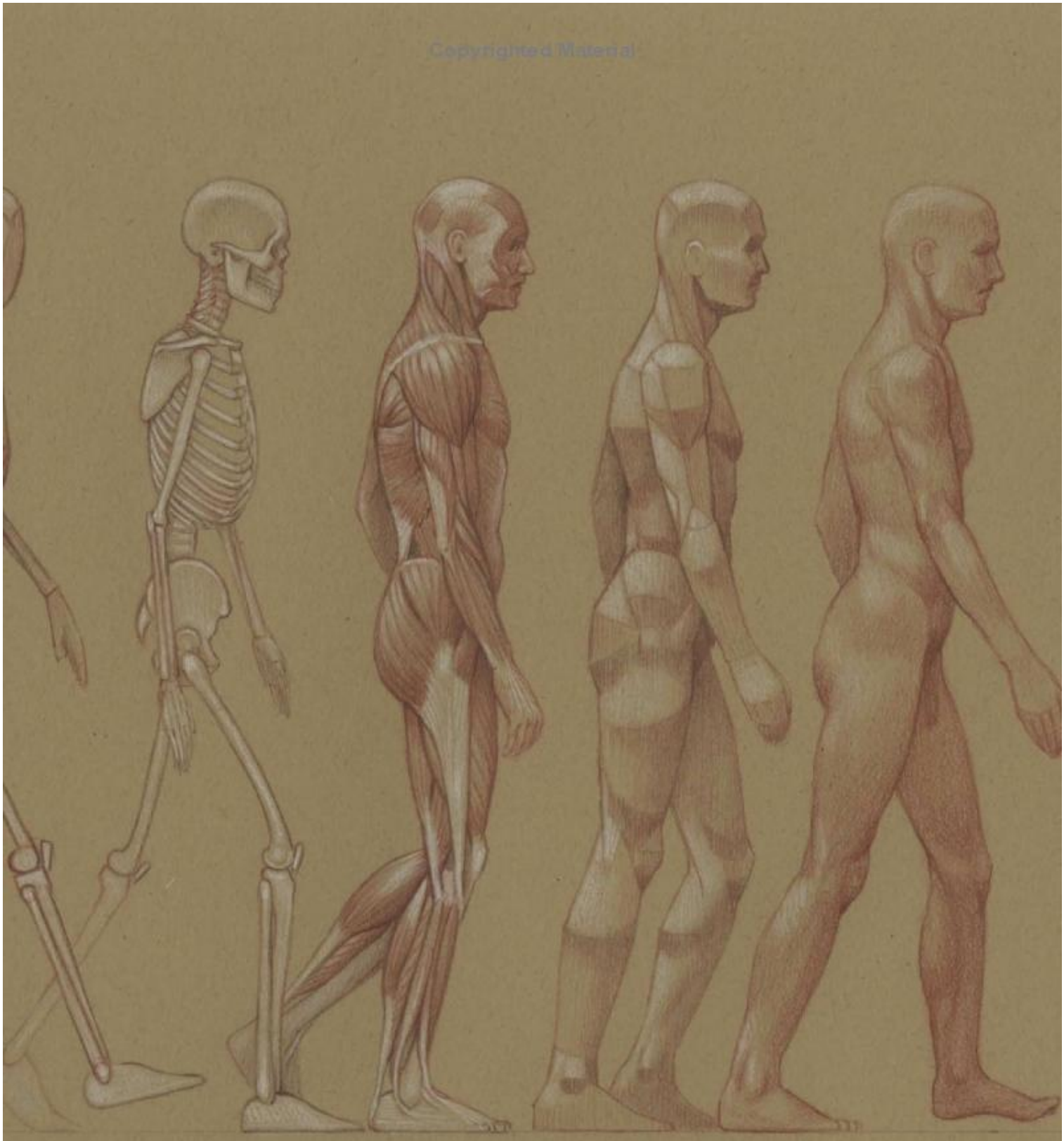
PROGRESSION FROM CONCEPTUAL TO ORGANIC FORM



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ABOUT THE AUTHOR

Roberto Osti studied at the State Institute of Art and the School of Anatomical and Surgical Drawing, University of Bologna, Italy, and earned an MFA from the New York Academy of Art in 2007. As a scientific illustrator, he has collaborated with many publications and publishers including *Scientific American*, the *New York Times*, Rizzoli, Mondadori, and Scholastic. His illustrations have been exhibited at the Museum of Modern Art and the Aldrovandi Museum in Bologna, the Museum of Natural History in Milan, and the Oceanographic Museum in Monte Carlo, Monaco. His fine art paintings and drawings have been exhibited in galleries in New York, New Jersey, and Philadelphia and other locations in the United States and abroad and have been included in publications such as *Creative Quarterly*, *American Artist*, and the Drawing Center's *Drawing Papers*. Osti has taught anatomy to artists since 2005, and currently teaches courses on anatomy and figure drawing at the University of the Arts in Philadelphia, the Pennsylvania Academy of the Fine Arts, and the New York Academy of Art. He also teaches a popular course on anatomy for the online site Craftsy. He lives in New Jersey with his wife and two children.

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