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FORCEFUL
SHAPE

TEXTURE

WITH A
FOREWORD BY

**Glen
Keane**

RHYTHM

DIRECTIONAL
FORCE

FORCEFUL
SHAPE

MICHAEL D. MATTESI

FORCE

**DYNAMIC LIFE
DRAWING**



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FORCE

Dynamic Life Drawing

Michael D. Mattesi

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I dedicate this book to my two wonderful children, Makenna and Marin.
"Nothing makes me happier than sharing this life with you."
April 2003



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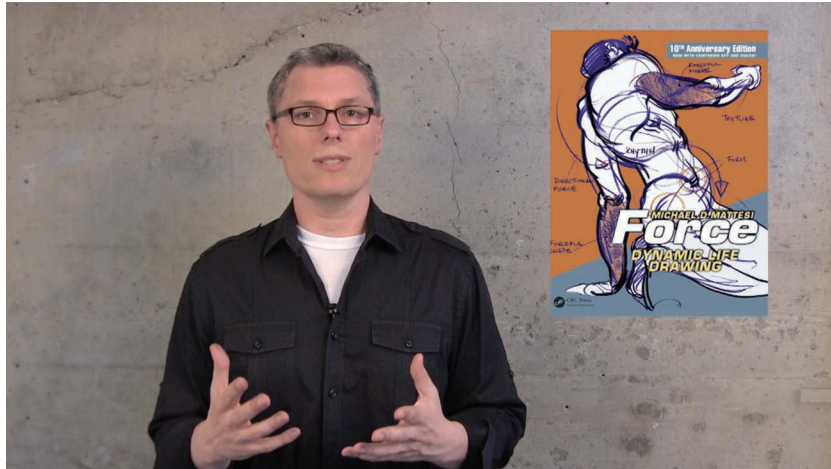
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A Decade of FORCE!



Ten years have passed since Focal Press published this book, and so much has changed since then! I am excited to see the effects of the book on the global art community! There are many blogs, concept artists, and other “how-to-draw” books that now address the idea of FORCE in numerous ways, such as flow, life spirit, and the use of arrows to describe deeper meaning within a drawing. The first publication is translated into eight different languages and inspired the creation of the three other FORCE books I authored thereafter: *FORCE: Character Design from Life Drawing*, *FORCE: Animal Drawing*, and *FORCE: Drawing Human Anatomy*.

The 10th Anniversary Edition contains numerous improvements. Around 30 videos are embedded within the book and accessible through the FORCE Drawing App. These videos will be identified throughout the book by this symbol (📹), as seen above in the top right corner of this page. In the App, click on the image of the camera, point your mobile device’s camera at the page with the symbol, and then finally tap the video card image floating above the drawing to launch the video. Then sit back and watch the video that shows me creating that drawing and discussing my process. Many new drawings can be found within this edition and the addition of color now further clarifies the theory of FORCE.

I want to thank the FORCE artists of the world for supporting and using FORCE this past decade and hope that FORCE will further inspire future artists. Let’s move on to the 10th Anniversary Edition!

Sincerely,

Mike Mattesi
September 2016



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Foreword by Glen Keane



DRAWING FORCE

There are many books dedicated to drawing the figure and the study of anatomy, but Mike Mattesi stands alone in his challenge to draw with forces. This idea holds great potential for any artist willing to be moved by it. Mike shows us how to see and use this natural energy in our drawing.

I discovered the power of drawing with forces in an unforgettable way.

It was the summer of 1974, and I was very nervous. For the past many months, I had worked on my portfolio to try and get into the Disney training program. Eric Larson, one of Walt Disney's legendary "Nine Old Men," began to thumb through my portfolio. Standing over a large Disney director's desk, he slowly turned the pages studying my finely rendered drawings. Then bit by bit I watched in horror as he turned the pages faster and faster, as though the hunt to find promise in any of my work was proving too futile. Suddenly he stopped and focused his attention on the one drawing I was sure did not measure up to any of the others. I was dying of embarrassment. I knew I should have left that one out! It was more of a scribble than a drawing. Eric proceeded to flip through the rest of the portfolio, coming quickly to the end, and then to my surprise turned back to that one scribble and said, "Can you do more like this one?"

"Uh well ... sure," I stammered.

The drawing was merely a 7-second ink sketch I had made of a woman sitting. How could it be a good drawing? I didn't labor over it, I hadn't "improved" it by rendering it with light and shadow. It literally just popped out of my pen and was there. I almost had nothing to do with it!

Eric said, "If you can do more like this, you may have a place here at Disney."

For the next week, I filled up seven sketchbooks with hundreds of quick ink sketches of people at the beach and parks, animals in the zoo, and shoppers at the mall. Those effortless drawings opened the door for me at Disney. I was hired.

You would think I would have continued to draw with the same ease that I did that 7-second sketch in. No, I was determined to prove I was an artist! I tried to impress my mentors with how well I could render the folds of a garment and draw with perfection. My animation became stiff and lifeless.

One day as I was digging around in the Disney archives, I came across some old notes of a lecture Don Graham had given to the animators in the early 1940s. It was an analysis of Bill Tytla's animation of the dwarves as they wrestled to give Grumpy a bath. He pointed out that Tytla was not animating just the form and shape of Grumpy, but was actually animating the FORCES that moved him.

A light went on somewhere deep in my artistic soul and from that point on I began to animate with forces. Whether it was a bear fight or a mermaid singing, I tried to animate the movement of forces that energized the figure.

Mike Mattesi has tapped into this same well spring of artistic energy in his lectures and books that encourage us all as artists to Draw Forces. We need this encouragement for it is all too easy to slide back into trying to prove how "well" we draw instead of experiencing the freedom of releasing the power that is already in the figure we are trying to express in line.

Glen Keane
February 2017

Preface

This book will instruct you on how to see and explore the power of FORCE through drawing. You will draw with thought and opinions that will strengthen your originality, understanding, and decisiveness. This will also develop your awareness of the stories that our bodies communicate through the actions we perform.

The theory of FORCE promotes seeing in more abstract terms; because of this, you can apply it to an unlimited amount of applications. It can be used for drawing, painting, sculpting, animation, architecture, graphic design, and all other disciplines of art. It can create a new awareness in your day-to-day life. How are FORCES operating when you stand, walk, or drive? This book is here for you to understand how to communicate FORCE through drawing, and that is very exciting!

“Art does not reproduce the visible; rather, it makes visible.”

Paul Klee

Students who open themselves up to learning are the ones that move ahead quickly. Take what you understand and agree with and use it to further yourself. Some students will actually argue their habits or limitations.

“Argue for your limitations, and sure enough, they’re yours.”

Richard Bach

These students move nowhere in their minds for sometimes a month, a semester, or even a whole year. Don’t waste your time with bad habits! Seek to understand! If you keep doing what you know at present, you will keep getting the same results.

Before starting on the journey ahead, I want to share with you some of my key concepts.



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Key Concepts

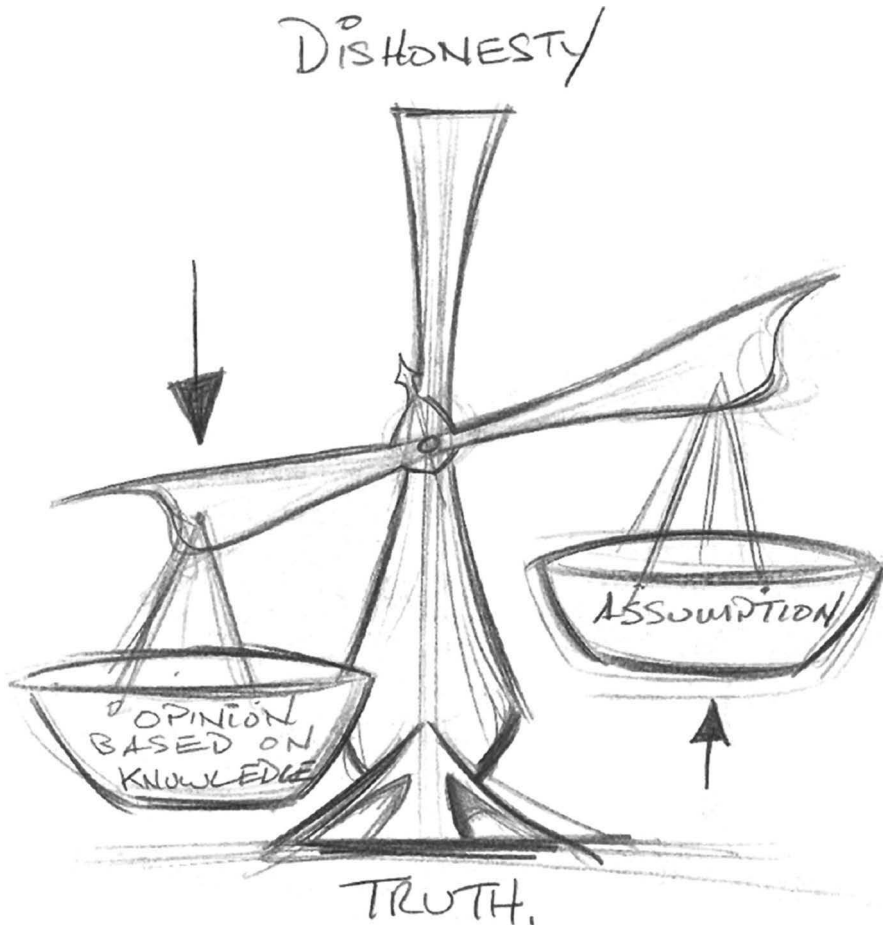
A. HUMANITY

In my last few years of educating, I have had the epiphany of focusing on humanity in drawing. I have taught and lectured in many schools around the world, and the one element I see missing in art instruction is humanity. Almost all art instruction with a figure model is used to learn how to draw through measuring instead of experiencing the richness of humanity. Once you have a bigger purpose to draw than learning how to draw, you will learn faster. You will be more eager to understand FORCE, perspective, anatomy, and everything else that goes into becoming a great draftsman!

Where does all of this start? It starts with you and your humanity. Become hypersensitive and present, live in the moment. When you drive, feel the speed of the car and the weight of your body in the seat, the inertia, and the tension in the steering wheel. What happens to your body's weight when you go into a curve at 50 miles an hour? Don't talk on the phone, eat, or listen to the radio while driving. Drive your car.

When drawing the model, stay present and in utter awe! When the model takes the stand, it is as if a god or goddess was presented to us. They represent you and the rest of humanity. Become amazed and stay open to this fantastic occurrence. Your experience with the model is your drawing. Therefore, the more rich, incredible, and dramatic your experience, the more rich, incredible, and dramatic your drawing. You are the vehicle to this journey, so if you are closed and fearful, so is your work. Use the idea of having the richest and most stimulating experience drawing the model's humanity while using your very own as the purpose to drawing. All of the technique throughout the rest of this book is to serve that higher purpose.

What is there to be in awe of? Look at the amount of effort the model gives you. A living, breathing person is in front of you. Notice their lungs fill with oxygen and how they present you with stress, tension, and torque. Look at their muscles and bones perform great tasks. Each particular person chooses particular poses. Be sensitive to that. Are the poses poetic, athletic, romantic, relaxed, masculine, or feminine? What stories does your humanity find in their poses? You must be sensitive to drama! There is the drama of the pose, the drama of FORCE, the drama of structure, the drama of depth, the drama of shape, and the drama of texture. As you can see, there is plenty of drama to be in awe of.

B. TRUTH

This illustration shows that the increase in opinion based on knowledge brings us closer to the truth and further from dishonesty. You need to gain knowledge to comprehend what to have an opinion about and to obtain the capacity to actualize the opinions you possess upon the page. In this way, your opinion will bring you closer to the model's reality. Every line presents your opinion.

Two ways of clarifying your opinions are through exaggeration and analogy. Using analogies helps you form opinions. "His leg is like a column of strength; the FORCES are like a roller coaster." I use many analogies throughout this book to make myself clear to you. If you have something to say, learn how to express it as best you can. Students tell me they are afraid to exaggerate because it is not real. You have a much greater opportunity to capture reality through what you conceive as an exaggeration of ideas than you do working on a dead representation of life via copying. Copying leads to lying.

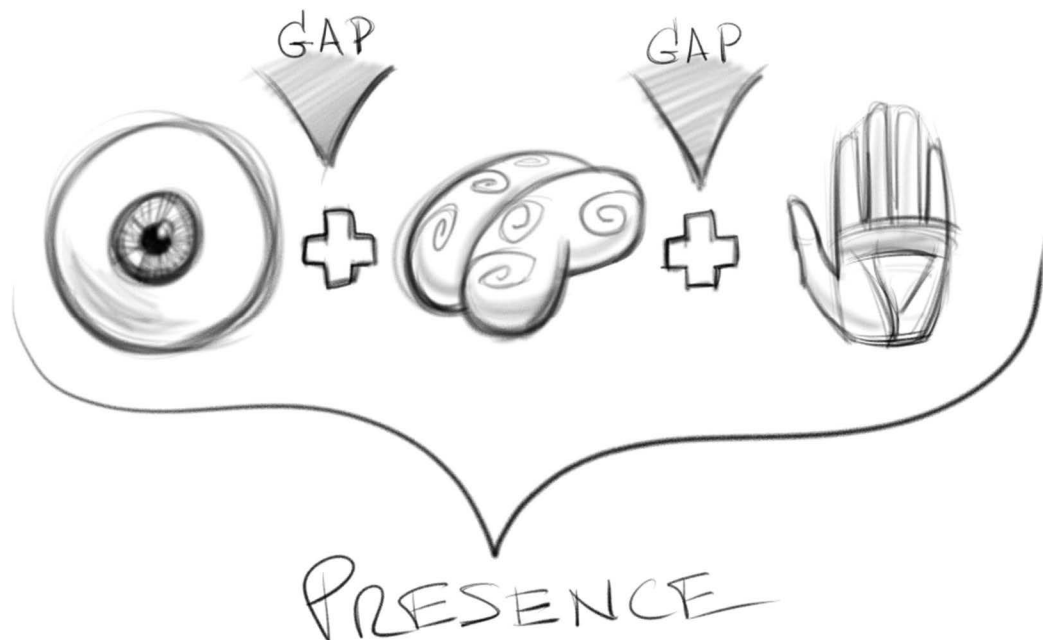
Push what the model gives you. Go after the functional and poetic ideas. If a pose is about torque, then draw and experience torque. If it is about relaxation, then make it clearly about relaxation. State clearly what you have to say. I love loud drawings, not whispers.

“The work of art is the exaggeration of the idea.”

André Gide

Glen Keane is one of today’s leading artists when it comes to exaggerating the clarity of a moment. He is extraordinary at imbuing his animation drawings with heart. If something is powerful, you feel its power; if sad, you feel its sadness. His drawings are always loud and opinionated. If you don’t know who he is, go see his performances of the main characters in films like *The Little Mermaid*, *Beauty and the Beast*, *Aladdin*, *Pocahontas*, *Tarzan*, and *Treasure Planet*, to name a few.

C. IN THE ZONE, FLOW, PRESENCE



During the act of drawing, we move through three steps: seeing, thinking about what we see, and then using our hand to draw it. The issues that occur with this process are in the gaps between the steps. Typically, we look at something and then our minds create their own version of what we saw, an assumption. Then we draw THAT idea, our mind’s idea. Closing this first gap between the eye and the mind is crucial. Your mind needs to believe what it actually sees. Try drawing without looking at the page. Then to close the second gap, focus on your hand moving at the speed your eye sees and your mind thinks. So become a FORCE drawing addict and feel the power of drawing in FLOW, in the moment!

A current, popular discussion in our world is the concept of flow, which is the state you get into where all focus is on the task at hand, where time either speeds up or slows down and your mind is like a laser. This same idea has existed for centuries within Buddhism. The act of drawing is a perfect vehicle for experiencing flow. In fact, in my more than 20 years of teaching, I have always said that this state is the goal we are after, and once reached, it is like an addiction. I just found out that science proves that many of the body's natural "feel good" chemicals are released into the body when in a state of flow.

D. PASSION

You must be passionate and driven to learn and be great. Love it, hate it, have an emotional experience. Always push yourself to new levels and enjoy the trip. No one strives for mediocrity. Give the drawing everything you've got in the limited amount of time you have with the model. This is the fundamental FORCE behind a student's progression. How can you or an instructor critique your work if it is not your full effort? The critique is then based on only a percentage of your ability. You have to believe that you can obtain the goals you are after. In terms of myself, everything I have achieved is due to knowing clearly what I wanted, I intensely wanted it, and some part of me knew I could get it.

E. FEAR

You are probably wondering how fear would have anything to do with drawing, but it has everything to do with it. Fear kills passion. Fear is the most detrimental attribute a student could have. The greatest fear is the fear of failing, which in this case is creating a "bad" drawing. Remember, if you are drawing in order to capture the humanity of the model, you will become unconcerned about your drawing. Be aware of your experience and just stay present with the model. There is no failing, only results. Be courageous and push yourself to new heights. Besides, what is going to happen if you make a "bad" decision? *You will learn from it.* The more results you create, the faster you will reach your destination. It is not as if we are skydiving. You will always land safely, no matter how great the risks. Consider yourself the ultimate stunt person.

F. INTERNAL DIALOGUE

Use it to help you, not hurt you. Stay aware of what you say to yourself, in your mind. Notice when and why you are indecisive or concerned. Brainwash yourself if need be. "I know exactly what I am doing ..." In time, a statement like this becomes a reality. As you learn about FORCE, you will come to realize that your mind will be occupied thinking about numerous ideas and that means there will be no time for you to judge yourself. Your mind-set is essential to this dialogue. Stay curious and hungry to learn. Experience the ten thousand hours of drawing and learning that give you the sense of accomplishment that comes with practice!

G. RISK

In order to grow, you must take risk, or what you perceive as risk. Risk to one individual is the norm to another. Be aware of that. Use your curiosity and passion for learning to push through your risks. This is where your courage and pride will come from. In order to have opinion, you MUST be able to take risk! You MUST move beyond.

H. THE POWER OF QUESTIONS

When you stare at the white paper and then back at the model and start thinking, "I don't know what to do!" it is time to control your thoughts and shift your focus to the power of questions. The question that got me out of doubt and turmoil is "What do I want?" This very powerful question forces your mind into creating answers. "I want to find the largest FORCE and experience it! I want to see shape and design in the figure. I want to learn how to draw FORCE!"

Envision and Empowerment

When I was in art school, I would play games with my mind. I would look at the model and then envision my drawing on the page. My image of my drawing was far beyond my abilities at that time but I do believe that the repetition of this activity allowed me to believe in myself and attain my goals more quickly. It is empowering to ask yourself if you are doing your best and answering honestly. You are capable of more than you are achieving. Hold yourself to excellence. I promise that you will be amazed by your true potential!

When you look down at your drawing and it is not what you envisioned, that is great! Notice the differences between the envisioned and the reality. Now you know what you need to work on and you can set goals to go after! It may be that you notice your drawing does not have enough form and anatomy and that is why you are reading this book!

Contrast and Affinity

While working at Walt Disney Feature Animation, one of the best rules I learned was "CONTRAST CREATES INTEREST." Beware of mediocrity through the lack of contrast. Look for idiosyncrasies, asymmetry, unparalleled moments, and varied line. This rule works for character design, landscape painting, film editing, writing, and all works artistic. Contrast is self-explanatory, but how many ideas can be contrasted? That is where the magic happens. A line on a piece of paper can have much contrast or little contrast. Is the line parallel to the edges of the paper or is it at a 45-degree angle? Is there variety in the weight of the line? How long or short is the line? Does it go off of the page? When drawing the human figure, we think we all look alike ... we all have two arms, legs, eyes, and so on. The real magic happens when you see the idiosyncratic nuances. "Wow, this model's elbows are larger than mine, her hip is long and thin, he has a heavy brow."

All of these possibilities represent different ideas in the world of art. Remember that every mark on the page has meaning, a meaning to create the bigger purpose of the artist's statement!

Affinity or unity means the similarity between items in the drawings. This gives you another opportunity for contrast ... the contrast between contrast and affinity.

Design is an abstract way of looking at our world and using it to communicate our thoughts. Your art is only as powerful as your thoughts and how you communicate them with your skills. I hope to present you with some new tools to assist you in communicating your experiences.

"Were the diver to think on the jaws of the shark he would never lay hands on the precious pearl."

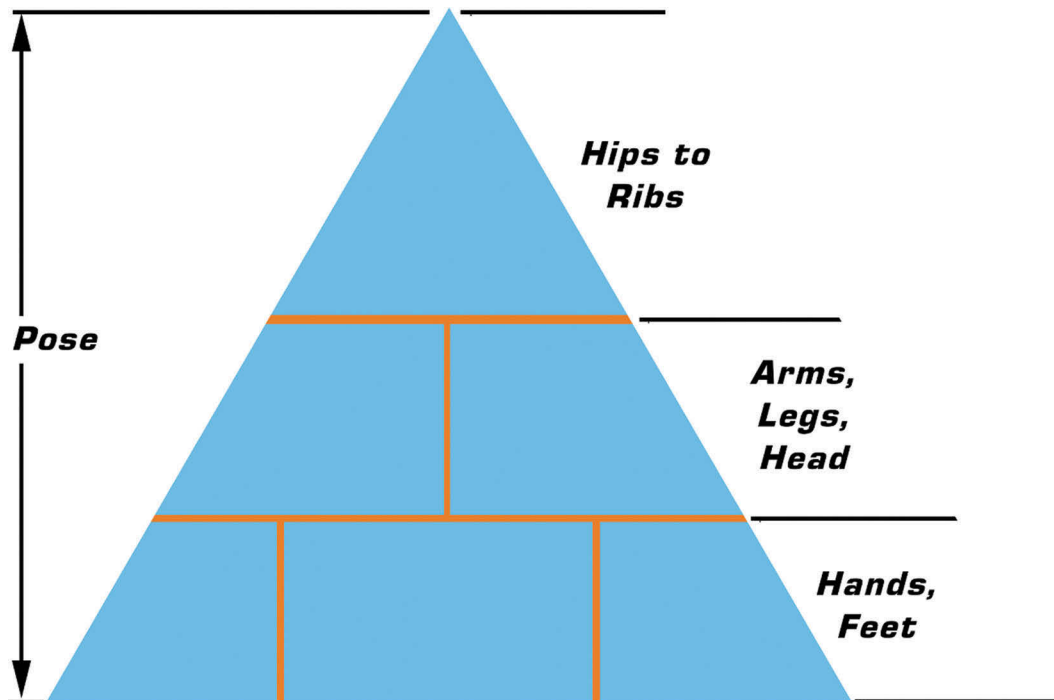
Sa'di Gulistan

I. OPINION

Strengthening your ability to take greater and greater risks allows you to get out of the "kind of" mind-set. New students look at life and "kind of" see it. You must see truth in order to form opinion. Opinions come from heightened clarity! Much of this clarity comes from knowledge. Your search for knowledge comes from curiosity. Don't draw with mediocrity; strive for opinion through clarity. What are you trying to say? How do you feel during your experience of drawing the subject? The act of drawing many hours alone without some real thought might get you some muscle memory, but you must observe yourself and your work to improve upon both.

Use creative ideas when drawing FORCE. You might have a thought that is an analogy. Perhaps, the figure's pose reminds you of a natural power, architecture, culture, a time period, a character, automobile, or other famous artists' work. Draw upon your intuition to inspire your experience.

J. HIERARCHY



The shape of a pyramid gives us an icon of hierarchy or an order of importance. In the beginning, draw and think with the most important or core idea first; details come last. The pyramid is the human body and the story its posture implies. The top of this pyramid shows the number one concept. This portrays your first representation of the model. This will be the main idea, or FORCE, of what the model is doing. For instance, standing straight, bending over, seated, and so on. Think from large to small. You always want to go after the main idea first. The bottom of the pyramid would be fingernails or something equally insignificant. Don't get caught up in the small things until you first know the main idea.

Animation is also a hierarchical process. Here, the entire pyramid symbolizes the character's actions instead of one drawing's FORCES. The animator's drawings are represented by the pyramid's peak. He draws the key moments of a character's actions. The team of in-betweeners, the rest of the pyramid that works with him, then further develops these motions. Their drawings go in between the key drawings the animator created.

An illustrator or concept artist must be aware of the story or main point of the image. Then progressive decisions are made that support that idea from layout to grayscale, color, and effects.

K. THE ARTISTS AND MODELS

If someone other than myself has accomplished a drawing, I will refer to that artist. Their full names are Mike Roth, MaryEllen Mahar, Keith Wilson, Barrett Benica, and Mike Dougherty. Thank you for all of your help. Every one of you has done a great job! I also want to thank the hardworking models that help my students and I recognize the beauty of humanity.

L. VIDEOS

The following models gave it their all for this book during the recording days for the 10th Anniversary Edition of FORCE: Carrie, Andy, Michael, and Michelle. A round of applause for their effort!

M. SUPPLIES

Students in my classes draw on 18" × 24" smooth newsprint. Students draw with very soft lead crayons or black china markers. I don't want a drawing class to focus on fancy mediums. Everyone uses the same supplies. These supplies have been chosen over years of instructing. Newsprint is cheap and the smooth paper with wax or really soft graphite provides a slick and smooth drawing experience.



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Chapter 1

Seeing Life

What is it that creates life? FORCE! FORCE, or energy with purpose, is what we want to recognize in the world around us. I am going to lead you on a FORCE-full journey that will change the way you perceive the world you live in. This new perception will clear your mind of the fog of assumption. You will live in a new truth. This in turn will make you appreciate life to a new degree.

Drawing is the profound vehicle for our journey. Through it, you will also learn about yourself. Always remember, what you put down on the page is a direct reflection of your thoughts and feelings.

There is so much to appreciate and enjoy, so let's get started.

1.1 THE AWARENESS OF FORCE

Drawing the body's FORCES is the least instructed subject in figure drawing classes and yet it is the most important. The majority of books and instructors teach about copying what you see and not understanding it. I was extremely fortunate to have Jim McMullan as an instructor and close friend at the School of Visual Arts. He taught me to be aware of life in the figure.

The human figure is always full of FORCE—no matter how still it may seem. We are built to move, and therefore, even when a model is standing straight, there are FORCES to comprehend and address. We are always under the influence of gravity, which is an all-encompassing FORCE to recognize. When drawing, we need to think about the beauty of why and how the model works, not worrying about what angle to hold a pencil at in order to shade appropriately.

“Thinking is the hardest work there is, which is the probable reason why so few engage in it.”

Henry Ford

You want to draw what you know and empathize with. Draw with the mind's eye, not only your vision. If you find you are having a hard time figuring out what is happening in a pose, then assume the pose yourself. This will definitely help your awareness of FORCE. We are all people. If a model takes a pose that radiates joy and you copy that pose physically yourself (all the way down to the facial expression), you will begin to feel what the model is feeling and know physically what the model is doing. When you see someone who is sad, how is it that you know that person feels that way?

As a fellow human being, you know that you assume the same physiology when you feel sad. You experience empathy through humanity.

Never forget that mind and body are one!

1.2 WHAT IS THE MAIN IDEA?

Let's discuss the pyramid of ideas that represent the model's pose. Remember, we want to deal with the top of the pyramid, the largest idea, first. You will create some general statements about the figure. They will be the first step on your road to understanding FORCE. With experience, you will become more specific.

Allow me to share with you an exercise I host in class. For the first minute, I have the students write what their goals are for their drawing of the model. I have them list the goals in a hierarchal manner. Then, for the last 4 minutes, they draw the model and strive to achieve those goals.

1.3 VOCABULARY POWER

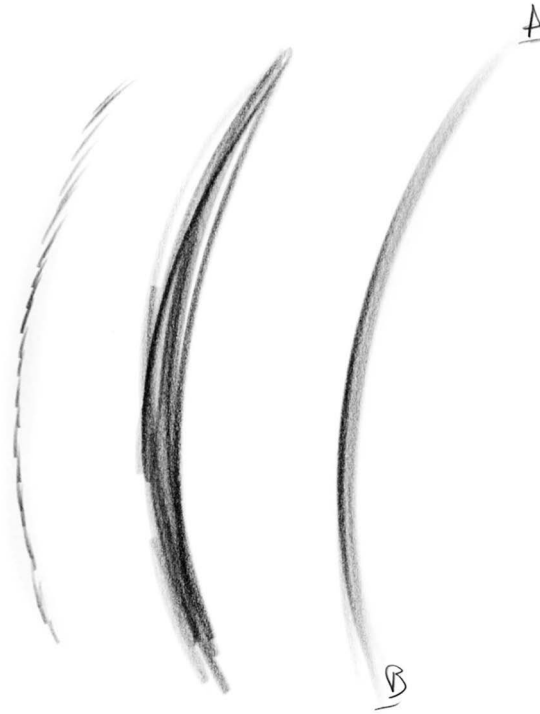
Using the comparison of a writer to an artist, to express our ideas, we must understand our drawn language via its own vocabulary. The more vast our vocabulary, the clearer, more intelligent, and expressive our thoughts. There are no great writers without the knowledge to write.

Our language throughout this book is drawing, and our understanding of line is our control of that language. The strength of line is immeasurable. To harness its power, though, one must understand how to see FORCE. Draw the verbs of the figure. This is where we want to direct our concentration. Draw what the body is **DOING**, not just the body. While having an internal dialogue, think "the stretching arm or thrusting hip," not "the arm is here and it's this thick, and look at the shadow on it." Verbs come first and then the nouns they are affecting. I have students bring in a thesaurus to increase their vocabulary and, thus, their experience of the model.

As important as line is, remember that the drawings are not about line. They are about ideas. The line is your idea. Don't do a drawing for the sake of beautiful lines. Create a drawing that expresses your experience.

Here are the types of line that most describe FORCE in the body.

1.4 TYPES OF LINE IN DRAWING



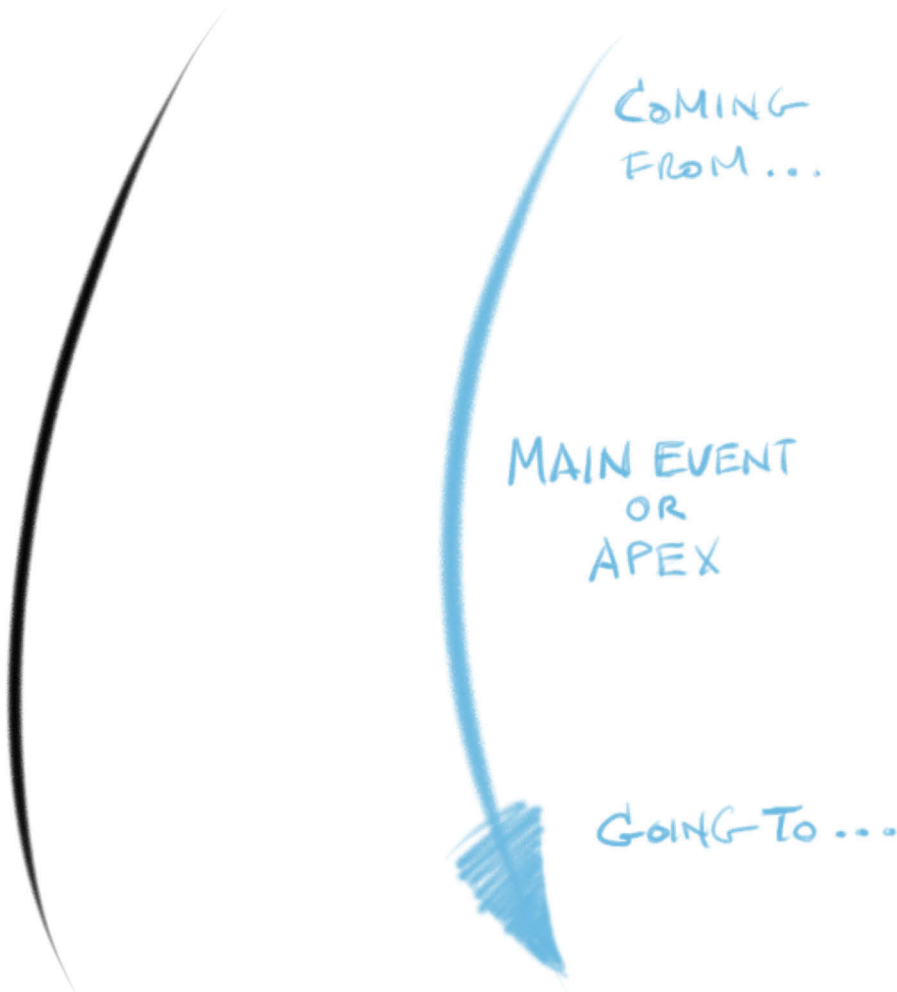
Left: This is the infamous hairy line. Uncertainty and fear take us across the page through thousands of broken thoughts instead of drawing one line per idea. Drawing like this never gives you the opportunity to move on to bigger ideas or feel FORCE and direction in your hand and mind.

Middle: It is sketchy and created by backward and forward motion. No direction. The line or, more importantly, its idea does not start somewhere, have a purpose, and go somewhere. There is no clear idea.

Right: Here is our curved line with FORCE and direction. The one line addresses one idea. The line starts somewhere, does something, and goes somewhere. This is achieved with a confident stroking of the paper with the pencil. The arrow example shows you the direction of the energy or its path. This is *Directional FORCE*.

Forewarning: I am not suggesting uptightness with the line. You don't have to get it right the first time. Let your hand sweep over the paper's surface in the directions that the model moves in until you have absorbed the pose's idea. Then make your marks by slowly applying pressure to the paper with the pencil while you are still in motion. Notice how you can control the line's value. This discipline of mark making is of tremendous value because when you draw, your head will already think about where energy comes from, what it is doing, and where it goes. Feel liberated and excited, and be courageous.

1.5 THE DIRECTIONAL FORCE LINE



So that leads us to our FORCE line found on the left. The core idea is that the line actually represents the idea of FORCE! One line = one Directional FORCE.

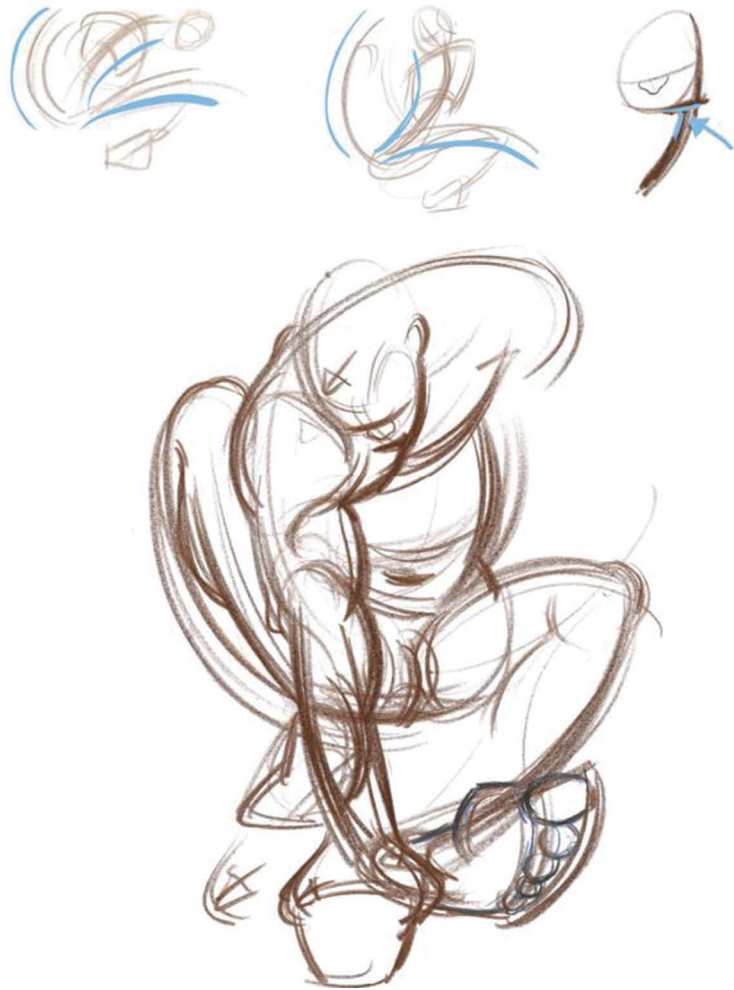
On the right in blue is the breakdown of that Directional FORCE. Notice that it contains three regions. You could think of the top and bottom regions as questions, where did this FORCE come from, and where is it going to? Where is the apex of this Directional FORCE? These are some of the questions you can fill your mind with while drawing.

Throughout the book, I will use the color BLUE to present Directional FORCE.



The Directional FORCE line does not need to be accomplished with one clean stroke as shown on the right. You can “soft touch” your way to feeling FORCE. On the left is an example of this. Using the analogy of driving a car, you can see how I transitioned from air drawing through a progressively firmer mark-making process in order to draw the Directional FORCE line. During this experience, I can comprehend and feel the apex of the curve. The most FORCE would be found there and made visual through the stronger drawn pressure.

If you are having a hard time finding a Directional FORCE curve, try drawing two curves that are opposite each other, one bends to the right and the other to the left, to see which most resembles the figure’s main FORCE. One of the curves will fit into the puzzle in front of you and the other will oppose the model’s movement. The lines are generic now, but this will give you an introduction to FORCE. The first FORCE you can look for is the one that connects the rib cage and the pelvis.



Witness the power of the Directional curves of FORCE. I often draw through the model to understand where FORCE begins and ends. Above the main drawing are simplifications of the pose using curves of FORCE.

Left, center: Examples of picking a curve for the direction of the upper body. One curve directs to the right and the other to the left. The clarity of the curve helps you make a decision on what direction is correct relative to the pose.

Bottom: See how the center drawing works because the model is obviously moving toward his raised knee. The top center drawing matches the larger drawing.

Right: Shows an awareness of tangents, a topic I will cover in more detail later. This is a close-up of the model's jaw and center of the chest. These two moments would have been flattened if the two ideas were drawn with one line.

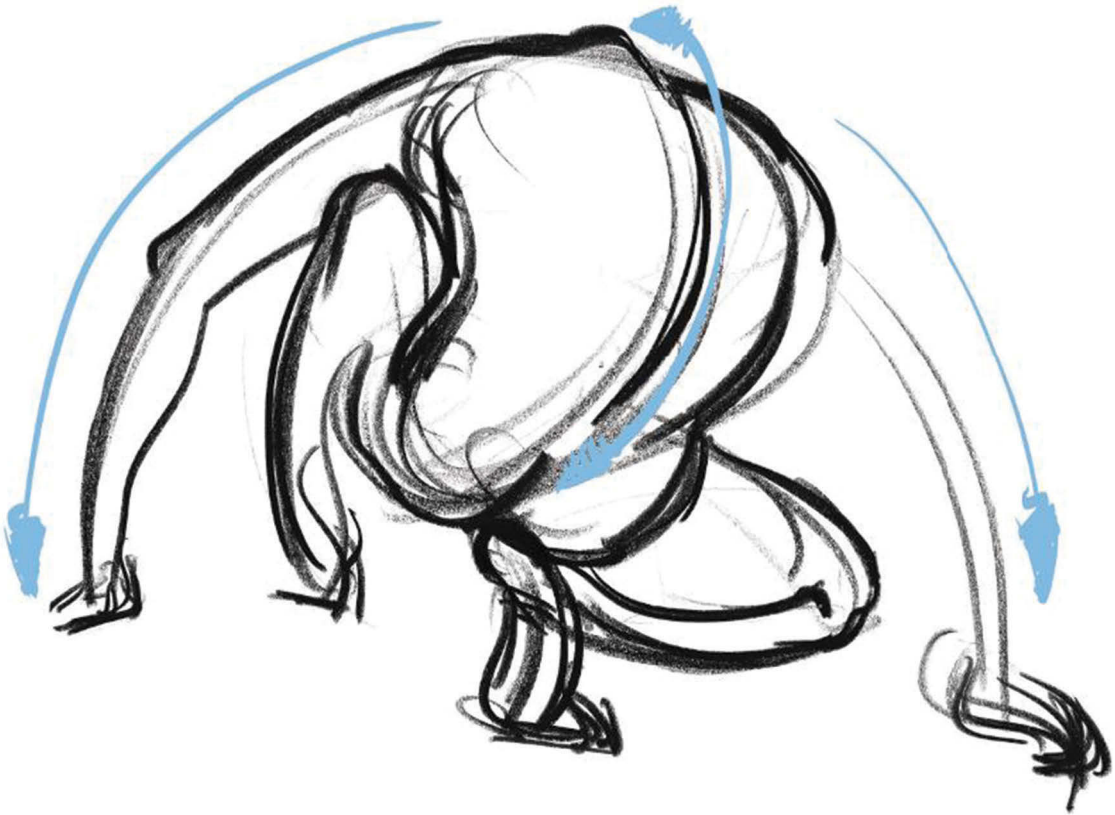


I am happy that I experienced struggle in my attempts to understand this pose. Look at these drawings in the order they are numbered.

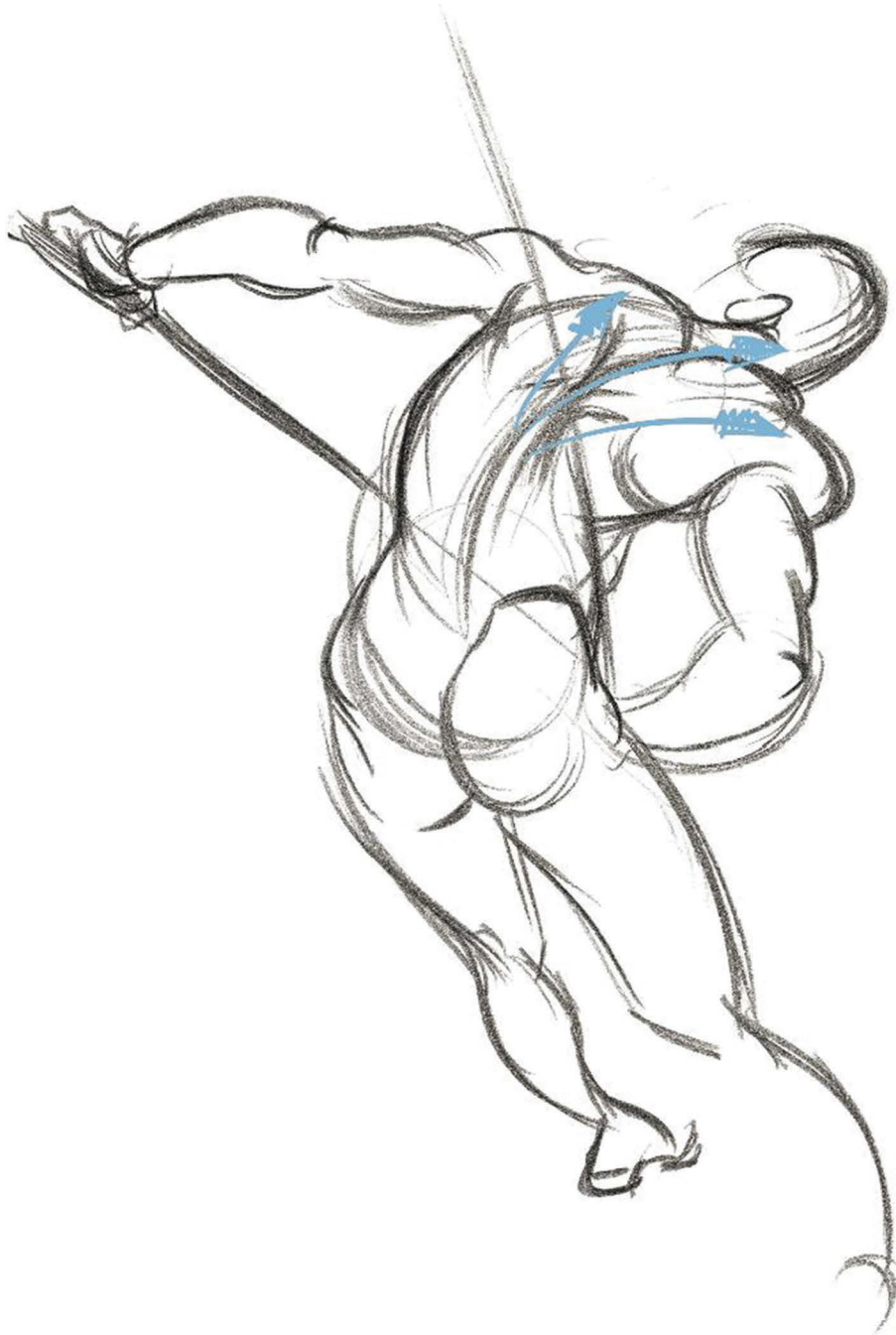
1. I began FORCE on the left side of the model's upper back. I was dissatisfied with the mediocrity of this drawing. The model was much more alive and aggressive than my weak depiction of him.
2. I more clearly see that the Directional FORCE is more aggressive. Its curve is stronger. There is more thrust into the left side of the back, and here, we see that the right side of the back and shoulder played a role in the activity on the left side.
3. I realized that main idea extended much further. Now I see that the pose is about the inward thrust of the lower rib cage against the upward FORCE in the right arm. The length of this FORCE idea creates the strain in the upper back and pushes the left shoulder out. This page is a great example of the following:
 - a. Investigating a pose to gain understanding.
 - b. Searching for how far a FORCE travels and its true motivation.
 - c. Not settling for the first attempt. Keep working at a drawing until it feels like the model's effort. It is easy to obtain mediocrity and challenging to stare into the visage of splendor.

"I am not discouraged, because every wrong attempt discarded is another step forward."

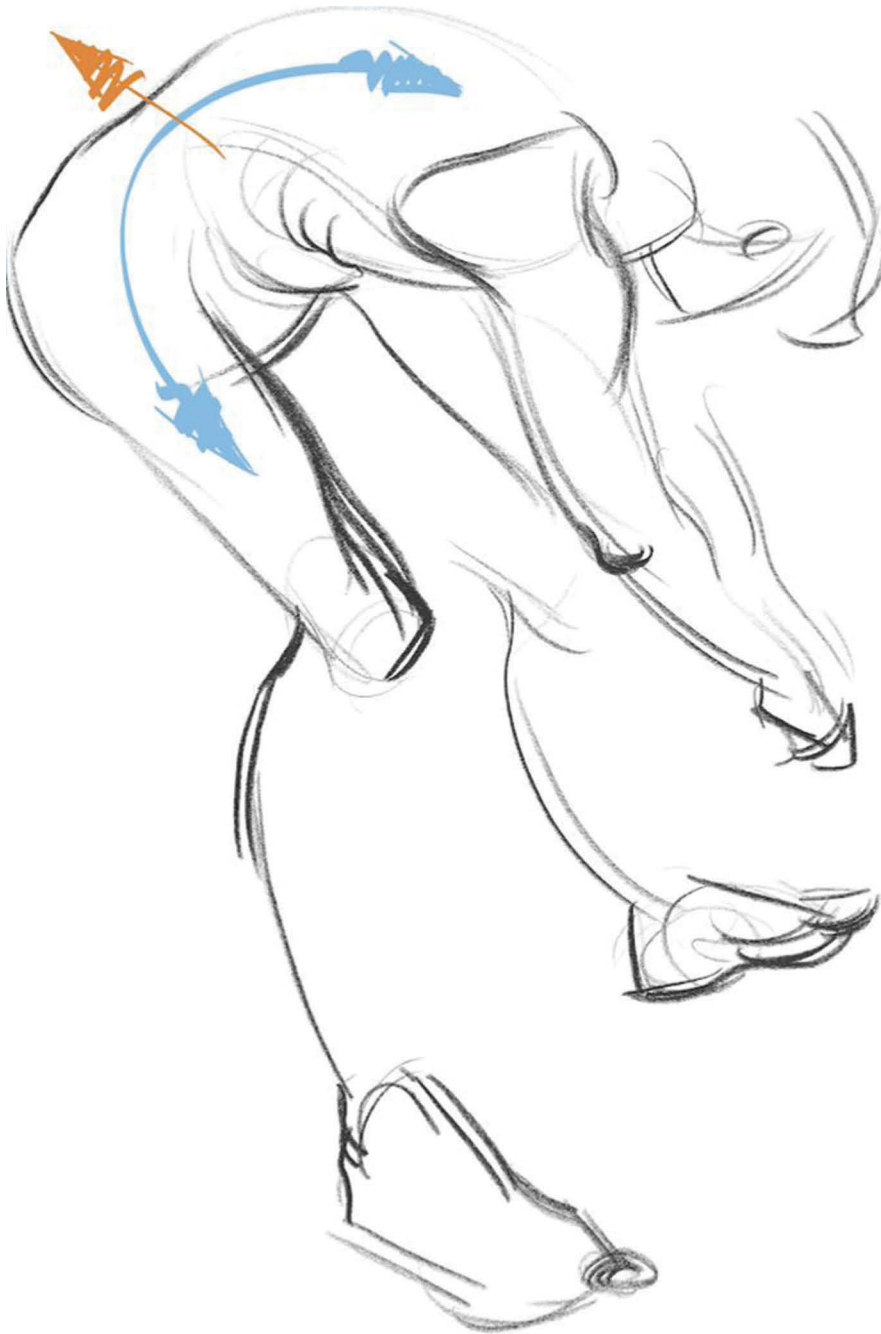
Thomas Edison



Earlier, I mentioned bringing an idea or metaphor to the drawing experience. This pose reminded me of a monkey, and that was my initial idea as I attempted drawing the full figure. See the simple curves of FORCE in the back and arms causing clarity of the pose.



This drawing by Barrett captures the vigor of the pose. The cumulative FORCE of the back sweeps up into the musculature of the upper body and disperses to the arms and head. It's like exploding fireworks.

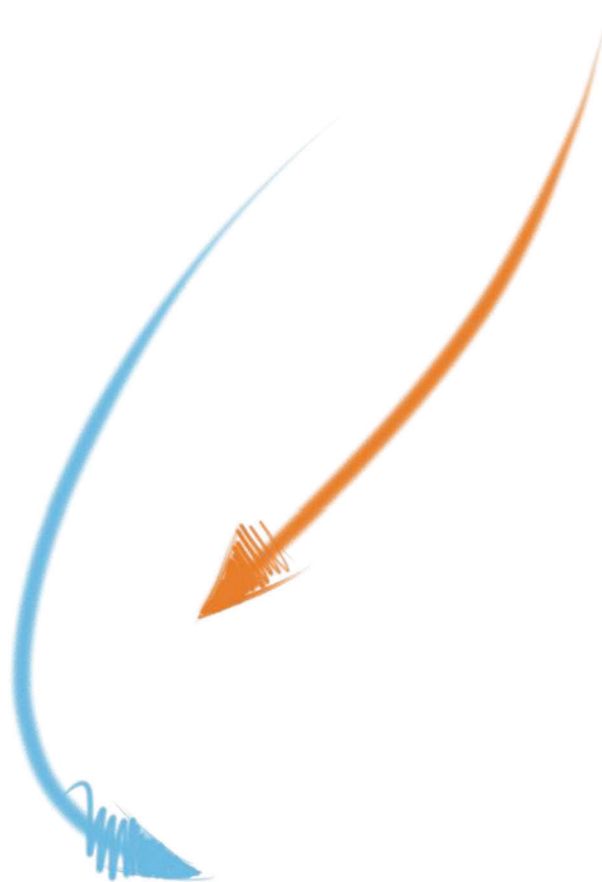


The model feels a pull from his hands up through his back and down into his feet. The focal point of FORCE or the apex of the Directional curve is the lower back. If the model were to let go, this is the direction he would fall in. This is due to the Applied FORCE, the orange part. Let's find out what that is.

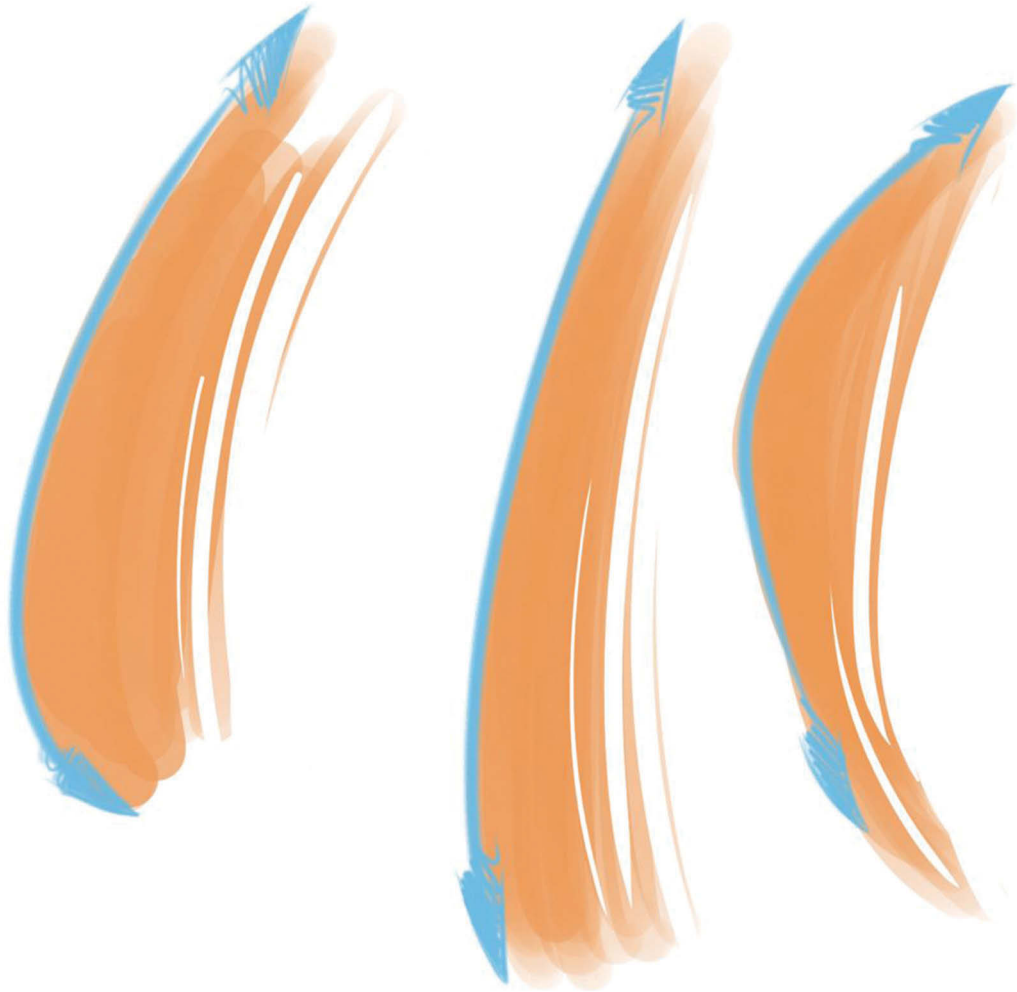
1.6 APPLIED FORCE

Besides the Directional FORCE line giving us a linear direction or path of FORCE, it also informs us how much FORCE is applied upon it. This Applied FORCE represents the body and the direction it moves as a mass.

If lines were roads, you would obviously be able to drive your car through a straightaway faster than you would through a curve. The tighter a curve, the more FORCE you would feel expended since you changed the initial trajectory of that FORCE. When driving through the curve, the place where you would feel the most amount of FORCE would be at its apex. The FORCE would diminish as you pulled out of it, allowing you to regain speed.



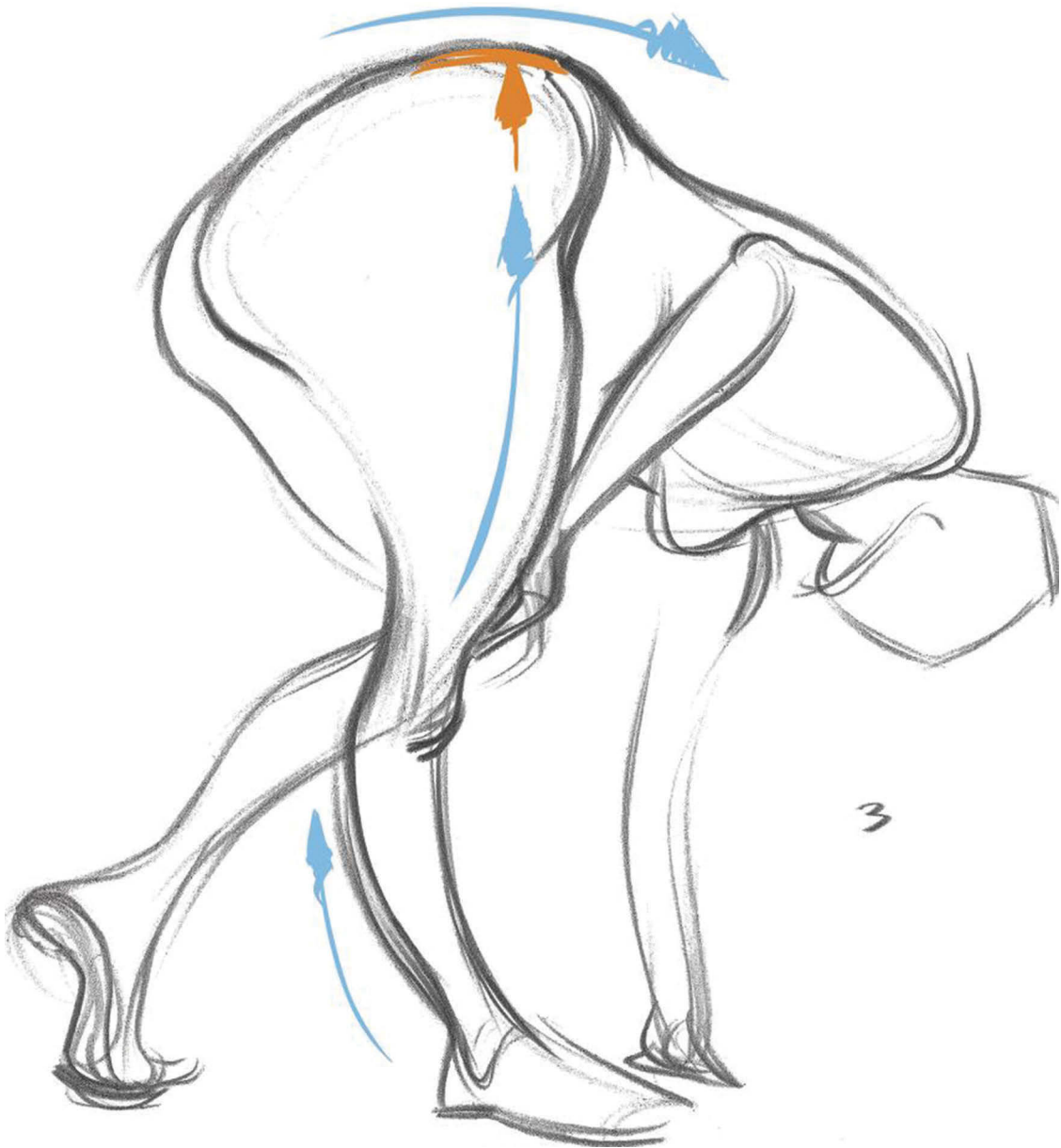
If we add gravity to this situation, the blue line shows us a mass that is bottom heavy because of where the apex of the curve is located on the line. The direction of the mass is defined by its apex, which was defined by the orange Applied FORCE. If we look at both of the arrows, we get a sense of their connected relationship.



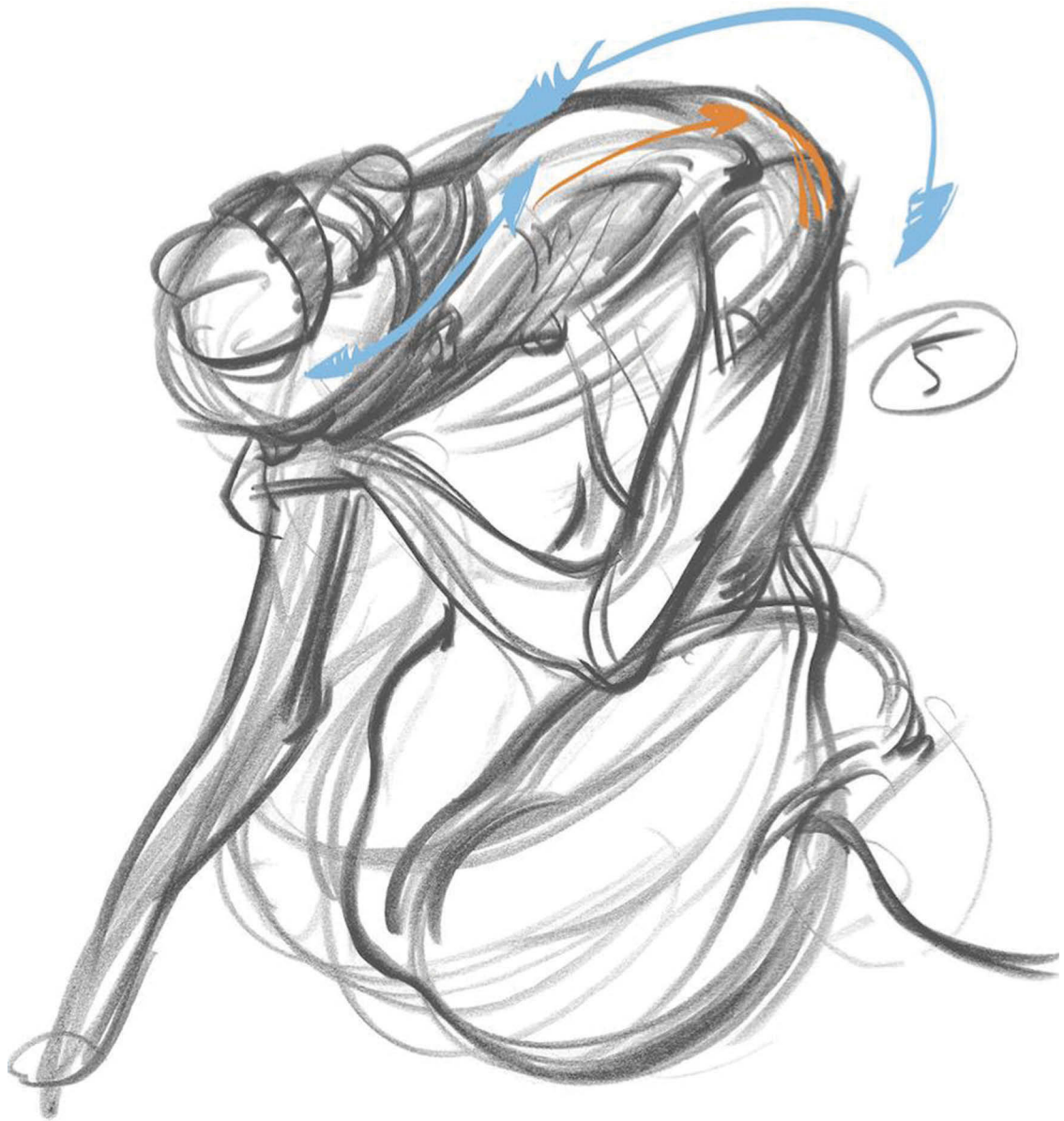
In these three images, notice how the differing apexes suggest different directions of Applied FORCE relative to the blue Directional FORCES. The center illustration has the least amount of Applied FORCE since it is so close to straight. The image on the right shows a strong Applied FORCE pushing high up on the Directional FORCE curve. The orange shapes represent the body's mass, and the blue Directional lines, a contour of the figure.



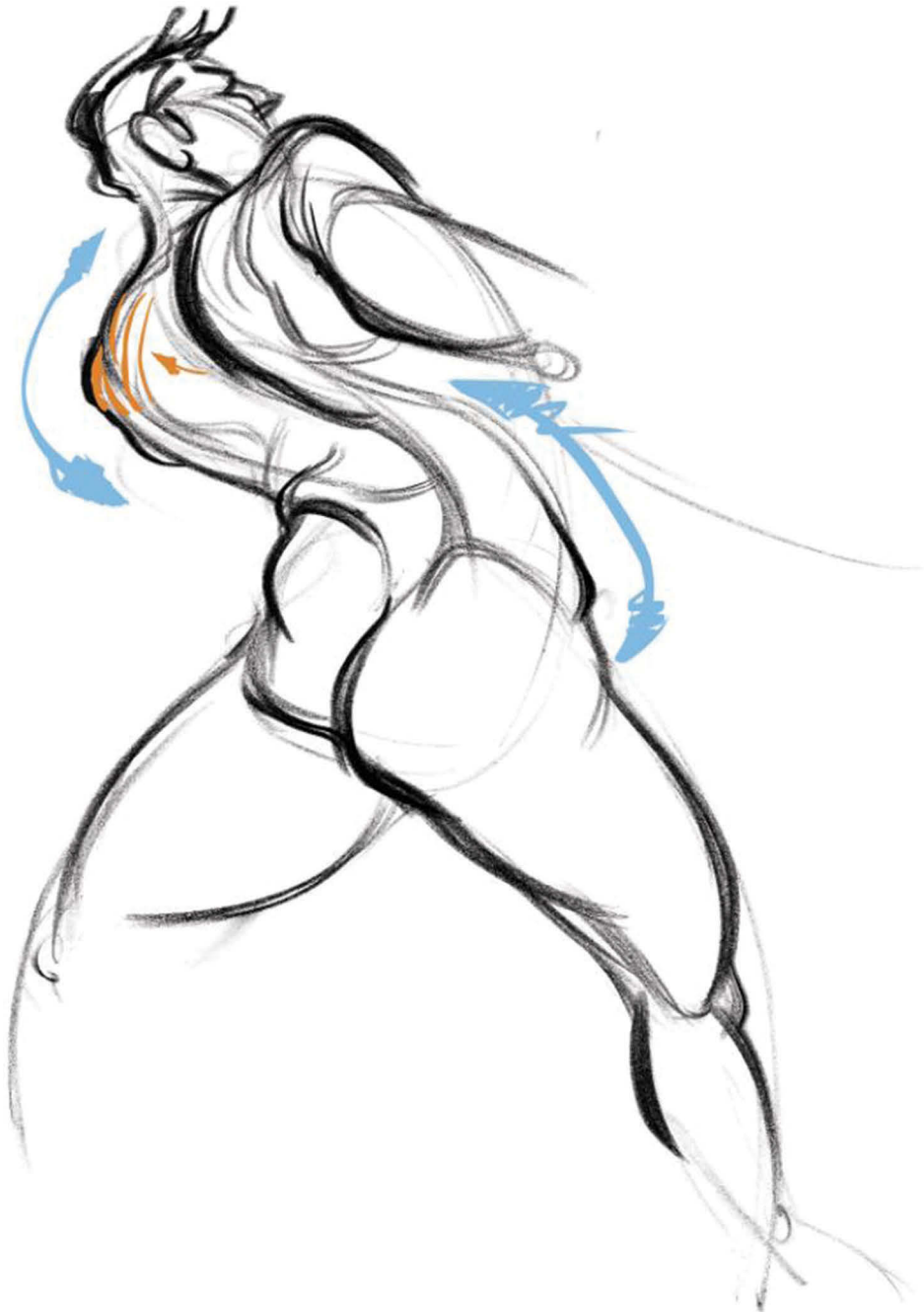
I accomplished this drawing by illustrating the Applied FORCES first. The blue Directional FORCES basically represent the usual black lines you would draw. The orange Applied FORCES are somewhat invisible and only made visible through understanding their effects on the amount of curvature in the Directional FORCE lines.



Here is a clear example of Applied FORCE. I described the rhythm of the right leg shooting up into that hip. Look at how strongly it pushes up into the hip when it arrives there.



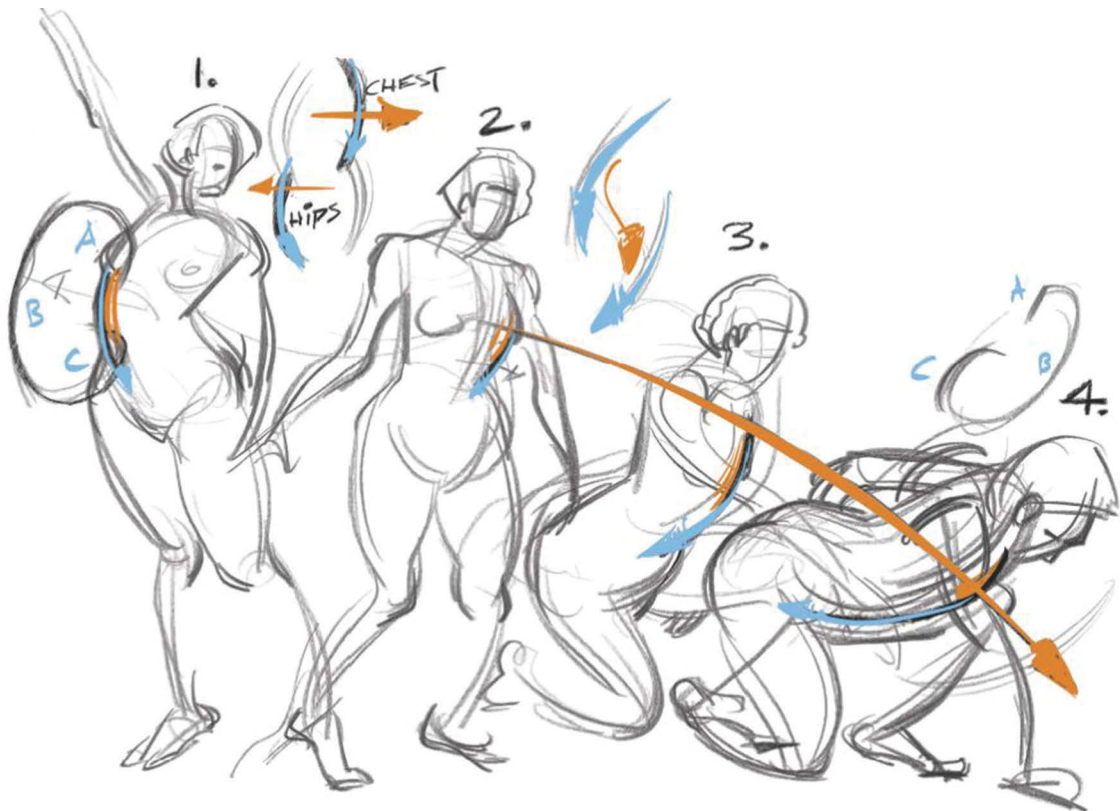
The model's left shoulder is an obvious apex of Applied FORCE. Look at how rhythmically it connects to the direction of the neck.



In this drawing by Mike D., you can see Directional FORCE apply itself into the model's left shoulder and back.

1.7 THE LEADING EDGE

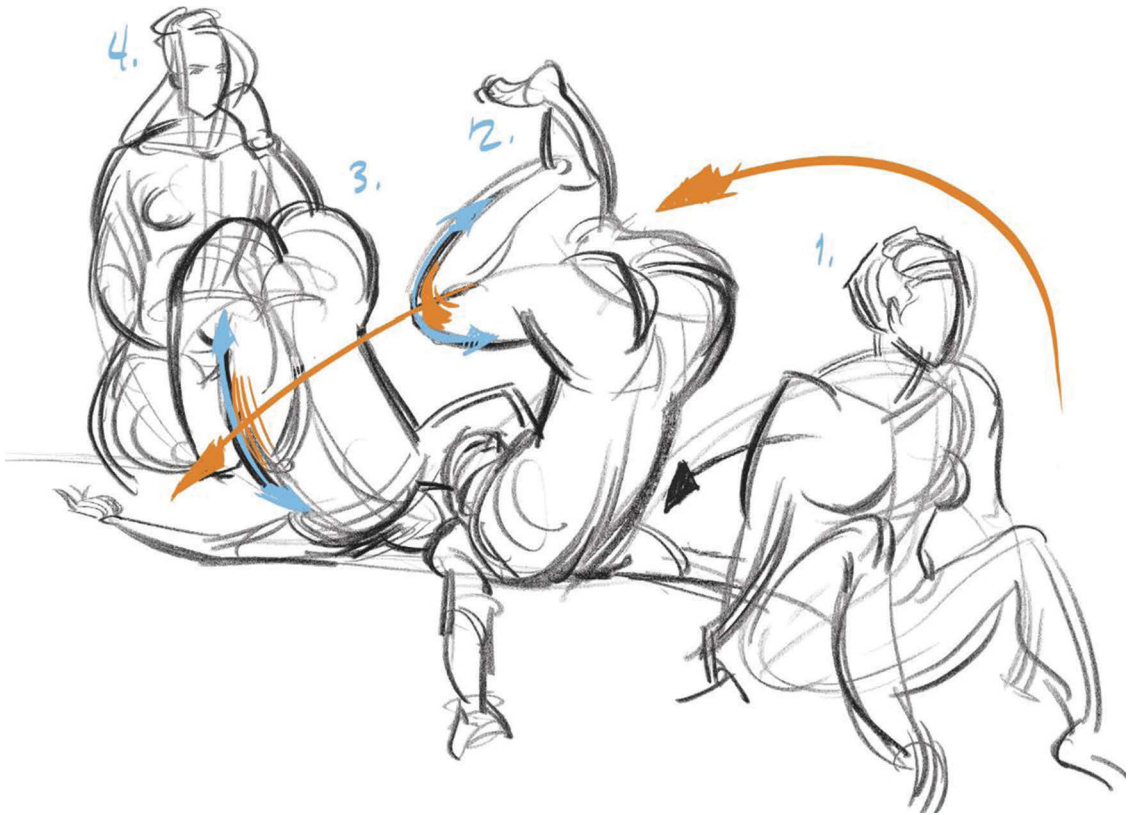
The leading edge is the edge of the body that leads a motion. This is where the largest amount of Applied FORCE can be found. This Applied FORCE is created by a prior Directional FORCE. To help students understand this idea, I describe it as the bow of a ship or a catch of FORCE. A simple way to find this is to watch the model go through a movement. The direction of his or her motion gives you the answers.



In these drawings, see how the leading edge is the rib cage. Follow the numeric order in the following.

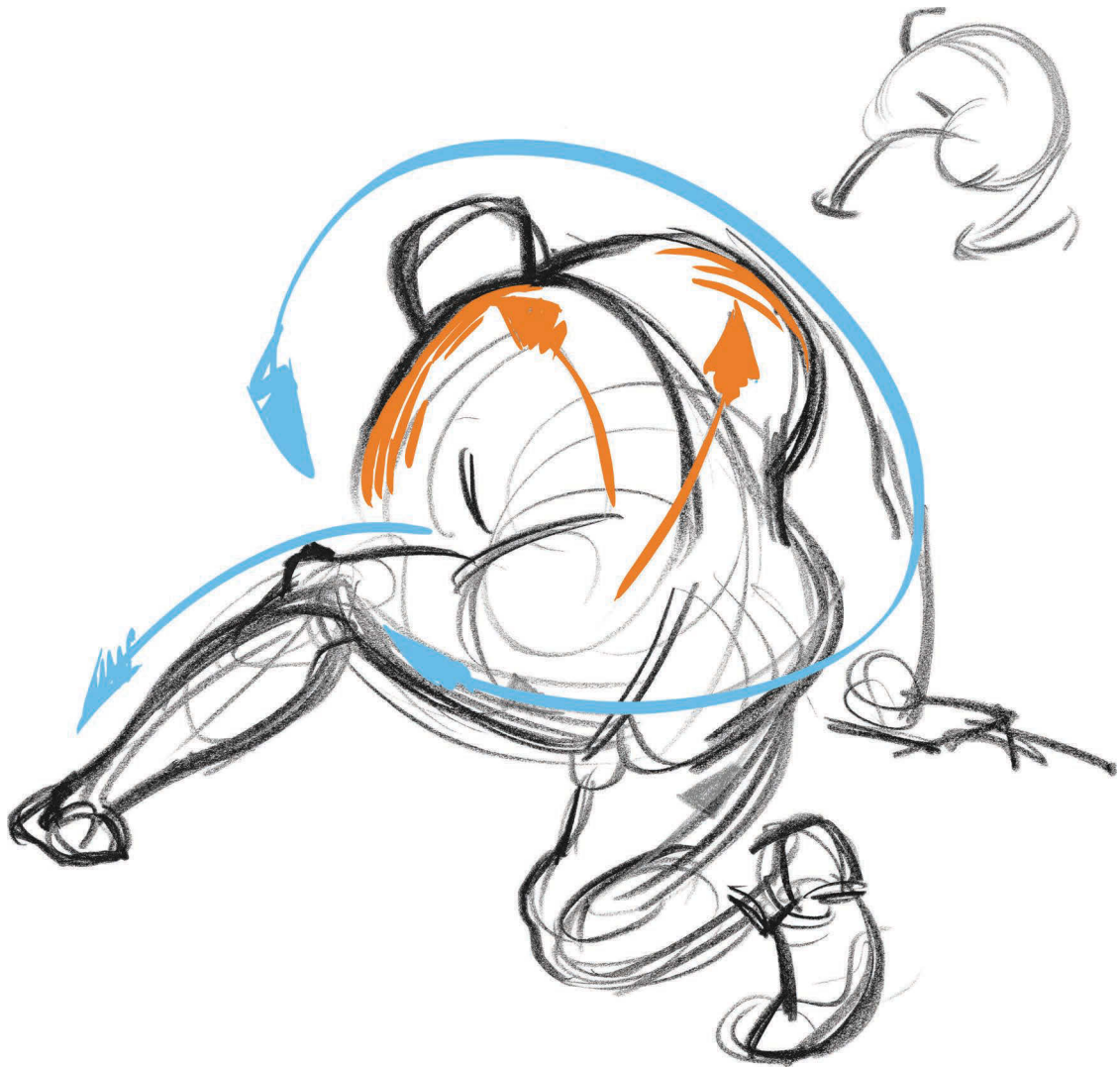
1. The rib cage directs us to the left, as the head looks right.
2. The model's upper body turns in the direction of the head. When it does, everything follows it.

The arrow from 2 through 4 represents the direction of Applied FORCE that creates the strengthened curve of the rib cage.

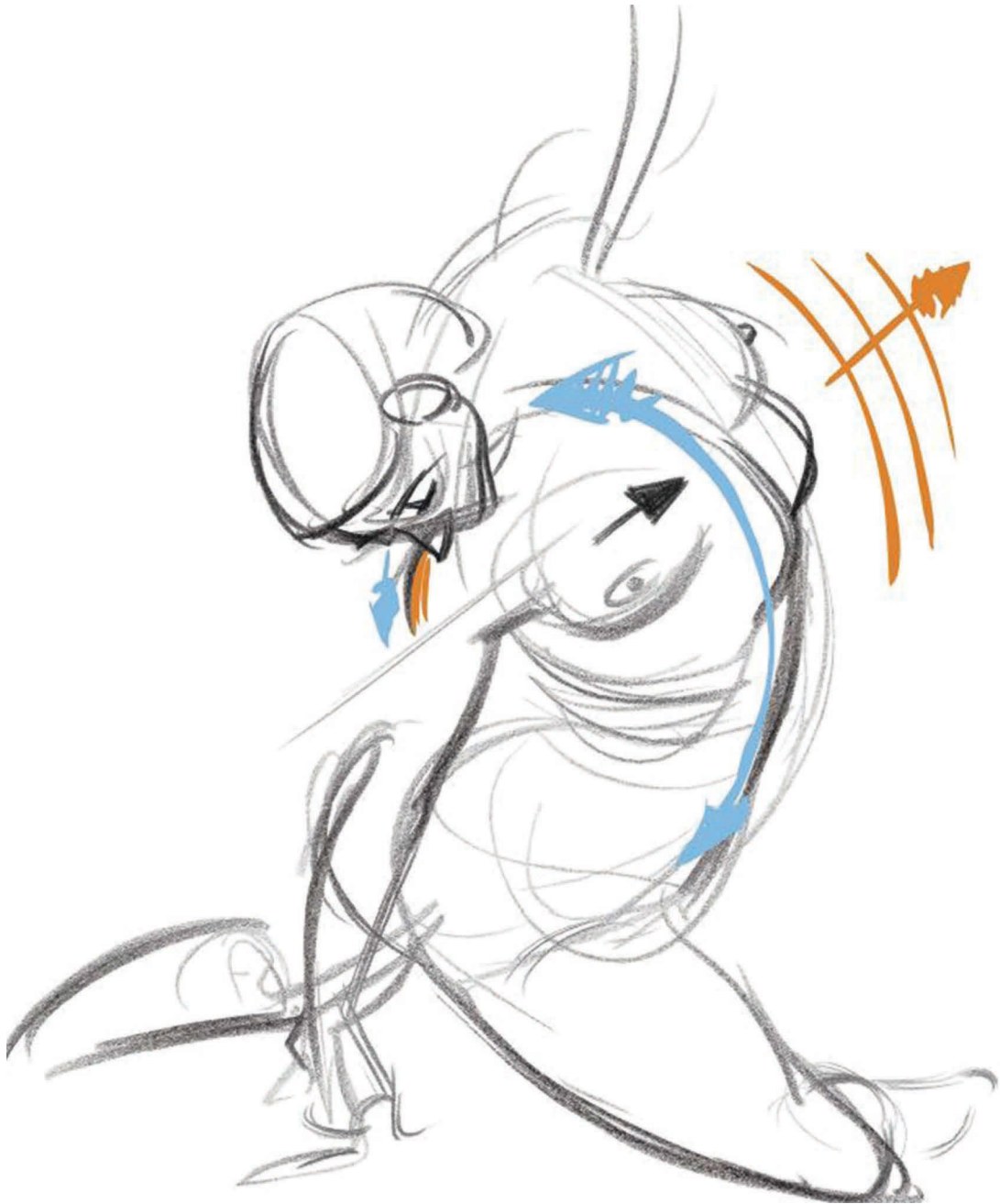


This was an adventurous and daring motion. The model executed a backward roll on the platform and held each pose in that action!

1. The leading edge is her upper back. It initiates the drive down to the platform.
 2. Her legs become the leading edge. They help continue the momentum over her upper body and get us into drawing three.
 3. Her right knee brings us down to the platform and the rib cage shows what direction she rolls.
 4. Her upper back returns her to the seated position.
-



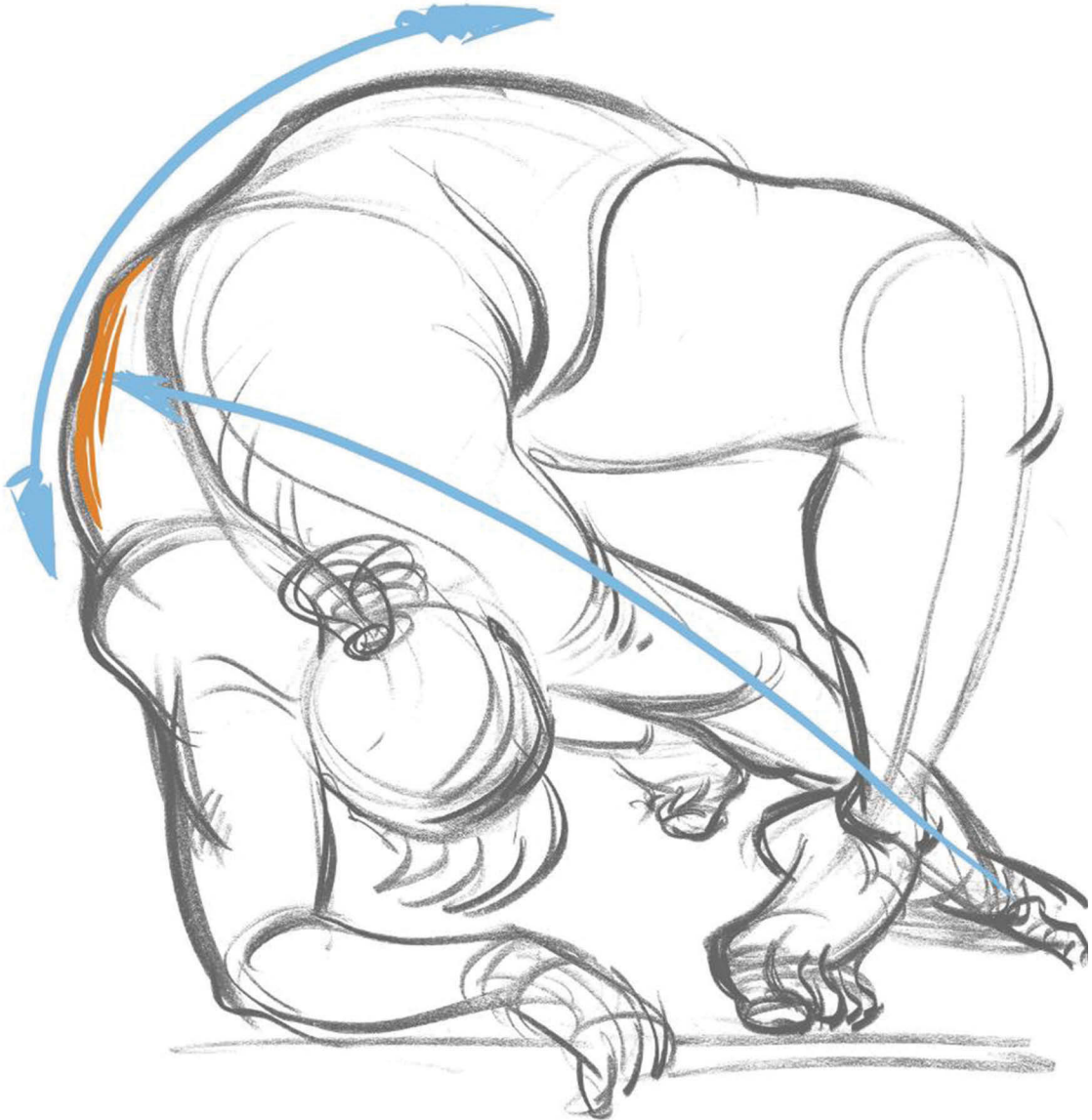
The model bends into an aggressive counterclockwise rotation by pushing out the right side of his body and contracting the left. His left leg is the brace for this motion. Applied FORCE constantly pushes against the Directional curve. The leading edge is where you see the repetitive lines within his left shoulder. Think of this concept as deciding where the model is going.



I love the upward rotational thrust into her rib cage. Again, the leading edge is the place with the three lines. It feels as if she would push herself forward to continue the motion of the pose.



Once more, Applied FORCE is found on the model's shoulders. See the strength of the curve. Here is our catch or ship's bow from all of the FORCE she uses to pull back on the rope. This is also the peak of our leading edge. She would continue this pose in the direction of her shoulder.



The model's stretched arm acts like the arrow that relates directly to the Applied FORCE and leading edge of the back. With just the understanding of Directional and Applied FORCES, you can begin to understand the bigger functional relationships of the human body.

1.8 THE RACETRACK OF RHYTHM



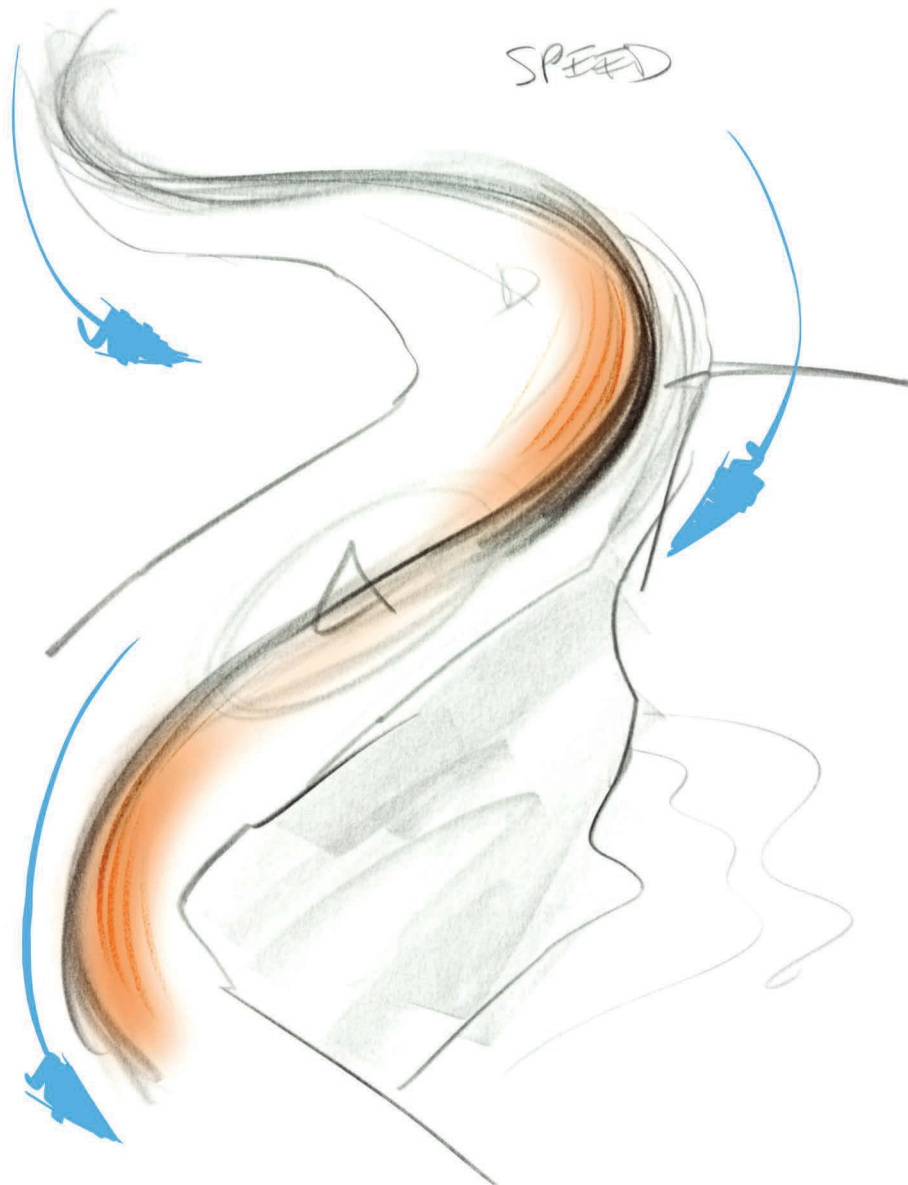
In the first half of this chapter, we discussed Directional and Applied FORCES. Now we will see how the union of the two creates ... RHYTHM!

Rhythm is the beautiful, seamless relationship of FORCES in the body that helps it stay in balance, or creates equilibrium. Rhythm exists in all living things. Therefore, your understanding of rhythm will help you create living drawings.

The simple equation is two Directional FORCES connected by one Applied FORCE equals one Rhythm ($2DF + 1AF = 1R$), as seen in the previous image. Numerous rhythms are found in the figure. Since a rhythm is a pair of Directional FORCES, you will get closer to the top of the pyramid by taking two ideas and turning them into one.

“The aim of every artist is to arrest motion, which is life, by artificial means and hold it fixed so that a hundred years later, when a stranger looks at it, it moves again since it is life.”

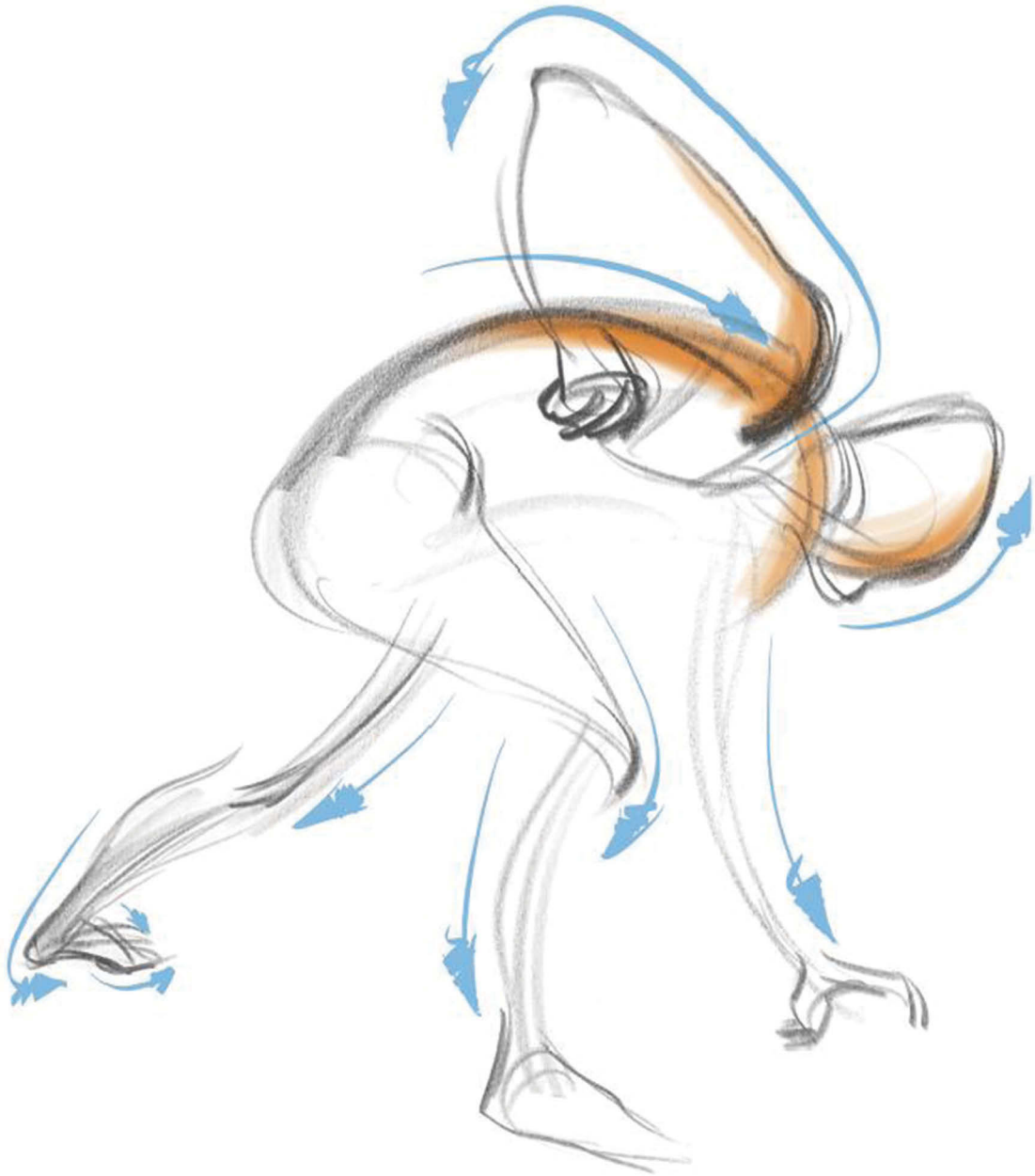
William Faulkner



One of my favorite analogies to feeling the act of drawing with FORCE is driving a car. In the previous drawing, notice the Directional FORCES connected by Applied FORCE, drawn more lightly and how, combined, they create two rhythms. As I drive through the curves, I feel FORCE pushing into the curves and therefore pushing harder into the page, in essence leaving more tire rubber on the road!



Using the soft touch method, I drove around the figure's racetrack, feeling the changes in speed and connecting the figure into one whole idea. During the process, you can tie down more accurate representation of the form and anatomy, never letting go of FORCE.

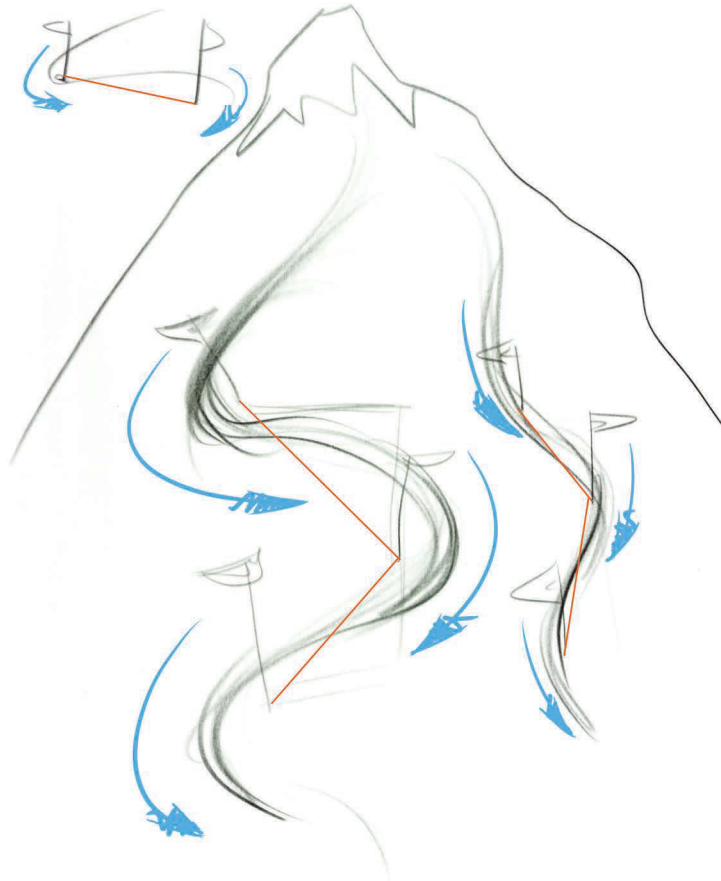


See FORCE drive over the back into the shoulder and then move out the arms and the head. Then rhythm moves down the legs to the planted feet.



There is a clear rhythm between the right side of the rib cage and the left side of the pelvis. All the lines across the lower back define my desire to experience the Applied FORCE connecting the two. The small, blue thumbnail drawing presents an "S"-like FORCE relationship for the torso, an idea we will discuss further in upcoming pages.

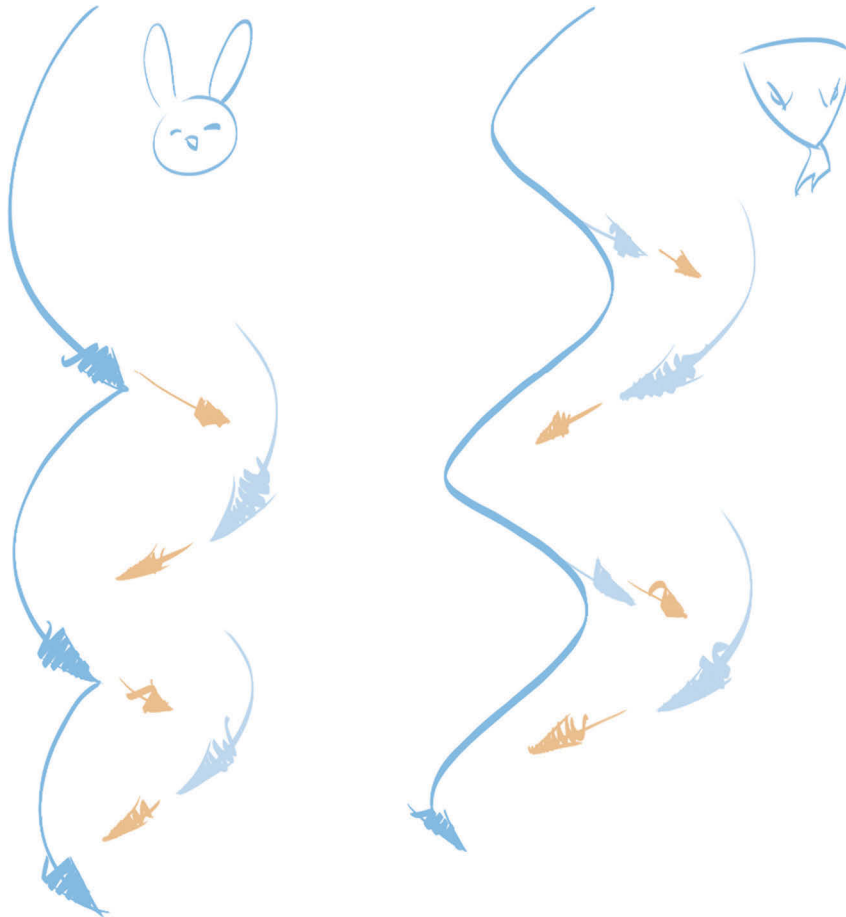
1.8.1 Skiing the Figure



Let's use the analogy of skiing slalom. Before us we have gates we must ski through. These gates represent the apexes of our Directional lines of FORCE or where Applied FORCE in the model is the strongest. There is a most efficient way to ski from one gate to another, and the bouncing effect created in doing so feels like drawing rhythm. The orange lines show the angle relationship between the poles or apex of the Directional curves, where the most Applied FORCE would be present.

The slalom on the right shows the gates closer together horizontally. This creates more downward speed. In the top left corner of the page, you can see a rhythm defined by gates that are far apart horizontally and close together vertically. This drastically slows down our descent of the mountain.

Pay close attention to the angles of the body created by FORCES. Angles allow you to stop straightening out the pose. This is a bad student habit. Angles are exciting and you want to find them. Try to avoid horizontal and vertical moments. The 45-degree angle is the most dramatic.



These examples show two common errors that students may make after an initial discussion about rhythm.

On the left is the “Rabbit.” We see that the student bounced their way down the side of the figure. Rhythm must be oblique to create balance. It must move across the figure in angles. See the solution to the rabbit on the right side where Applied FORCES moves across the body to find the next Directional FORCE. The Directional then directs FORCE by becoming an Applied FORCE, where it finds and affects the next Directional FORCE.

On the right is the “Snake” analogy. Some students will draw this way as an attempt at connectiveness and, in doing so, lose true rhythm. Remember that ONE curve is ONE FORCE. When you snake your way down one side of the body, you do not create balance and you are also drawing concave curves, curves that bend into the shape or form of the figure. The line does not start somewhere, do something, and go somewhere.

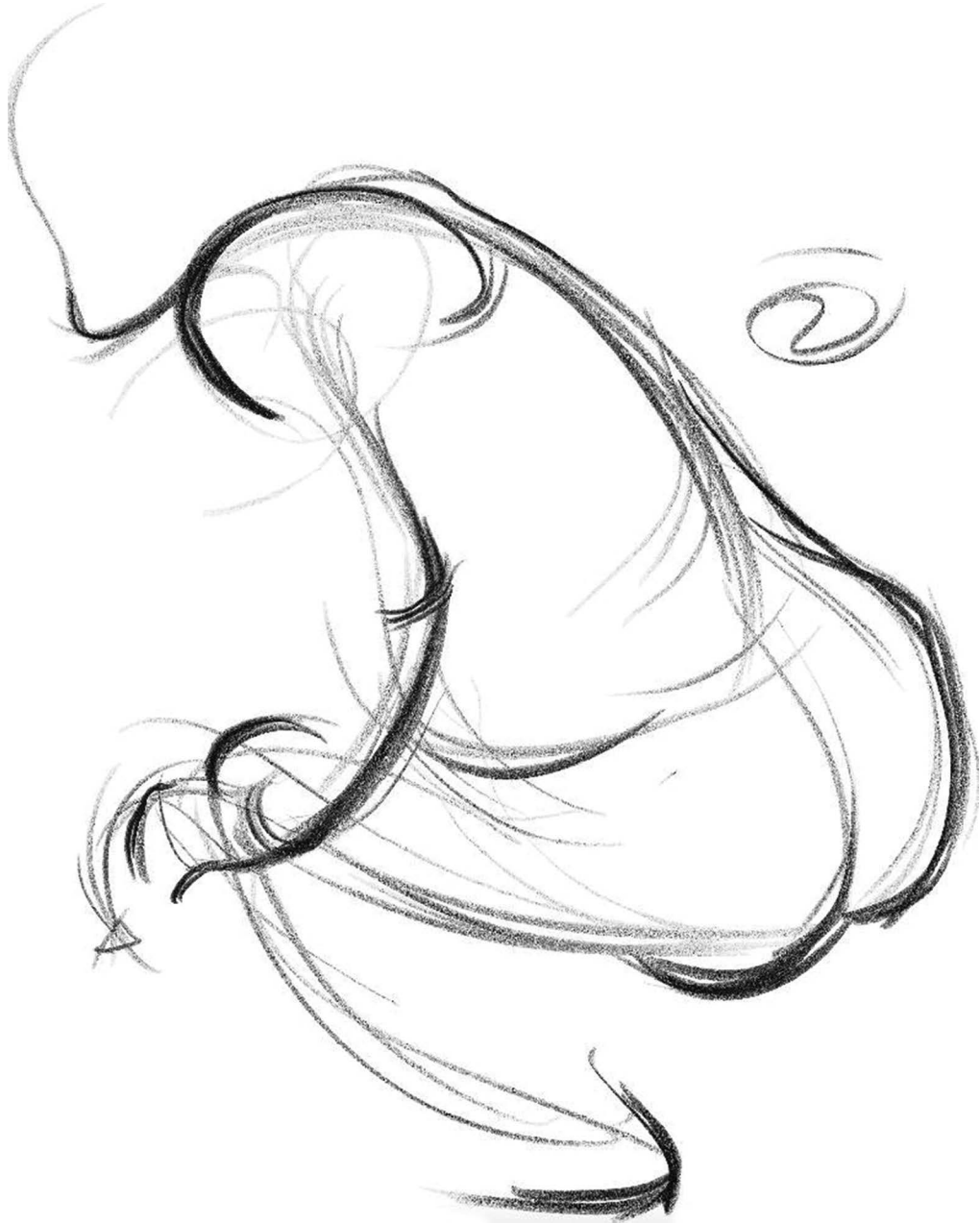
Both the “Rabbit” and the “Snake” cause the same issue, lack of rhythm across the shape and form of the figure. When you draw a curve, it must take you ACROSS the figure and not linger on the same side to find the next Directional curve. This is due to balance of the figure.



I have taken one of my drawings to show you an example of the "Rabbit" and "Snake." If we start at the top right shoulder, once we get down to the lower back, at the red line, FORCE moves across the figure to balance the rib cage and hips over the legs. We should not continue over the right buttock. Rhythm is not about following the edge of the model. This would put the model off balance.



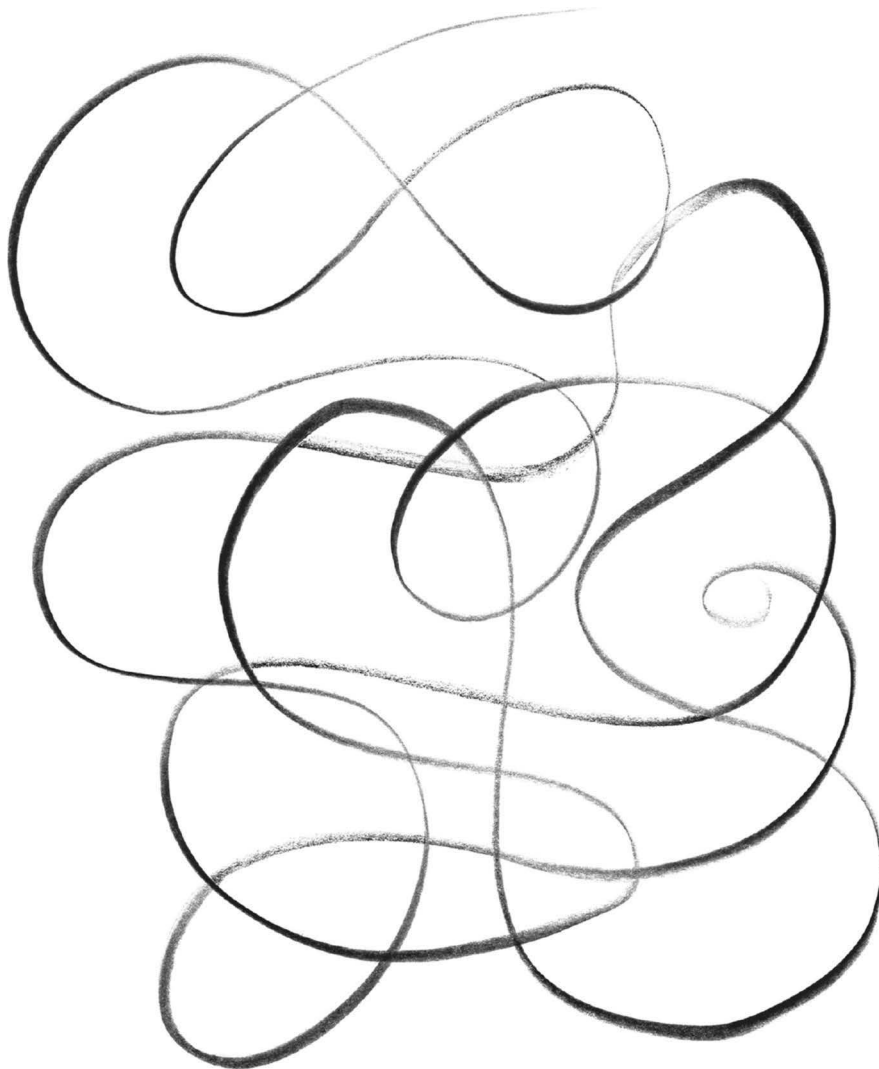
This drawing shows how FORCE directs itself seamlessly from one place to another in the model. Notice that I draw through the right leg to get to the buttocks and the shoot up to the hip. Also, see me draw through the right shoulder and over the top of the back to create the rhythm between the upper back and neck.

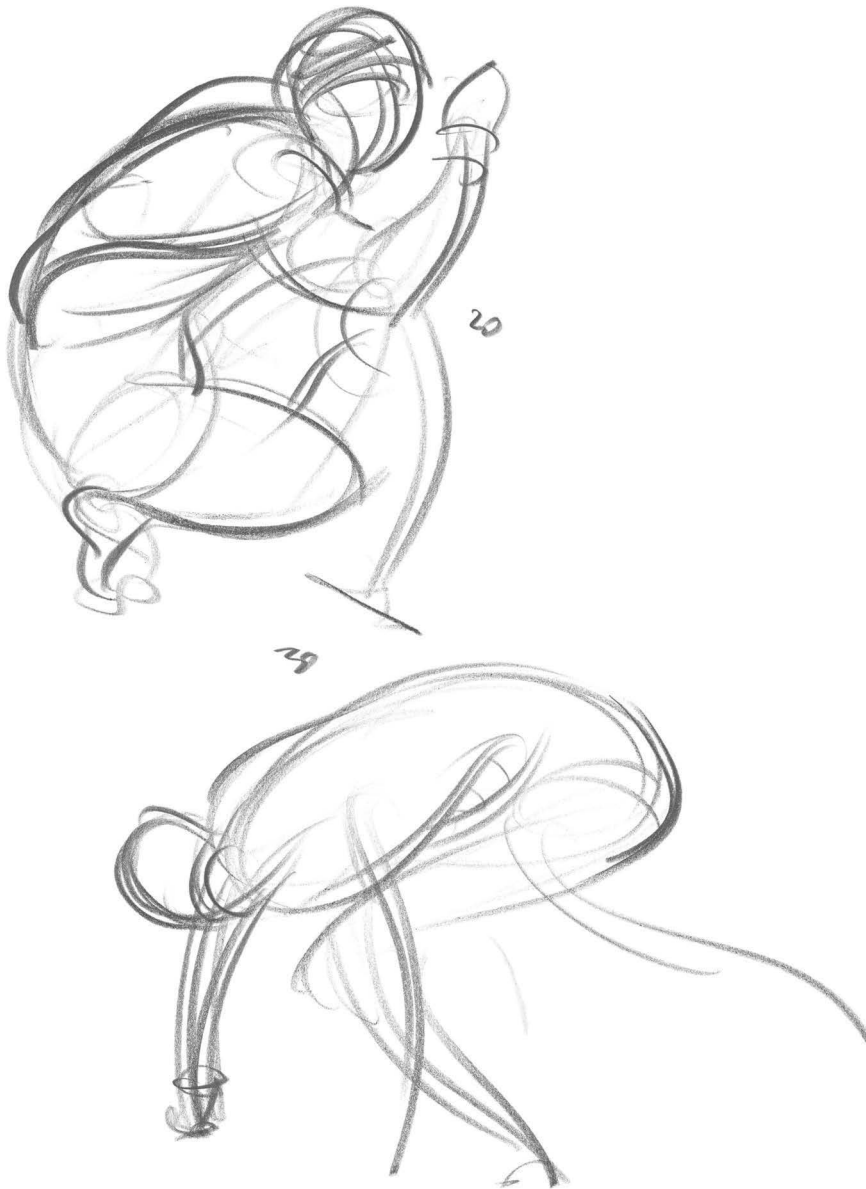


Here is another drawing that shows FORCE directing itself through the entire body. These drawings show the first steps to drawing FORCE and the most important ones. Line skates the page and moves FORCE. Notice how we can travel from the hand through the entire body to the foot on one connected path.

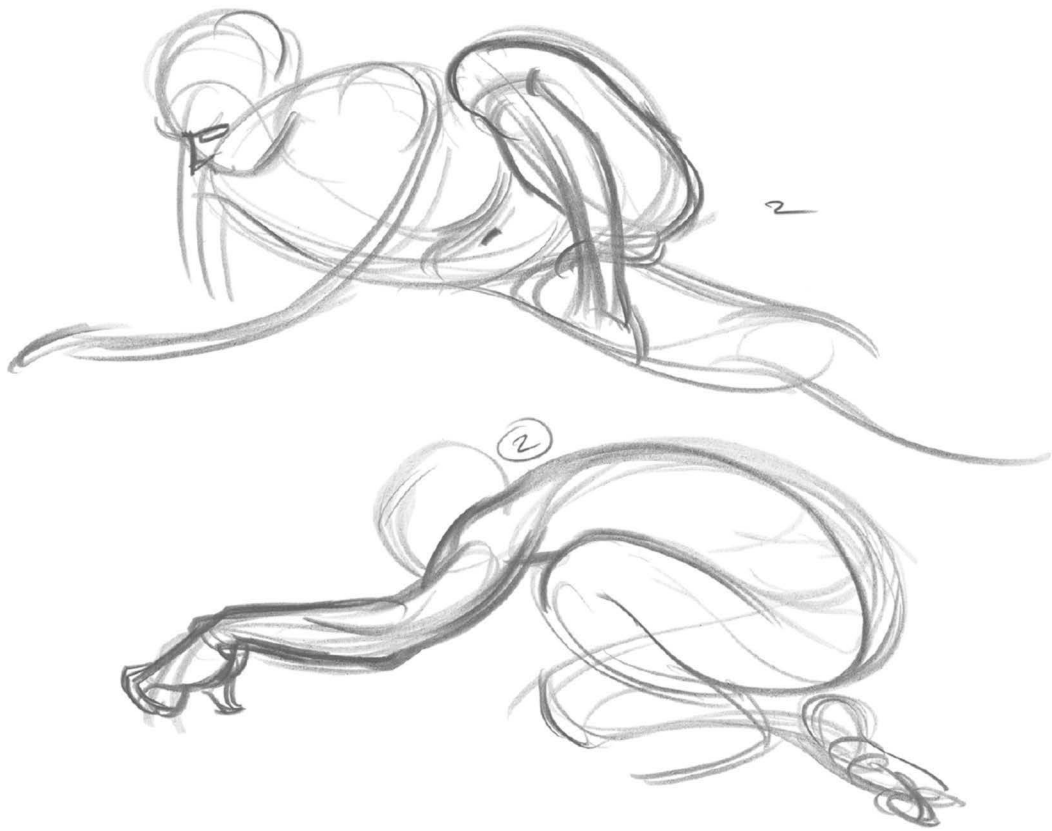
1.9 SKATING THE PAGE

An excellent exercise to get that physical sensation of FORCE and understanding the pressure changes is to close your eyes and “skate” the page with your drawing utensil. Imagine your speed across the smooth, hard, and cold ice. Feel the blades carve deep as you dig into a curve. Your mark on the page should get heavier as this happens. Notice how fluidly you move. There are no clumsy, pinched moments. Have I mentioned that you do this exercise with your eyes closed? Yup, focus on connecting your thoughts with the speed of your hand. In a classroom setting, students go immediately from this exercise to drawing a posed model to bring this skating experience to life drawing.

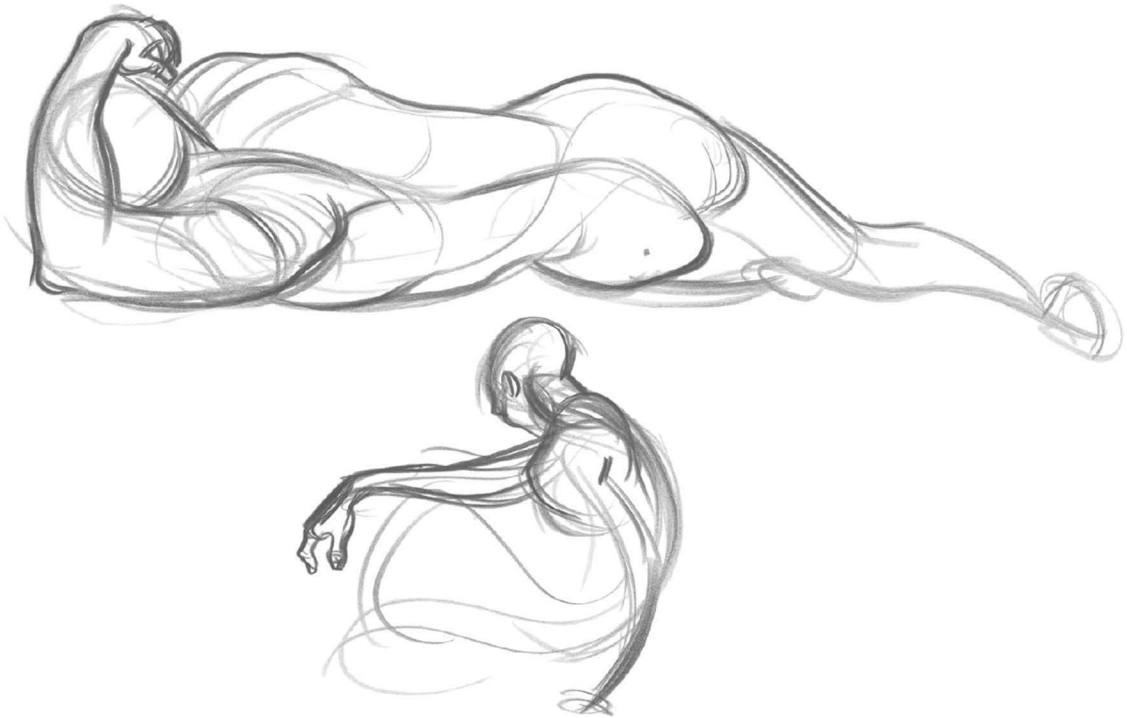




Here are half-minute drawings. The body's entire pose is the key to understanding it. Skating and driving bring me through the whole figure and make it possible to accomplish this much in 30 seconds.



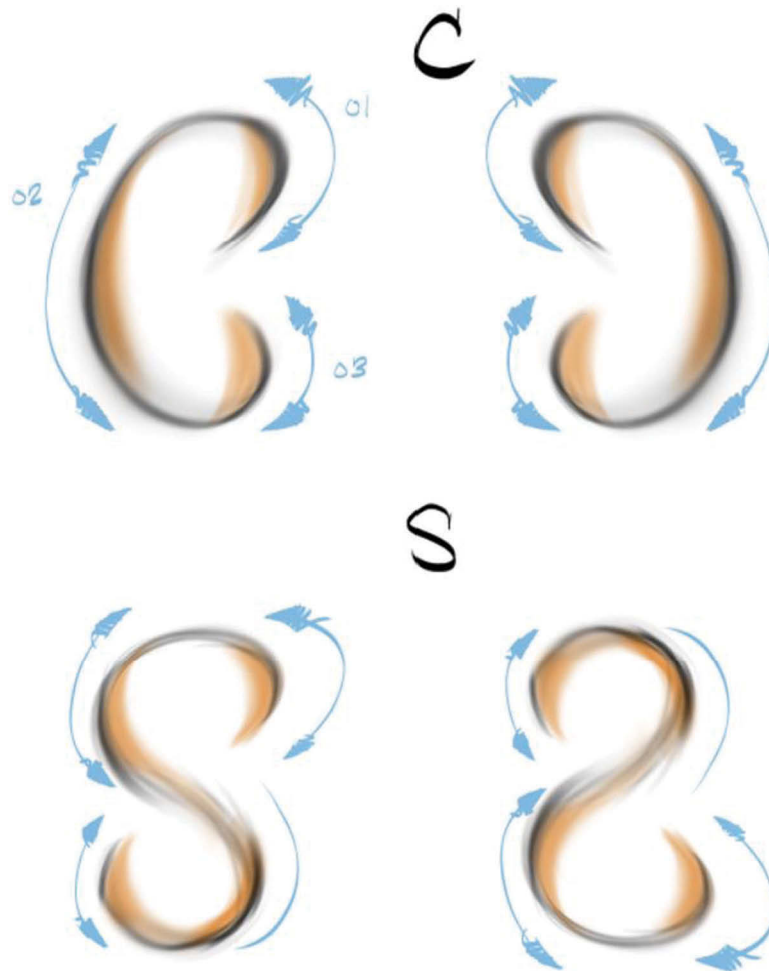
In 2 minutes, each of these drawings has the main concept of the pose described along with more information in form and shape. Long fluid lines help describe these ideas.



This, 5-minute drawing allows for more accuracy, form, and shape. All this new information is attached to the initial understanding of FORCE. Both of these figures present the fluidity of the prior analogies discussed in this chapter.

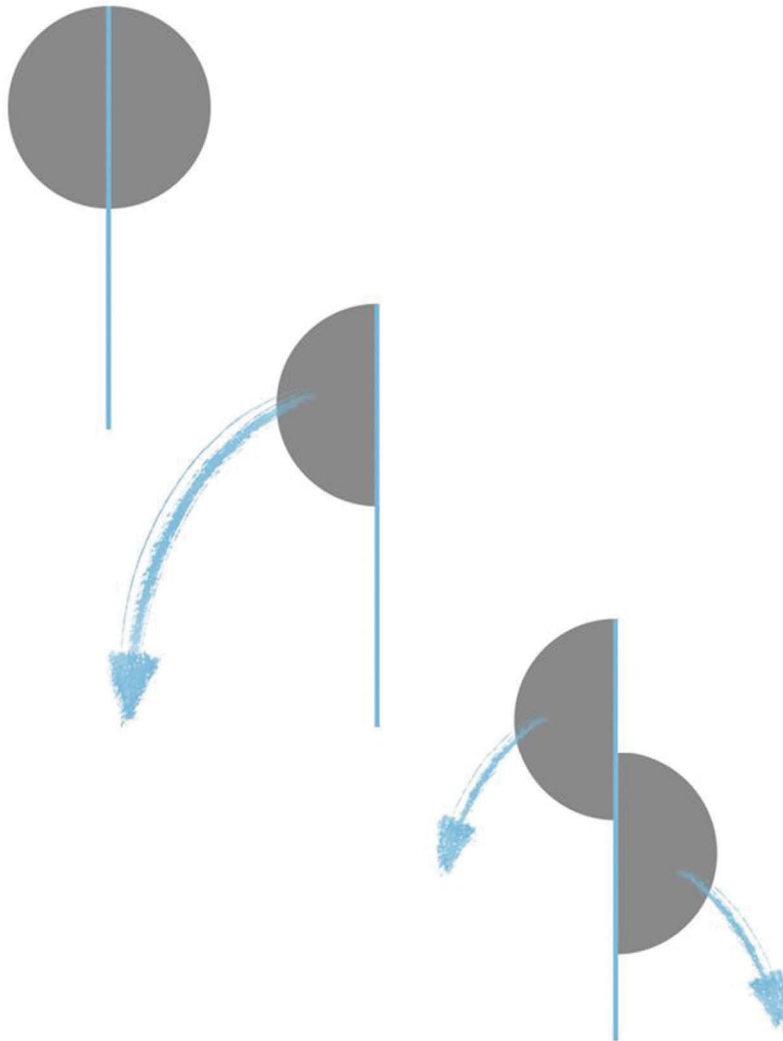
1.10 TEMPLATES

Now that we have discussed FORCE and used some analogies on how to feel drawing with the FORCE theory, I want to share with you anatomical templates of FORCE. Remembering these rules will inform you on where to go as you drive the rhythms of the figure. Hierarchically, we focus on the big ideas first, in this case the torso-to-pelvis relationship.



The letters "C" and "S."

Here are four basic FORCE setups for the rib cage-to-pelvis relationship. Notice how they look like the letter "C" or the letter "S." This is the top of the pyramid. These are some generic ideas because we all have the same anatomy. These concepts represent the front and/or back of the figure in rhythms. The top two show the body side bending. The bottom two show the rib cage and pelvis moving laterally in different directions. Always try to find one of the four options.

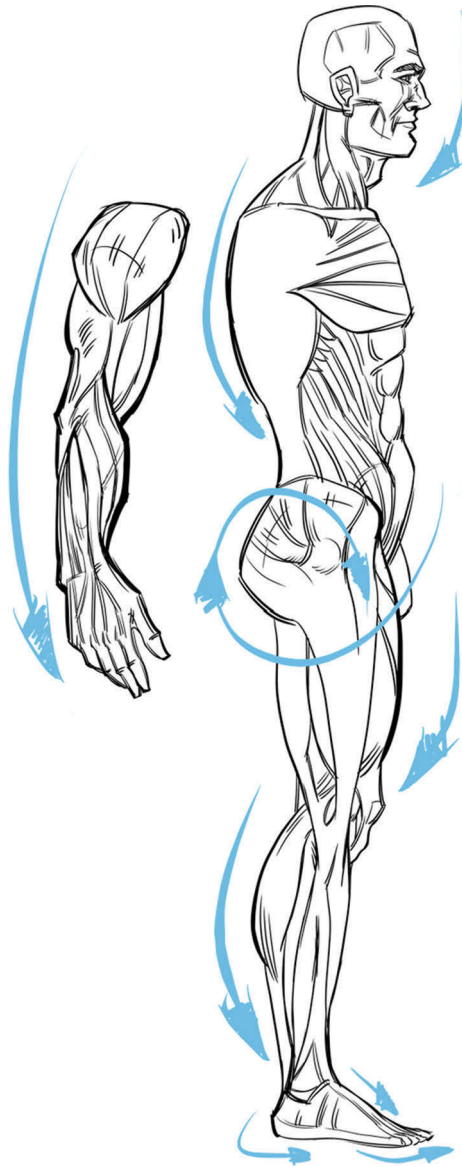


Here is a diagram to illustrate the concept of FORCE, mass, and balance. The blue line presents the center of balance.

Left: This image shows two equal masses on either side of the center of balance, thus causing balance.

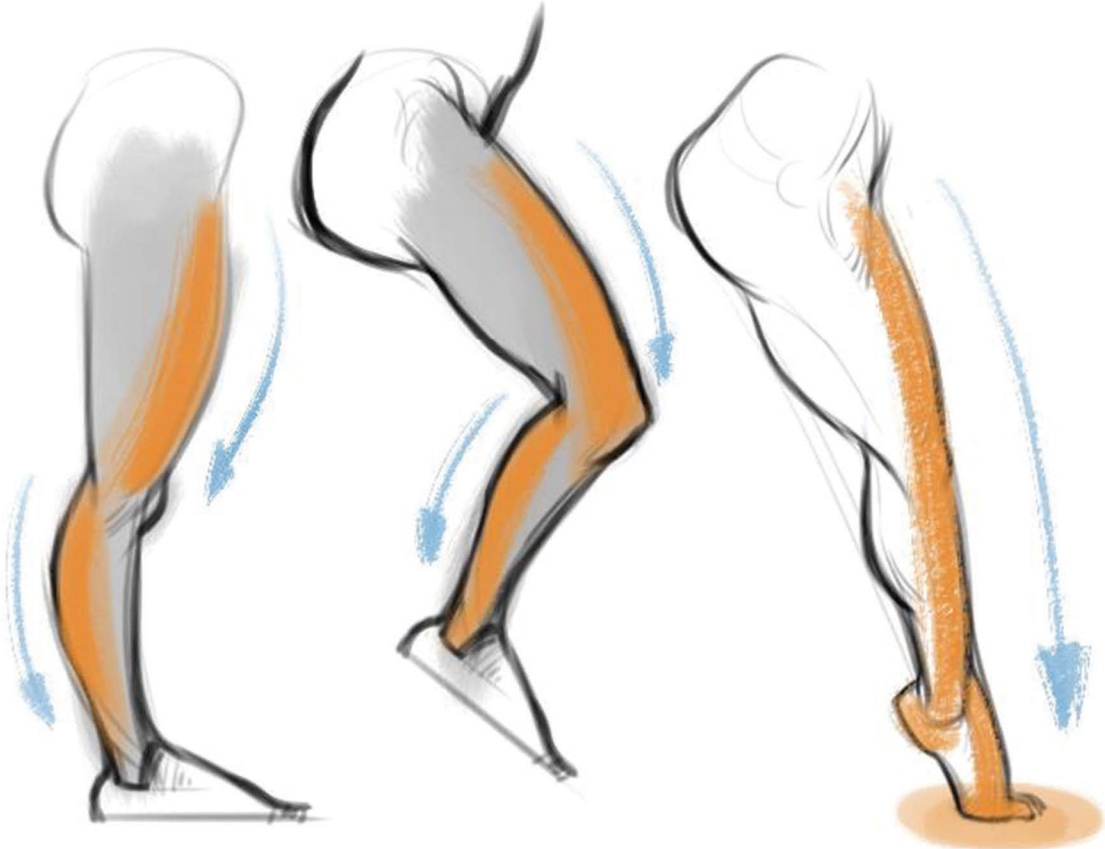
Middle: Here we have a mass on the left side of the center of balance. Since there is no counterweight, the mass falls to the left.

Right: In order to create balance, another mass must be placed on the right side of the center of balance. These masses are connected with FORCES. So, FORCE and mass moving over the centerline of balance are how the figure functions.

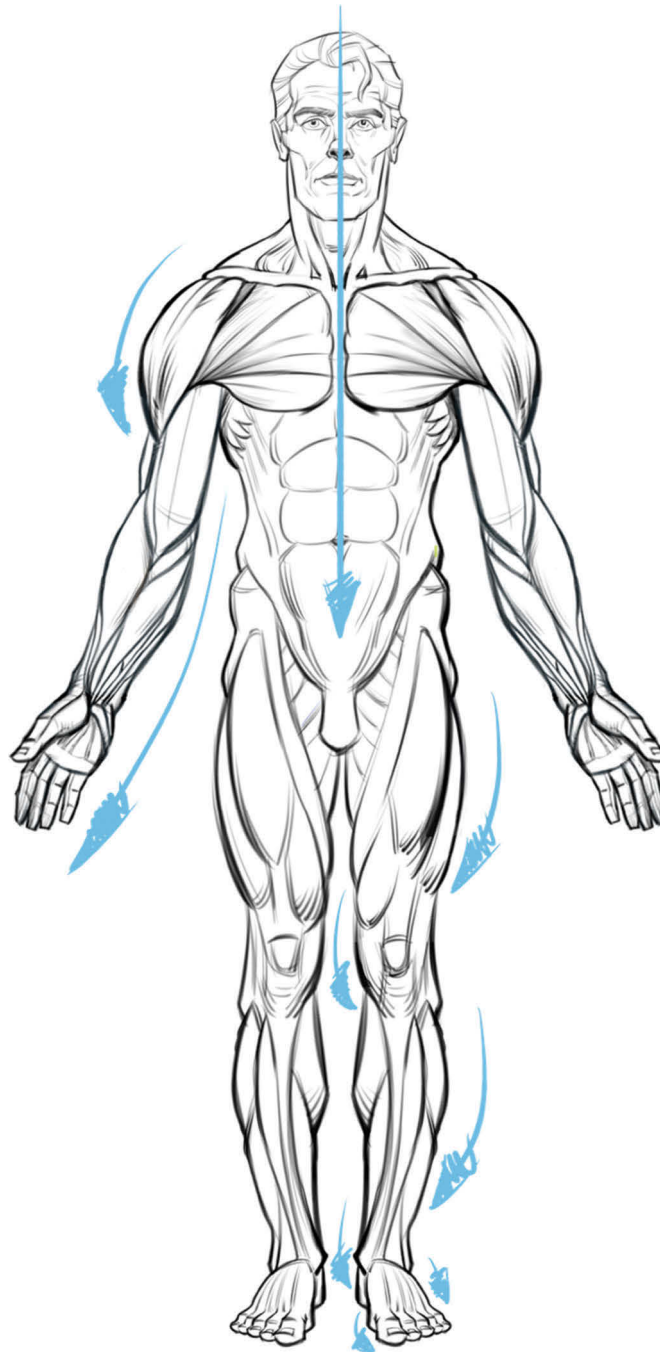


Gravity is the reason we have rhythmic balance in our bodies. Our anatomy is not linear but asymmetrical in its musculature. This allows us motion against the FORCE of gravity and equalization when standing still. Understanding this will help you draw a living, grounded, balanced figure. In fact, one measure of success of a FORCE drawing is if the drawing is balanced.

Here is the general setup for the side view of the figure. Notice how rhythm goes from one side of the figure to the other to obtain balance. Look at how I draw through the crotch to get to the rear end and up to the top of the pelvis. The arm in this view is one long idea from the shoulder down to the hand. The arm does the same thing when it is raised. At times, you can see an extra rhythm, where the wrist bends.



Here are different situations that could occur in the leg while in profile view. Most often, the leg functions from the front of the thigh to the back of the calf. In the image to the far right, you can see an exception where the FORCE goes all the way down the front of the leg to the ball of the foot. The other time that FORCE stays along the front of the leg is when the heel is pressed up against the rear end, bent tightly to the body.



Here is the front view of the figure. Notice the symmetry in the core. This is remedied by the "S" and "C" concepts. Where we do see anatomical rhythms is within the legs. I rationally call this "outside thigh, inside knee, outside calf." Artists typically forget the inside knee moment.

Through following the rhythms in the figure, you can get a quick understanding of the entire pose's purpose and balance. The relationships of different FORCES in the body will become broader in concept. Remember, your main objective is to draw what the model is doing, main idea first. There will almost always be a relationship between the torso, hips, and head.

Beyond the head, rib cage, and pelvis, you want to *draw these lines of FORCE from joint to joint* in the figure. For instance, connect the hip to the knee or the shoulder to the elbow. This will stop you from drawing hairy lines or broken ideas. Again, if you are having a problem seeing the FORCEFUL curve, draw opposing curves and see which most resembles the movement of that particular part of the body. In time, you will understand the operation of a whole limb, like the wrist to the shoulder.

When drawing, gravity is the invisible FORCE you must always be aware of, to bring reality to your work. In fact, seeing if your drawing is balanced as well as the figure is a measure of success within the drawing. Some pointers to think about when drawing the figure and considering our topic:

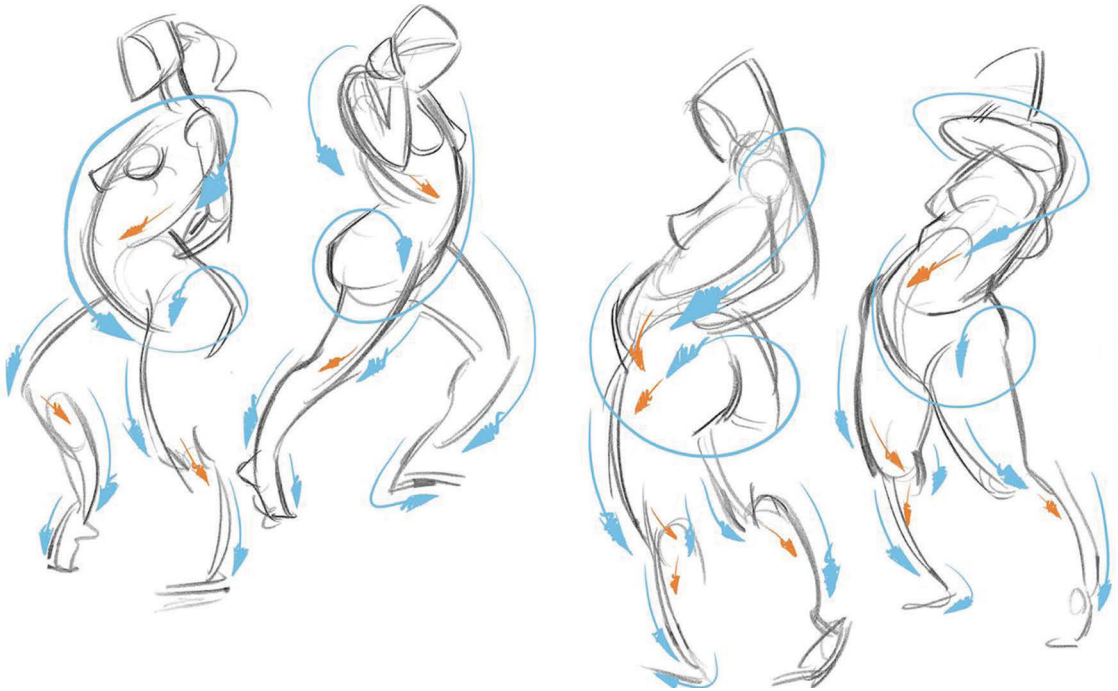
1. A man's center of gravity is in his chest, a woman's is closer to her pelvis. Women in general are better balanced because of their lower center of gravity.
2. Always pay attention to where the model's head and center of gravity are in comparison to his or her feet.
3. Think about the model's mass and FORCES and realize they have to be equalized on both sides of the centerline of balance in order for the model to stand. This does not have to occur when someone is moving. Then the body has time to compensate for its lack of balance.
4. Notice the implications of gravity pulling on the model, squash in the feet, muscles working with and against it.
5. When drawing the amount of pressure in the model's feet, take into consideration the weight of the model.

1.11 DRAW SMALL, THINK BIG

A great tactic for understanding hierarchy is to draw small. That will help you think about the big picture. This helps you see the body as one story. It is your time to think and it also helps liberate you from feeling committed to your drawing. It's great to draw and redraw that main idea. Draw small and think big. The downside to this is that you stay distanced from the model emotionally and physically. The ultimate scenario is to fill the page with the model's full figure.

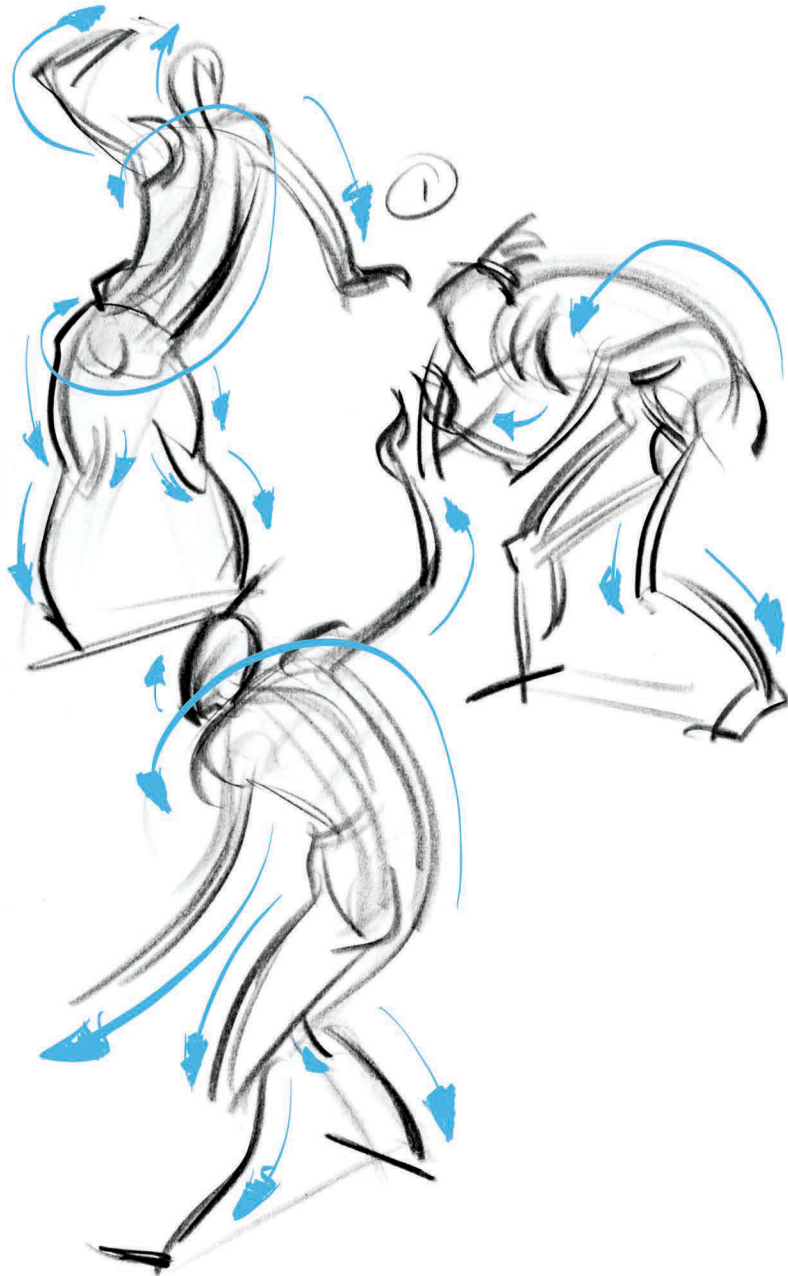


Here are numerous 1-minute drawings all on one sheet of paper. Learning the templates promotes full figure understanding of the body's rhythms.



Looking at these four drawings, there are many patterns one can see. Notice the constant attention to the relationship between the rib cage and pelvis. The buttocks represent the pelvis. In most cases, you can see the FORCE of the thigh pushing the knee and calf back. Look at the close resemblance to the driving and skiing analogies.

The Racetrack of Rhythm is the figure's solution for balance. You must first find this road and draw the moments along the way. Your initial recordings of the pose should not involve you teleporting from one area to another in the figure without understanding the body's connections. Only draw the parts of the body you travel to through rhythm. This makes the drawing's sense of balance clear.

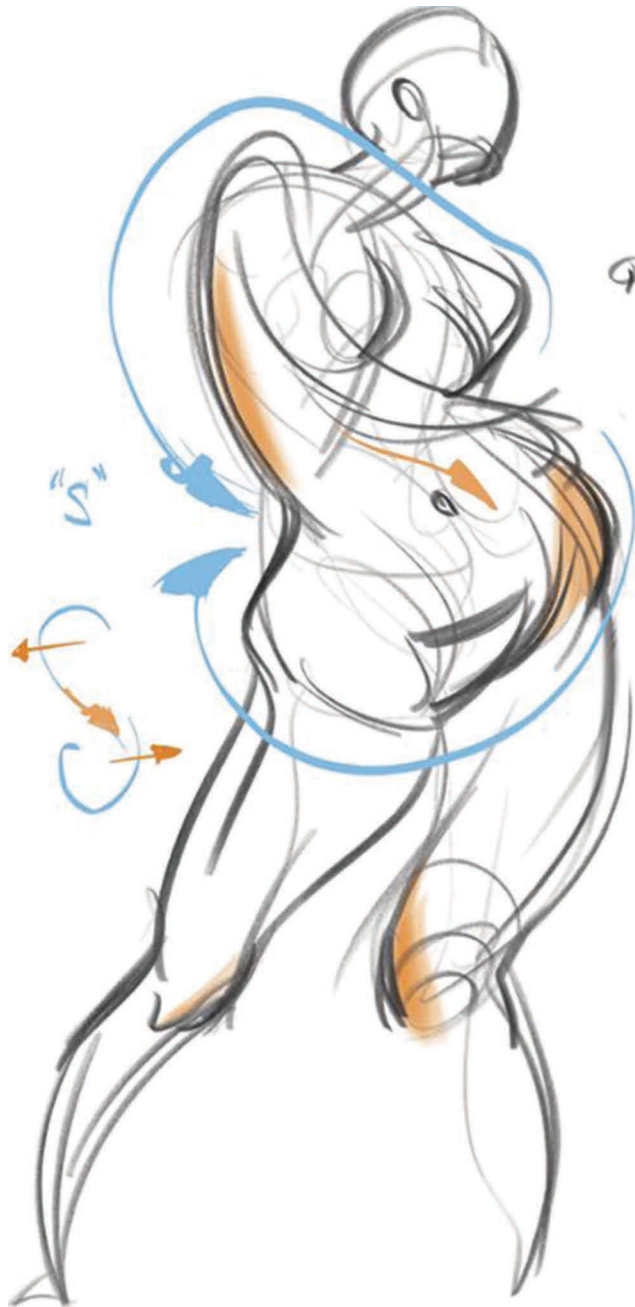


The drawings here are slightly larger, three drawings per page. Once more, the FORCE templates allow for full figure understanding. The physical experience gains strength.

Now, let's try to fill the entire page to get the full feel of drawing with FORCE!



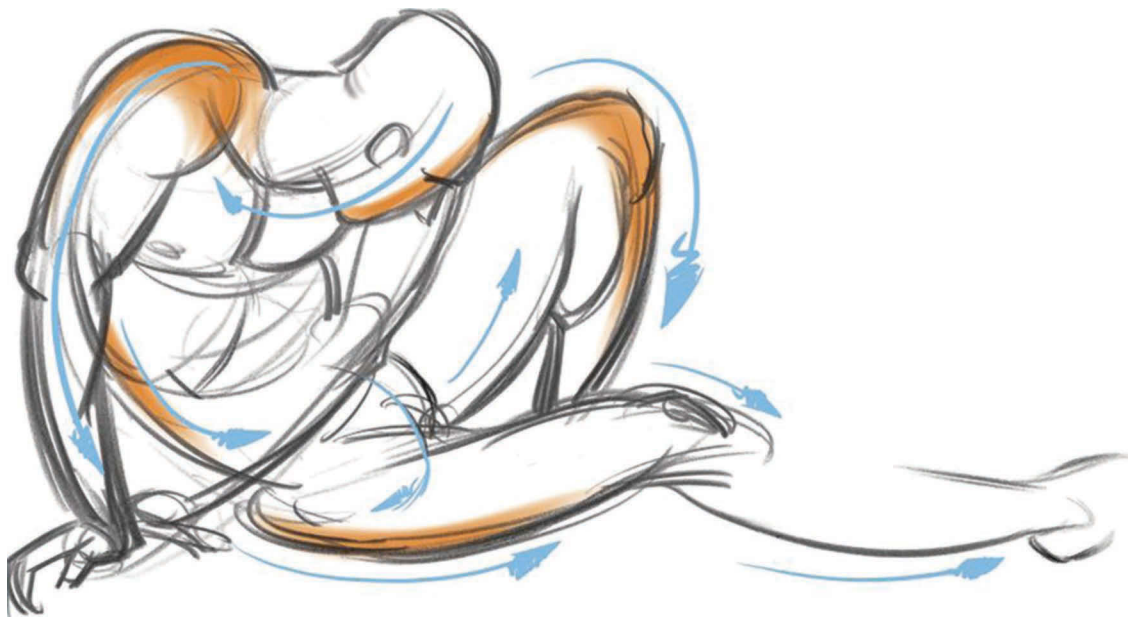
Here, the swing of the rib cage sweeps strongly down into the side of the pelvis. The FORCE then divides down the legs, both of them functioning in an outside, inside, outside pattern. Below the chin, you can see I toned in the negative space as a quick measurement to place the head the correct distance from the trapezius.



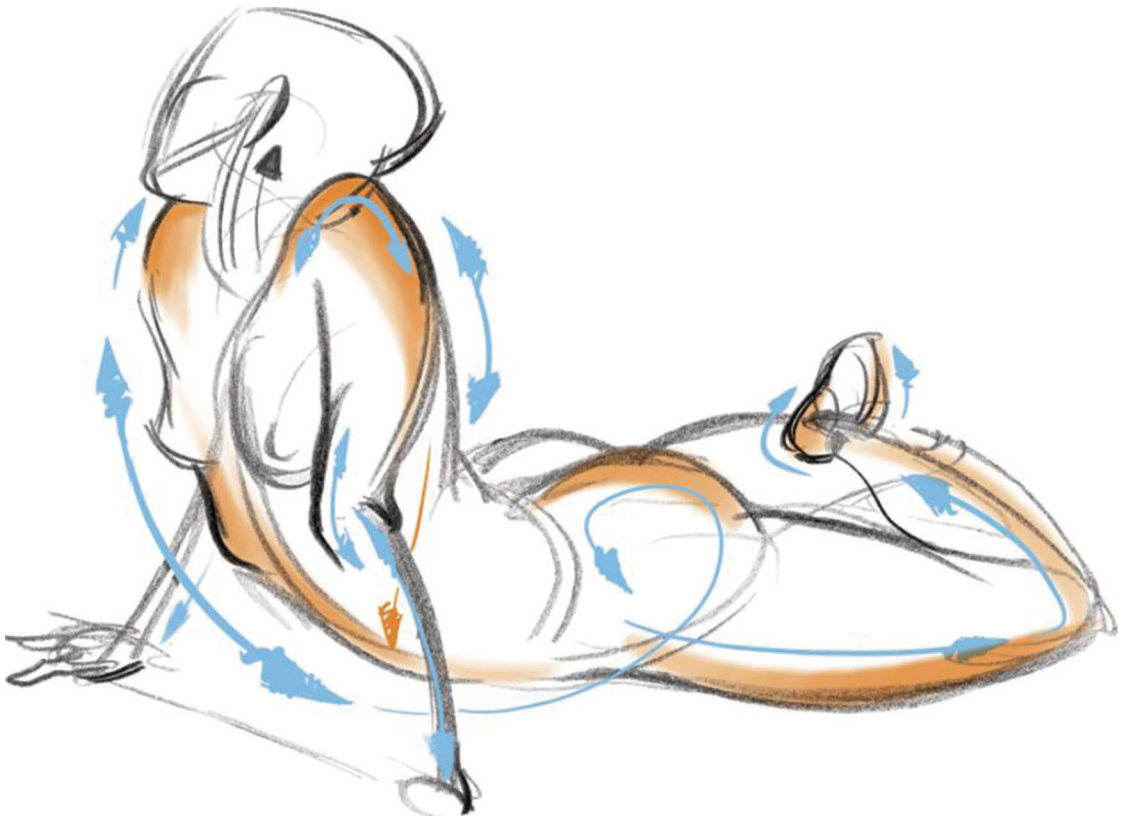
This is a 4-minute drawing with the model. This figure is set up on the "S" rib cage-to-pelvis setup. Again, see that the focus is on getting the main FORCES of the model and how they relate to one another. Look at how the weight and FORCE of the rib cage sweeps down into the hips and slips out to the legs.



See the template in the figure, upper back to abdomen, through the crotch, over the hip, and then down the legs. The arm extended to the left side of the page connects with the upper back and creates its own rhythm that later connects to the rest of the figure.



This pose feels fast. Look at the beautiful rhythms. The westward lunge of the back against the eastward projection of the head and legs create an aggressive angle of balance. Look at the road of rhythm.



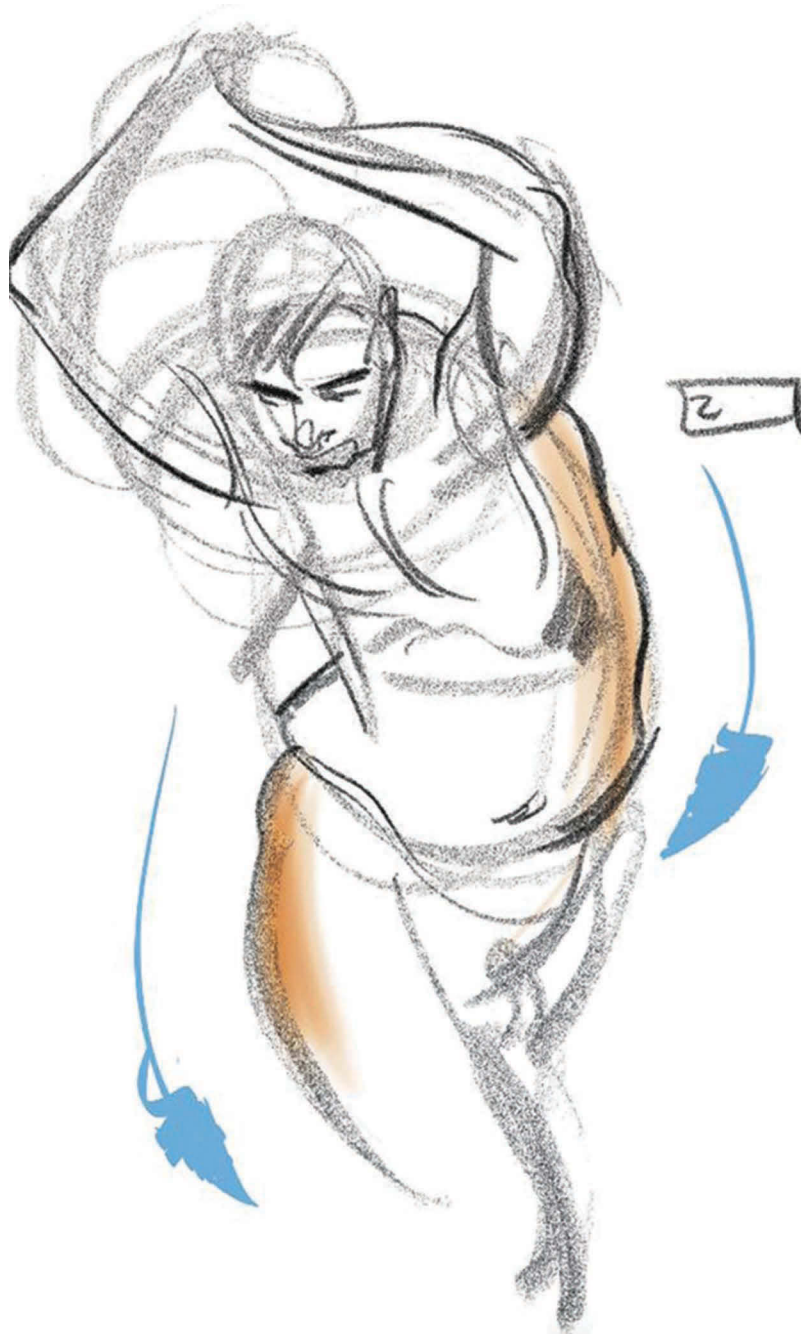
First, we have an elongated stretch of the abdomen all the way up to the pit of her neck and down to her hips. All of the weight of the torso that is being suspended by the cradle of the clavicle drives upward from the hands into the shoulders. This is the reason for the stretch. Notice the transfer of FORCE in the elbow. The opposing FORCE of the rib cage is her upper back, which then rhythmically connects us with her neck through the sternocleidomastoid.



This drawing shows a clear asymmetry from the left shoulder to the right hip. Notice how we travel down the legs in an outside, inside pattern starting at the hip.



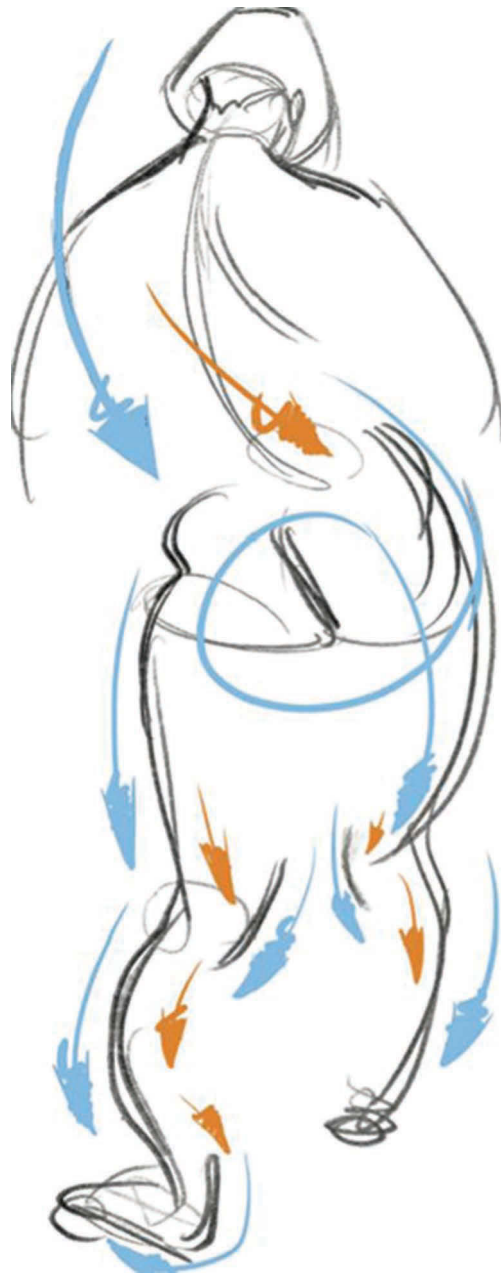
The "C" rhythm setup shows the stretching of the rib cage versus the contraction of the opposite side. Then FORCE drives down the strong leg from the outside of the hip to the inside knee and outside calf.



See the first big rhythm, the top of the pyramid, the rib cage-to-pelvis relationship defining the drawing's sense of balance. Balance is one of the body's main functions.



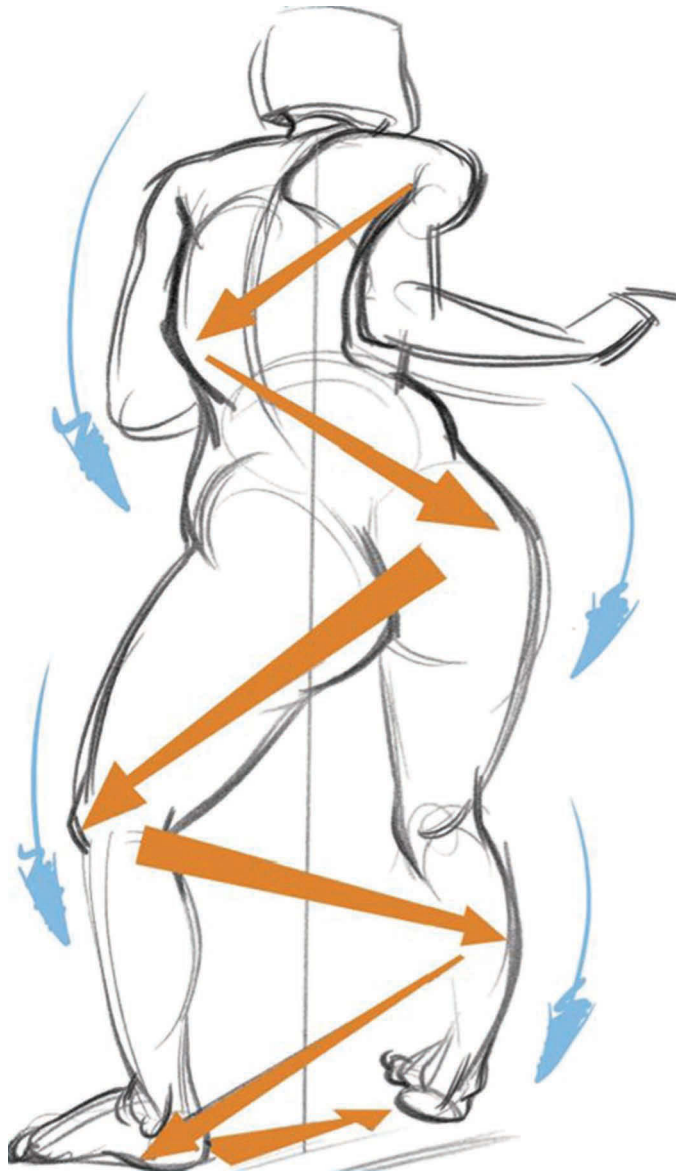
Here, you can see how the reversed "C" can be used in profile of the figure as well. The firm upper back helps push the model's chest outward. The upper back also connects to the deltoids and lets us move out through the arms. The FORCE lines attempt to match the model's physical FORCES.



Rhythm in this drawing is obvious. (It is the only parts of the model I have addressed.) So little is actually drawn, yet so much is said about the essence of the pose. Once we sweep into the hips, FORCE divides down each leg. See the importance of the knees as a place for the transfer of FORCE between the upper and lower leg.

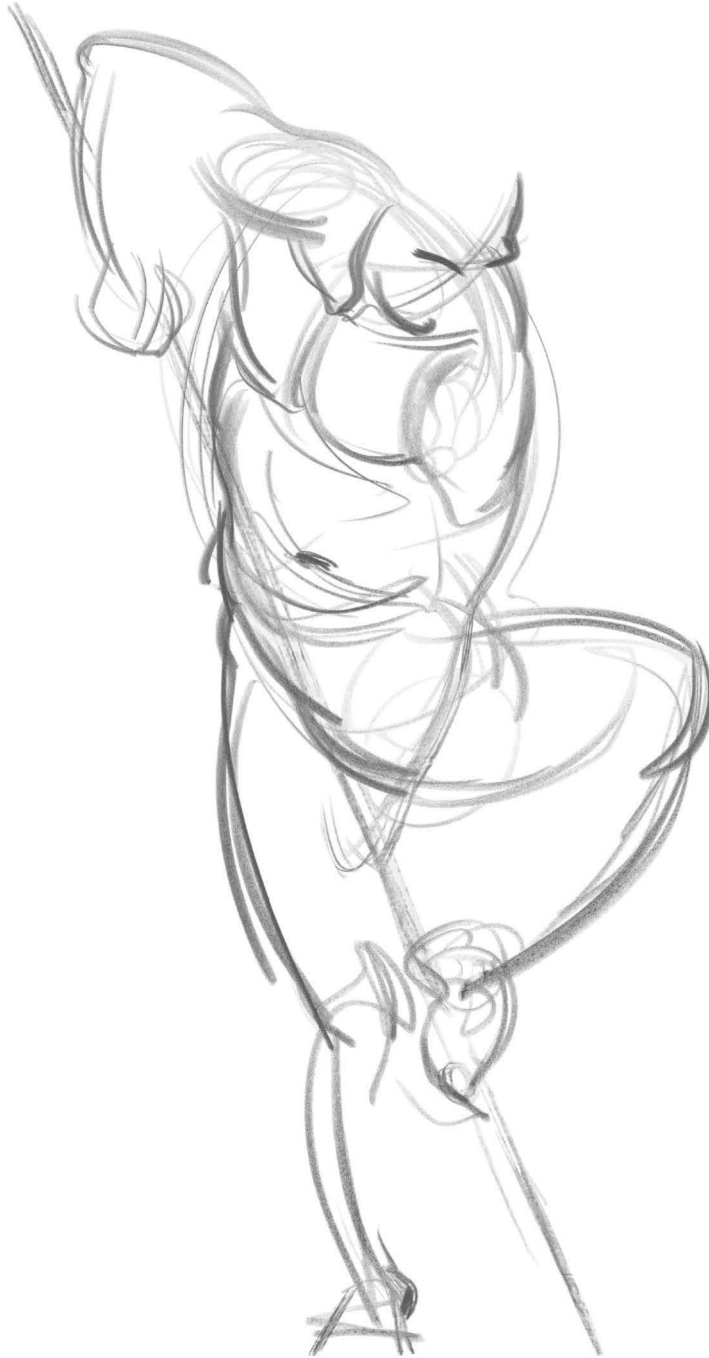


This drawing presents FORCE flowing from the upper back, up and over the hip to reach the abdomen. The arrow in the hip presents the idea of Applied FORCE pushing upward from the leg.



There is a great deal to absorb here, so let's go through this step by step:

1. The Applied and Directional FORCES set up the body's cohesiveness or rhythm. All of this happens for the body to stay in balance. This Applied FORCE obliquely crosses over the line of balance, equalizing FORCE and weight on both sides of the body.
2. Notice the line of balance. It is a guide of equalization of FORCE and weight of the model. The model's head coincidentally happens to fall on the centerline.



Here, I want you to look at rhythm's road and see how it continuously creates equilibrium or balance.



This is another blueprint. In order to comprehend the model's balance, you must look at the rhythm or relationship of one leg to another instead of moving down only one leg. This is a great example of pairing. Notice again, how Applied FORCE moves across the line of balance of the figure. Look at the next few drawings and find the vertical line of balance.



In order to see balance, look at these drawings and understand how the model would fall without the rope he is holding onto. The top drawing shows the center of gravity in his chest way past the platform of his feet. The rope in his hands pulls back over his body to balance his weight. In the next pose, he would fall to the right were it not for the rope's tension on the left side of his body.



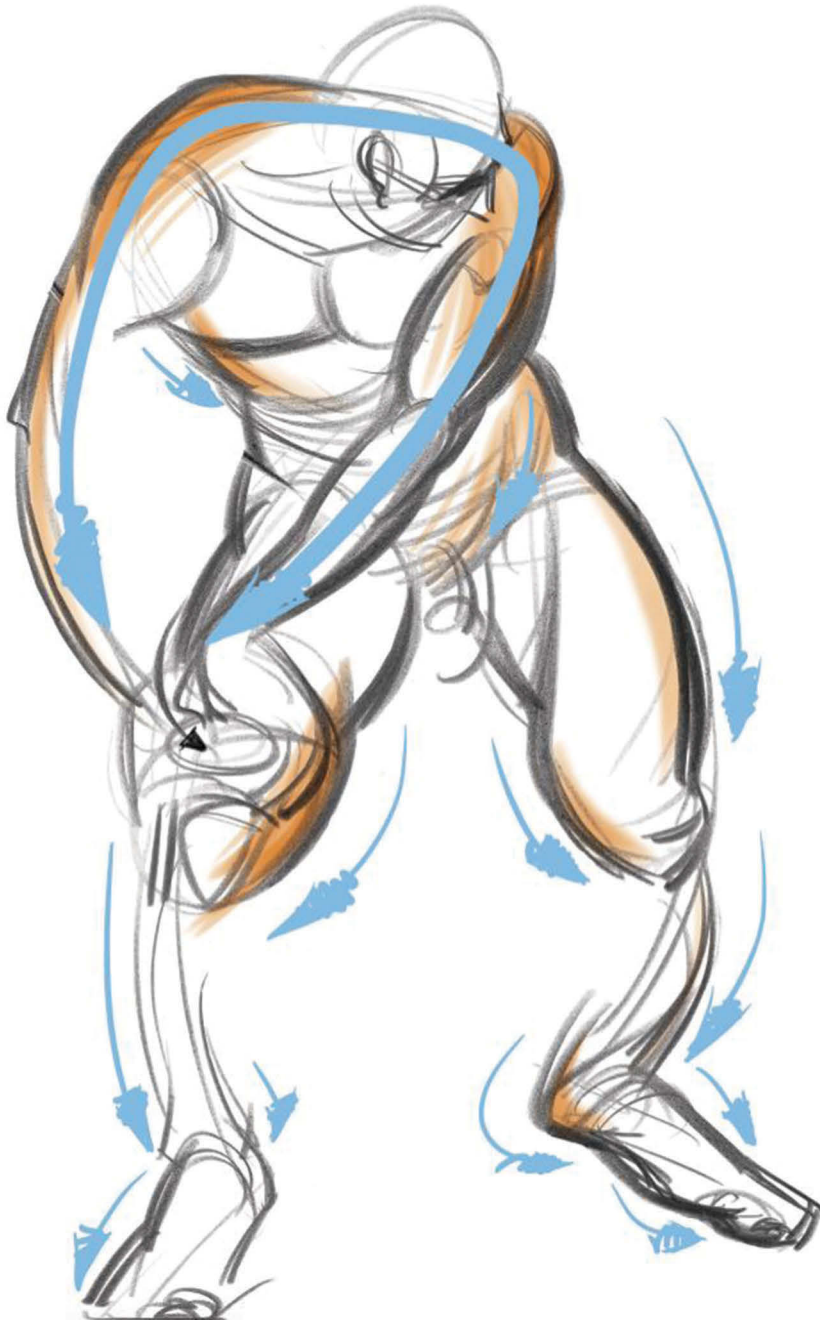
Here, the model is just slightly assisted by the rope. He would normally be teetering on the balls of his feet because of his chest's placement relative to them. Instead, he stands flat-footed since the rope is used like a pendulum.

The head is extremely important because it usually establishes the direction the body is going to move in, like the engine of a train. If you turn, your head initiates that movement. You never turn your body first. It is the control center for the figure's actions. Pay attention to how it affects the body's balance because of this. It is so small in size relative to the figure, though, that for the sake of the pyramid and getting the largest idea on the page first, we go for the rib cage-to-pelvis relationship.

The head must always coincide with the nature of the back. Many students forget to notice how the head projects out of the rib cage and that the neck does that job. I usually try to use the sternocleidomastoid, or the muscles that run from the back of your ear to the meeting point of the collar bones, as a way of showing the neck's FORCES.

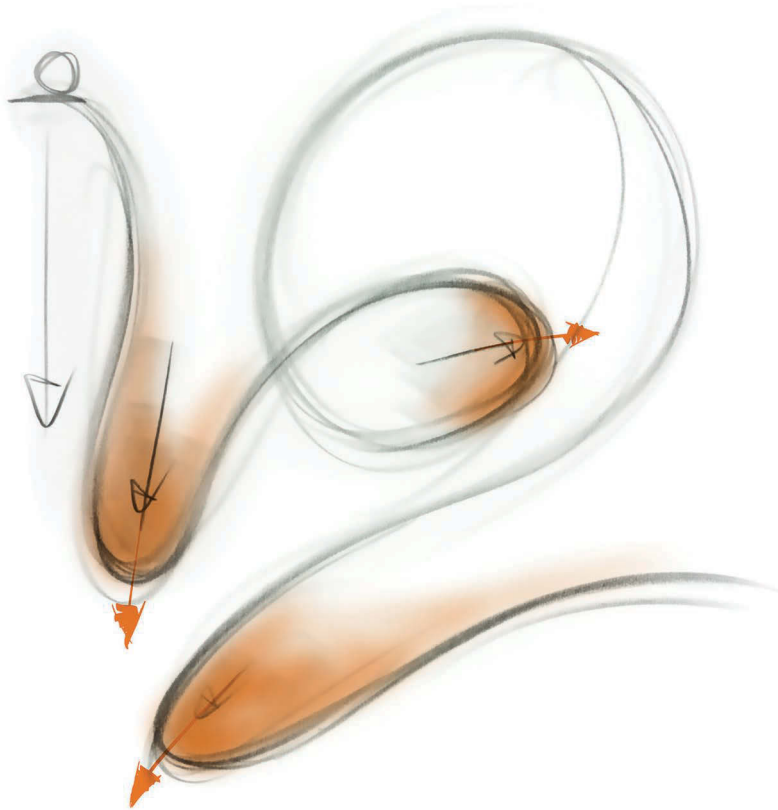


See the opposing FORCE of the neck relative to the back. The sternocleidomastoid shows this with subtlety. I drew a couple of diagrams showing the wrong and right way to handle this relationship. The bottom drawing demonstrates a straight tubular neck with no relationship to the back. The top is correct with its opposing FORCE.



Here, I want you to see the functional connection of the arms, how they support the upper body as seen in the shoulders and brace down on the one leg.

1.12 THE ROLLER COASTER OF RHYTHM



The roller coaster analogy introduces the FORCE of gravity to our FORCE experience. You now connect the Directional FORCES to one another and how they are applied. This allows you to really feel the Applied FORCES hitting their curves.

Find the largest moment of FORCE on the roller coaster and hop on. The tracks are smooth and graceful. Feel how they project you through space, over high peaks and low gullies, through fast straightaways and G-FORCE-filled turns, spiraling along loop to loops and pretzel-like structures. Then time is up, you get off the ride, the model changes positions, and a new and exciting ride is yours to experience.

You have to give yourself the right to draw through the figure. Those of you who are uptight can loosen up in this exercise. Drawing through the figure will dramatically help you see long ideas and begin to understand space, dimensionality, and structure.



Here, we see where some ideas are longer and more connective than others.

See the FORCE that goes from the far shoulder to the close shoulder and down the side of the body. This directs us across the body where we travel down to the crotch and sweep up through the left hip and drive up into the right one. We then pick up speed again and shoot down the thighs through the knees and to the different endings in his feet.

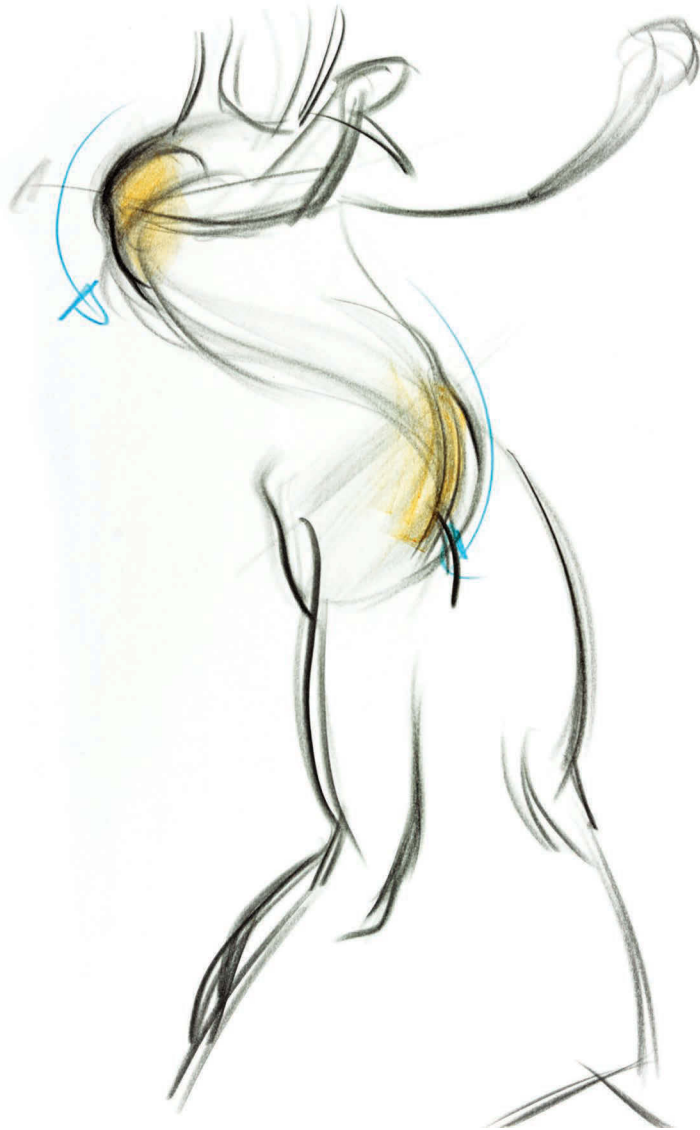


The thumbnail on the left shows you my first thoughts on how to approach this pose. Look at how much is said about it with long ideas.

Here, we shoot up the model's right leg, and roll around to the inside knee. Then we swing our way up the thigh and over into the hip, where we make our final ascent up into the back, over the shoulder, and down into his extended arm. The relationship of the left arm and right foot helps encircle the idea of this pose, riding the roller coaster.



As you learn the templates of FORCE, you will have more opportunity to react to the model and the pose. I drew this pose with vigor, driving FORCE along its path. I connected the legs and pushed them up the hierarchical pyramid.



Use any analogy that works for you, from driving, skiing, skating, or the roller coaster, find the smooth ride with its changes in speed, based on the function of the body's pose relative to the ultimate FORCE, gravity! See the connection here with the one rhythm built of two Directional FORCES and one Applied. Rhythm comes from the "S" situation and then we follow other templates for the legs and arms.



The model did a great job of giving me something new and exciting to understand. The man held this fireman's carry pose for 5 minutes. See the majority of the weight of the woman's body draped over his right shoulder and how he uses the pole as assistance to his balance. Notice the broad base he created with his stance.



Look at how connected the body's rhythms are. This 1-minute drawing shows how much can be said about a pose's energy in very little time.

Students seem to think that they always have to draw an enclosed figure. This is just another habit to hurdle. For now, you want your attention to be on rhythm. Remember, it is the essence or main idea that you want to achieve. Fluidity, continuity, action to reaction, and all of the theories I have given you are ways to think about this concept. Use whatever it takes for you to understand this principle. Remember, if you can find but one place in the figure where you feel you understand the FORCES shown, they will lead you throughout the rest of the pose on the road of rhythm.

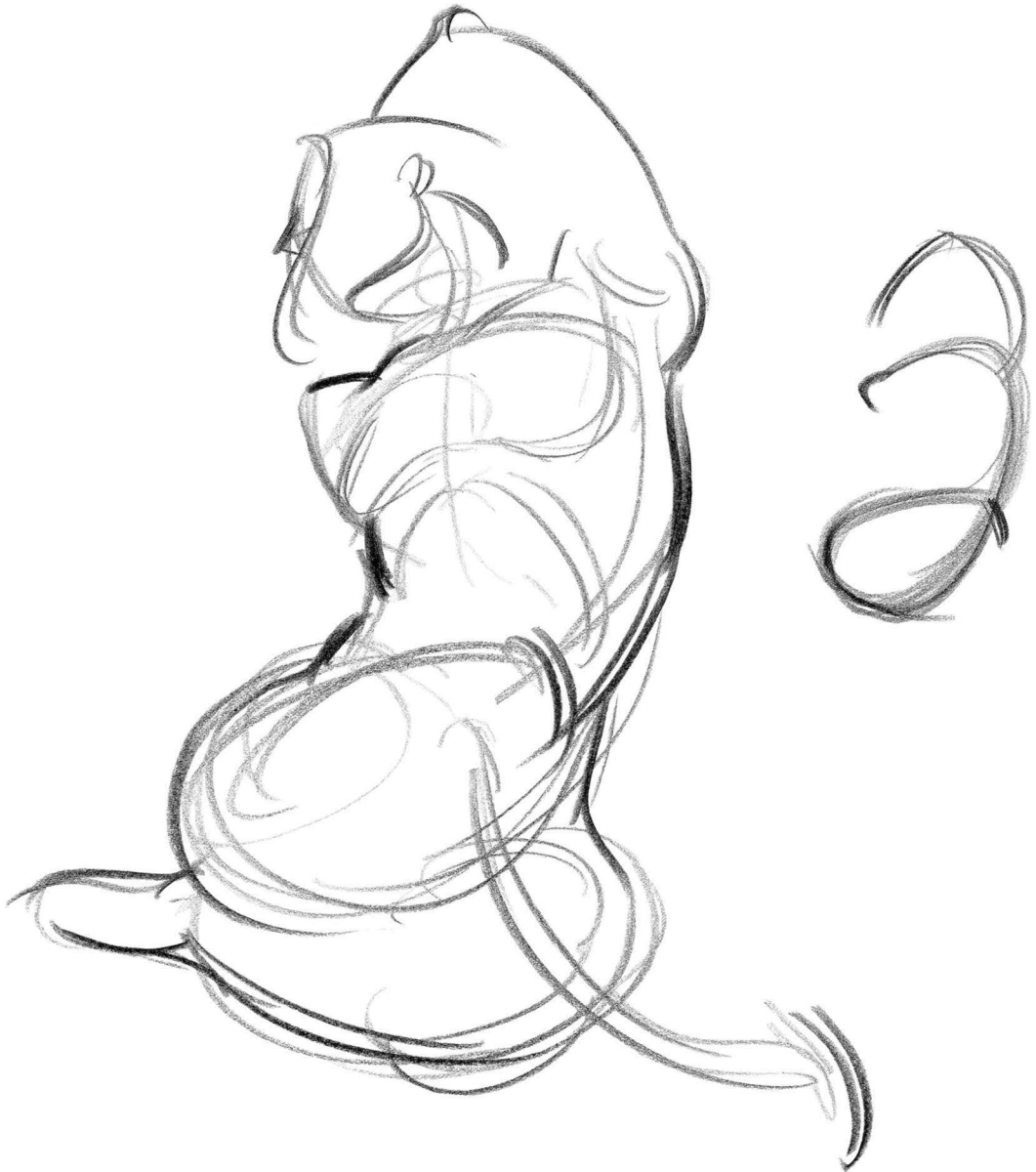


See here, the roller coaster driving through the arms, connecting the upper back to abdomen, moving through the hips and falling down into the legs.



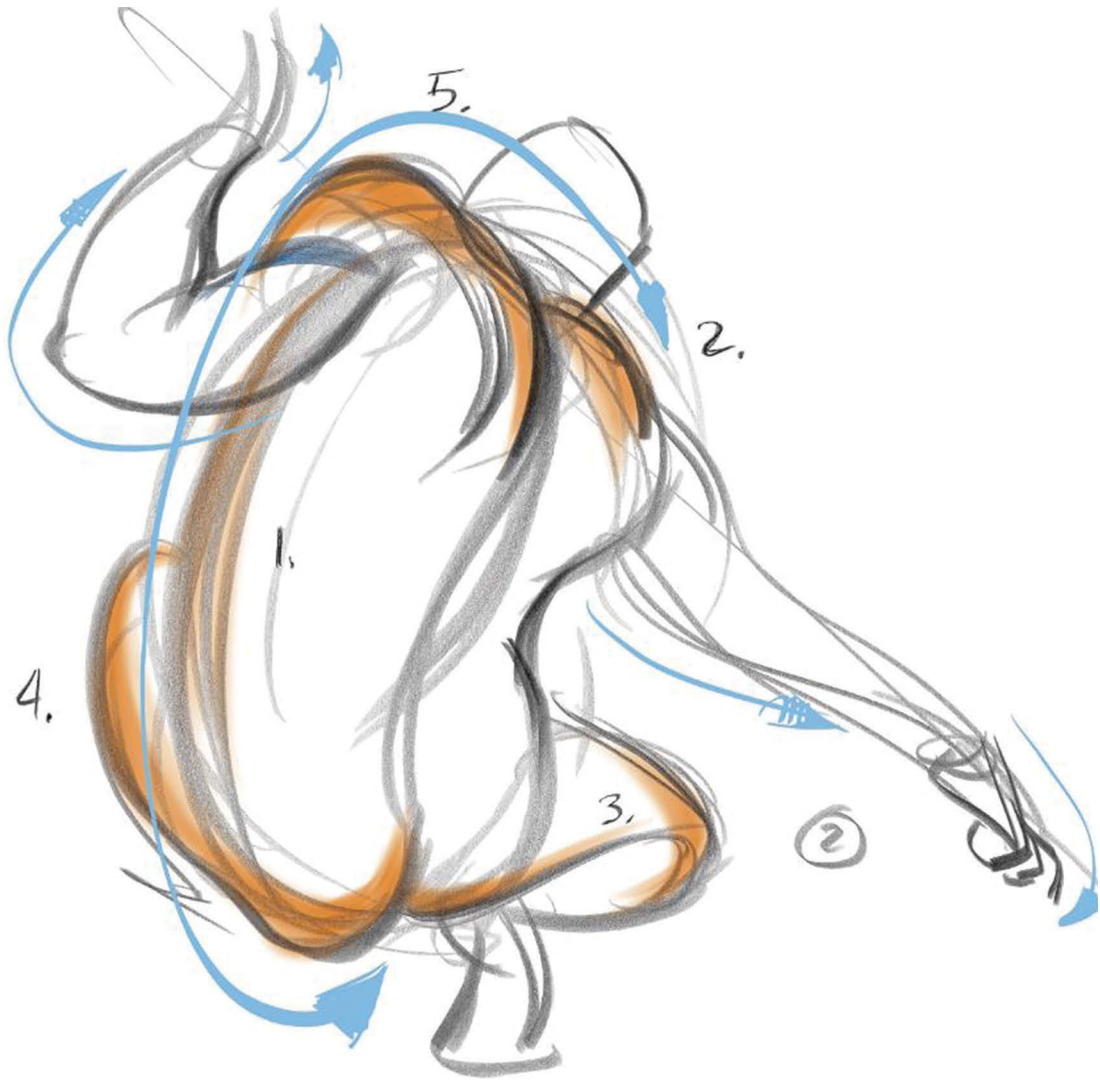
Above we can see how FORCE drives through the three outlets at the top of the upper back.

In this profile view, we can see FORCE travelling down the upper back, across the body to the lower abs, through the groin, to the rear end, and over the pelvis. Then we move down both legs from the front of the thigh to the back of the calves.



I love this drawing. To me, it is so alive; it's lyrical. The thumbnail on the right shows my initial idea.

Look at the long connection of her head and elbow down through the hips, up through the thigh to the knee. Finally, after that long and elegant journey, we have a change in tempo but for a moment, found in the knee. Off we embark down the calf for a fast and graceful curve to her ankle, where it repeats the tempo of the knee. Look also at how effectively mass is described with few lines.



Let's go through some main points in this drawing.

1. I address the largest idea, the connection between rib cage and hips.
2. Then, to push the ride, we can sweep into the arms at 2 and 5.
3. We also can glide into the legs at 3 and 4 with seamless rhythm.



This drawing presents a drawing exercise that requires two students. The pose's time duration is split in half between them so the first student draws most major FORCES and the second, makes adjustments and looks for longer rhythms. This drawing was started by Chuck and then completed by Barrett. Barrett unknowingly succeeded in producing a drawing with a very long idea. Above the figure, you see my explanation of the roller coaster ride we take. Barrett explained how he was content with seeing the model's left leg from hip to foot as one idea. A second look at the drawing shows us how that FORCE sweeps through the crotch, up and over the back, into the deltoid, and then down to the model's wrist.



Two minutes of clarity created the last drawing in this chapter presenting the rules of FORCE with efficiency and sophistication. The pose exudes masculinity coupled with feminine grace, a wonderful contrast found in this model.

Remember: Everything in Chapter 1 works together. At times, you will see Applied FORCE, and sometimes you will see the chance to go long, all within the same pose. Either way, you want your drawing to be a rich experience of the humanity that was in front of you, a loud drawing of your understanding. Don't forget the power of the FORCE full curve.

Now let's look at how to better describe the forms around which FORCE travels.

FORCE POINTERS

1. Skate the page. Close your eyes and imagine the paper as ice and you as the world's best figure skater. You are performing your best routine. As you skate, feel the fluidity and speed of your movement. Notice how the blades cut into the ice as you move through tight and open curves. Your marks should indicate the change in FORCE and pressure that your body would feel on the ice.
 2. Find the rib cage-to-hip relationship first. Keep seeing how their relationship is asymmetrical and falls into one of the four previously discussed scenarios.
 3. Stand and mimic the model's pose. Start with the biggest ideas of the pose and work down to the small detail. Close your eyes and feel your body in that pose. Notice the stretches, torques, pressures, and gravity on yourself. Then push the pose and feel where it wants to go. Put those experiences into your drawing.
 4. Watch the models move into a pose. Look at the directions their body swept into to take the pose. There lie the answers to FORCE.
 5. Draw with a clear Directional FORCE for each part of the figure.
 6. Be passionate about the aliveness of the model and the pose. Draw your excitement.
 7. Write what you are achieving in a drawing. Bring a thesaurus to increase your vocabulary about your ideas. Write the verb first then the noun it affects.
 8. Pay attention to your internal dialogue. Don't be self-defeating.
 9. Explain what you see; don't just copy it.
 10. Get out of your own way. Don't worry about the drawing.
 11. Always have something to say.
 12. Draw to feel what the model is feeling.
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Chapter 2

FORCEFUL Form

There are two buckets of skill needed to draw well. One bucket is technique, FORCE, form (perspective, anatomy, FORCE form) and FORCE shape. The other is honest observation, being able to draw what you truly see. When the two combine, you can draw well! You draw what you see and understand it at the same time. You can assess your own experiences and see where you need more technique or more honest observation. Is the drawing generic? Look more. Is it specific but flat, dead, and poorly designed? Use technique. The main technical skill to learn when it comes to form is ...

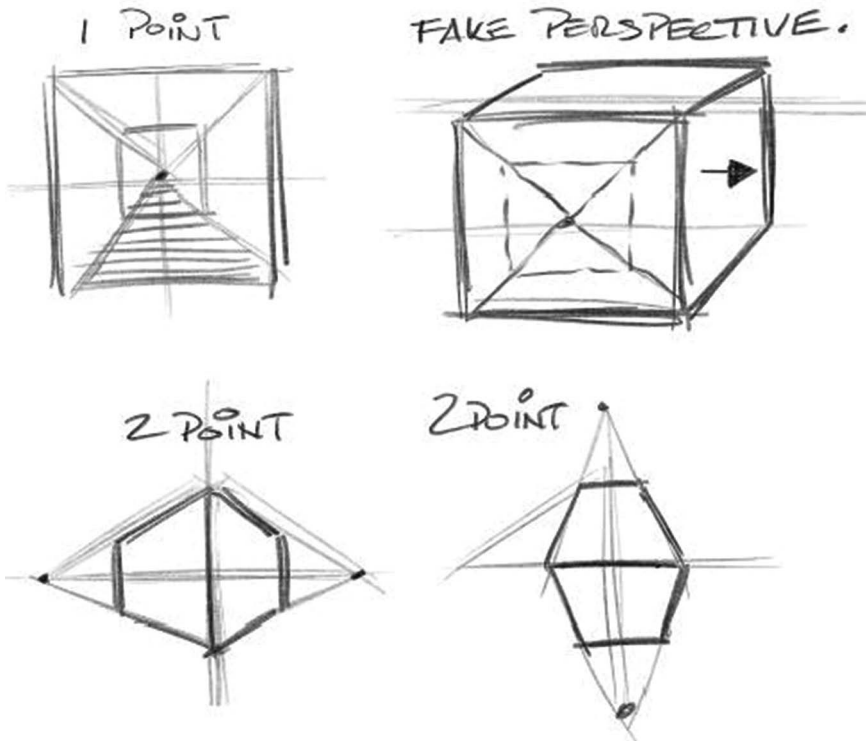
2.1 PERSPECTIVE: THE DRAMA OF ANGLES

Artists defining the visual theories of perspective have changed the world we live in. Their observations helped them create dimensional thoughts upon a flat surface. You are affected by their enlightenment. Recognize that the chair you occupy and the space you live in were conceived by an artist with the capacity to draw form and thus define space.

The first topic we'll cover is perspective. Perspective is not difficult, it just takes some time to understand what you are seeing and know that you are capable of representing depth on the page. This happens after understanding the traditional ways of drawing it. I learned perspective in junior high school first, then from *How to Draw Comics the Marvel Way*, and then, most importantly, from the 4 years of architecture I studied in high school. The cube or box presents the beginning of understanding structure in space.

One of the major uses of perspective is to show you your viewing angle relative to an object. These angles give you the sense of vanishing that occurs in our world.

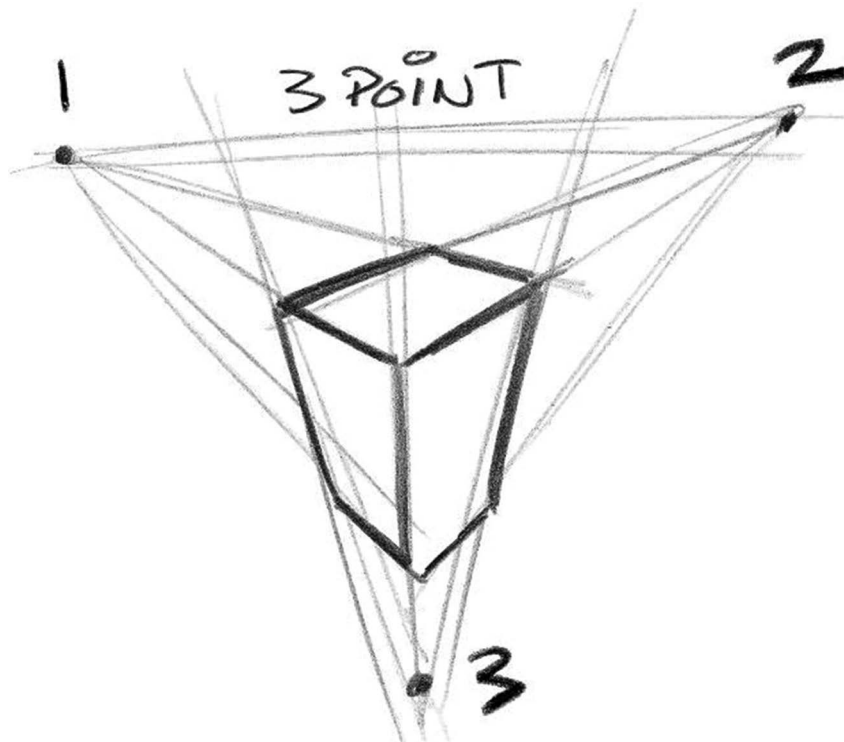
2.2 ONE-, TWO-, AND THREE-POINT PERSPECTIVE



One-point perspective is everyone's starting point when it comes to seeing space into a flat page. Most of us have seen the railroad drawing to illustrate the power of one-point perspective. It is limited. Its main use is to draw flat planes in depth. In the box on the top right, labeled "Fake Perspective," one point shows its limitations. When looking at a box, as soon as we face it from any direction besides head on, we are dealing with two or more points of perspective. We cannot see another side of this box until we have at least two points as reference.

The "Fake Perspective" box is also an example of what I receive from students when I ask them to draw a box in perspective. This is the nemesis of perspective. I know we are taught this, but if you look at the box, notice how the front face has 90-degree corners. We are looking directly at the front face, so how would it be possible for us to see any of the other sides? It is as if we took the back plane of the box and slid it, in a parallel manner, away from its actual structural orientation with the front of the box.

The two-point perspective cube converges in perspective on one plane of existence. Notice how the vertical lines in the box are parallel and the others are not. Here, our cube is affected only on a horizontal plane. The horizontal lines of the cube are squeezed into perspective by adhering to the vanishing points. As soon as we are above or below the box, which means we should see three of its planes, we must have three points of perspective.



In three-point perspective, the box is affected by perspective on two planes, vertical and horizontal. Numbers 1 and 2 are the horizontal points and number 3 is our one vertical point. We could have two points on a vertical line and one on the horizontal. In this case, the third point gives us a sense that the box is long vertically. We seem to be floating above it, peering down at its top. The vertical lines that create the box are converging downward toward the third point. An easy way to figure out how many points affect a box is by counting the amount of planes you see. The plane and point count will be the same numerical value.

Some simple rules to help you become aware of perspective:

1. The left point on the horizon line affects the left plane of the box. The right point affects the right plane.
2. This is inverted when you are inside the box. This comes into play when you do a room interior.
3. When an object is below your eye line, the verticals are affected by the point below your eye line. When the object is above your eye line, the verticals are affected by the point above your eye line.

To help explain one, two, and three point, I am going to use drawings of people's heads. Why? The head is the most block-like structure of the body. Some artists like to construct the head from a ball; I prefer the cube. It is more definitive. It has clear planes that erase doubt as to what specific direction in space a person or animal's head is in. Use the angles of the cube to help define the angles of the facial features. Just as curves defined FORCE in Chapter 1, straight lines evoke structure and perspective.



This profile drawing is constructed from a one-point perspective box. Here, we are looking directly at the side of the model's head. This is the most difficult view to draw since the perspective along the side of the cube or front of the face is so tight. Every overlapping moment must be correct.



Mike's drawing of Keith is in two-point perspective. We have the front and side of his head visible to us. The turning edge of those two planes is at the peak of his right eyebrow. That edge defines the forehead and temple planes. The drawing is solid. Look at the bottom of the nose and his upper lip. We see three planes of perspective in these features, but the head itself is not in three point. Also notice the slight pinching effect of the projection lines of the eyes nose and mouth. The glasses are obvious evidence of the two planes of perspective. Mike did an excellent job of combining skill and sight.

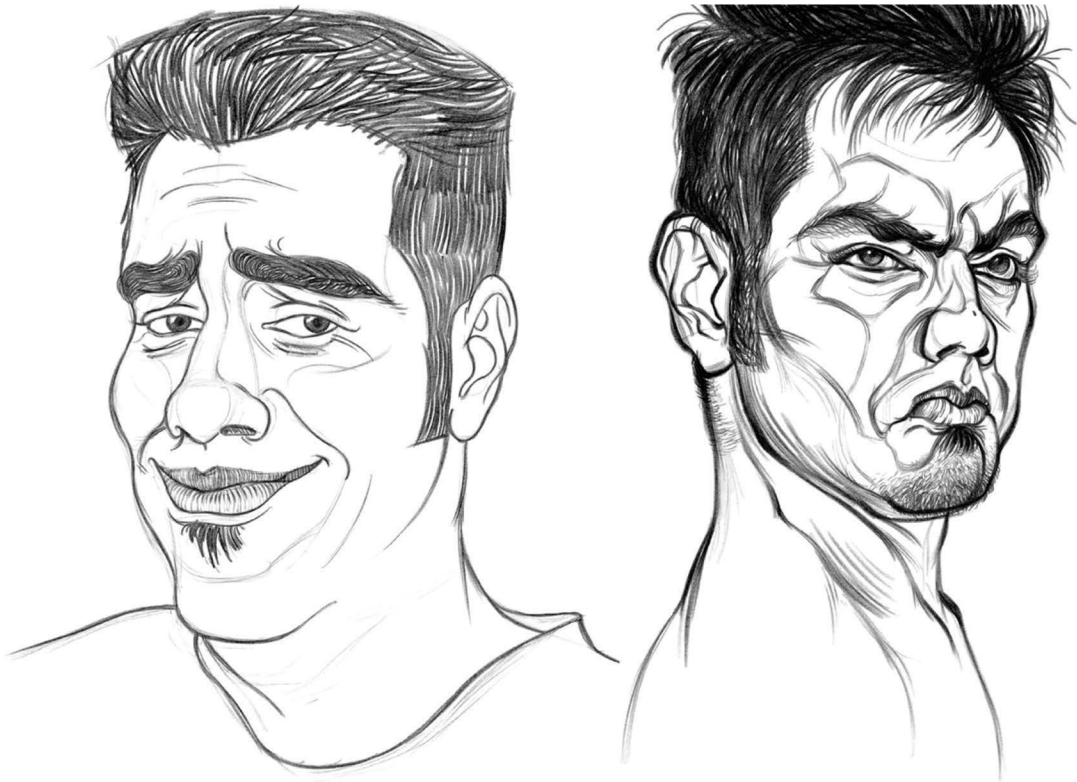


Here is a drawing of my wife, Ellen. You can immediately tell that I was above her when it was produced. See the clear three planes of her head. Notice how her facial features visually block one another because of the perspective. An example would be her nose blocking the edge of her face.

Learn how to draw the right angles of a box in space and then how to squeeze those angles to give your drawings even more depth. Pay attention to the vertical and horizontal lines and how they need to converge to suggest a plane progressing back into space.

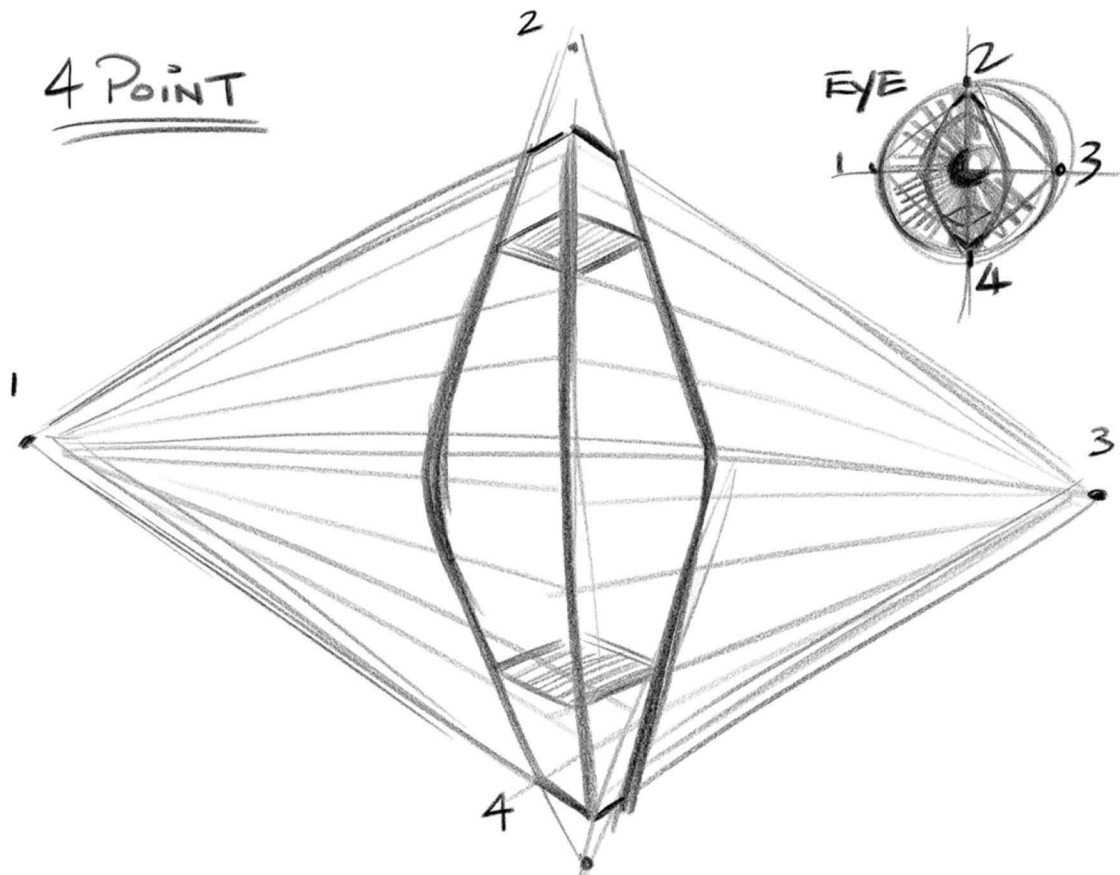
You must be able to draw a cube from any perspective out of your head. This is a definite requirement of drawing well.

In my classes, I assign for homework five head drawings a week. I highly recommend drawing a real person, not drawing from a photo since it is flat, which actually makes the job harder. Students then look for the relationship between their subject and the cube of perspective the head resides within. Last, the head should be drawn with surface lines to show structure. Later in the year, they move on to hands and feet with the same disciplines in mind.



As a homework assignment, students create many drawings of their heads. Here is an example of Mike D.'s assignment in his first term and then in his third. You can see the huge increase in accuracy and clarity that he obtained pertaining to FORCE and form.

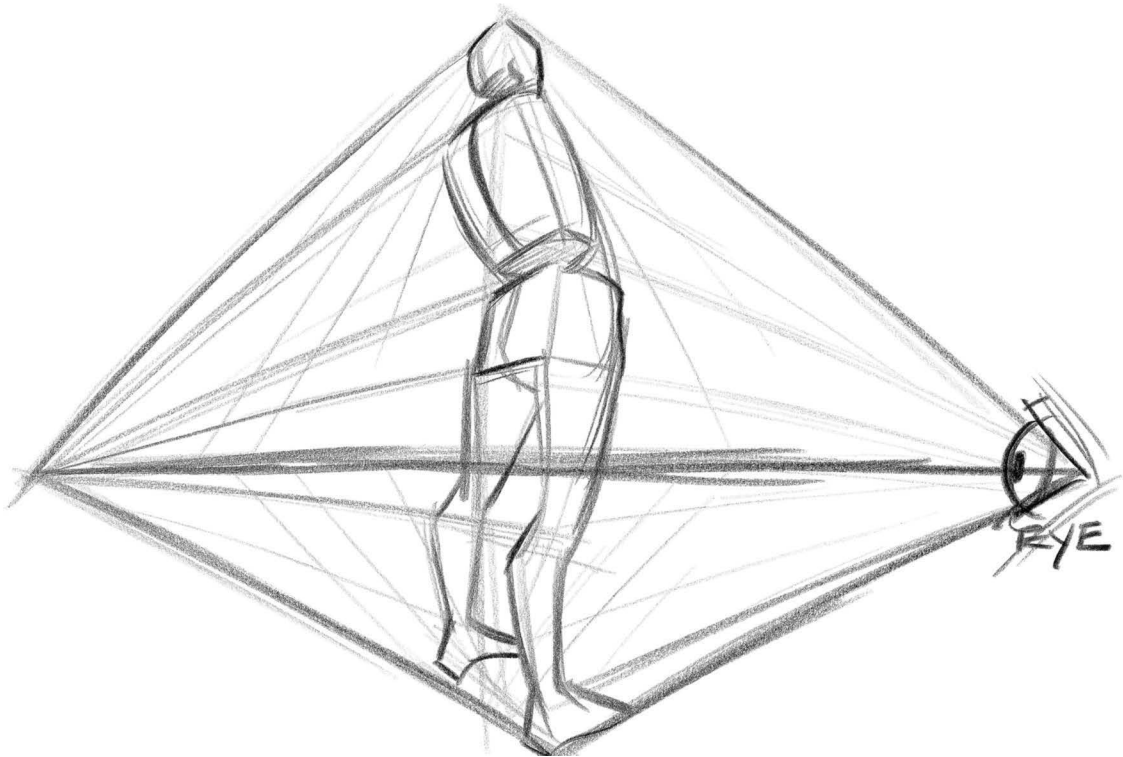
2.3 FOUR-POINT PERSPECTIVE



So here it is, four-point perspective in all its glory. It reminds me of looking out a window in New York City. If you were at the height of about the 13th floor and the buildings around you were 30 floors, this is what you would see. We have squeezed depth on both the vertical and horizontal planes with each presenting two points of convergence. This is the world of perspective we live in. The closer something gets to your eye, the more of a fisheye lens effect you will see. The center of the object will emerge closer to you while its perimeters will squeeze away back into space.

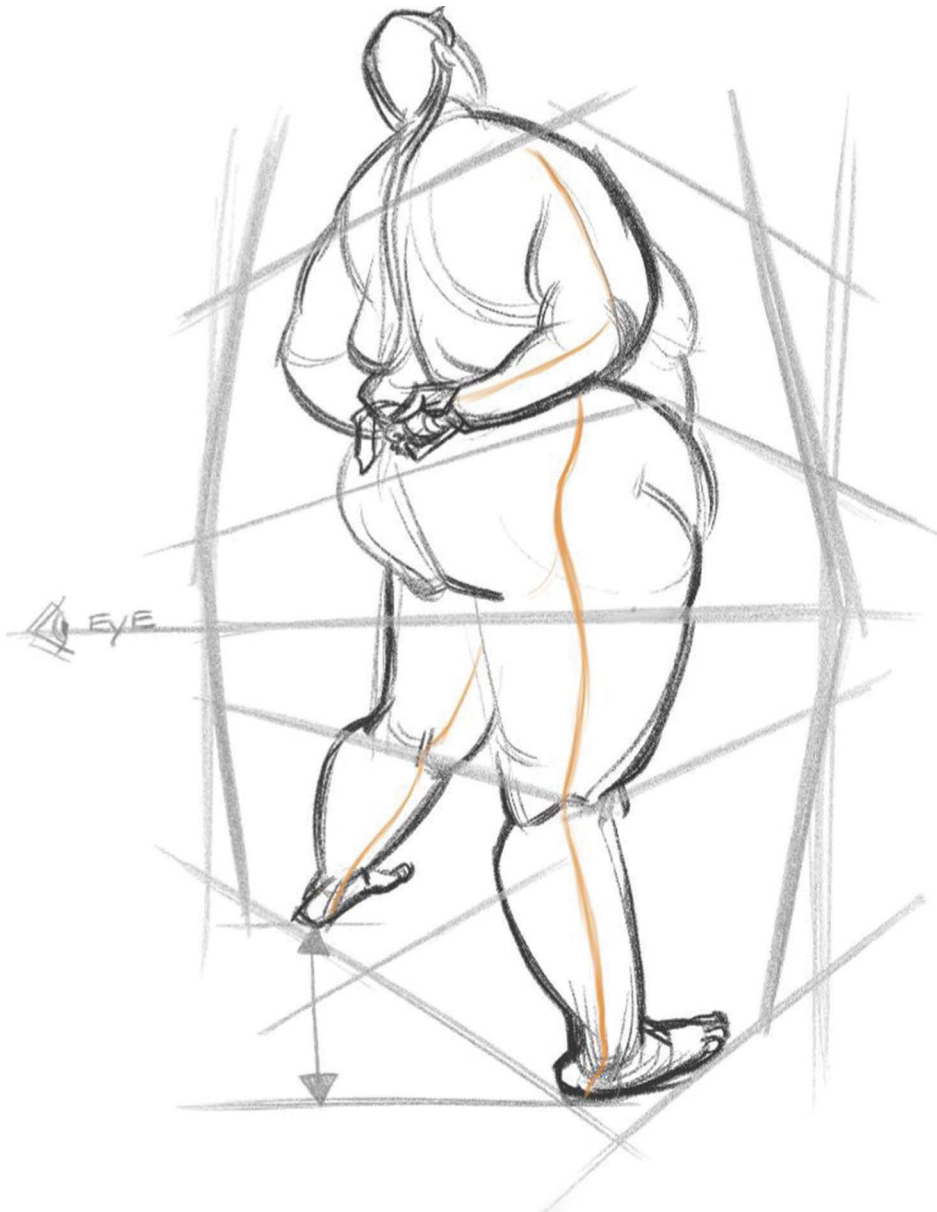
We do not usually witness this strength in perspective since we need to be either really close to our subject or the subject must be large enough to look up and down at.

What you see in the side-view mirror of a car is what you want to be aware of all around you every day. In production art, you will sometimes see four-point perspective in camera tilts for storyboards or a layout.



Here is an example of how four-point perspective affects the model. A good first step to bring awareness of perspective to your drawings is through acknowledgment of where your eye level resides relative to the model. In this drawing, the eye level or horizon line is at midhigh.

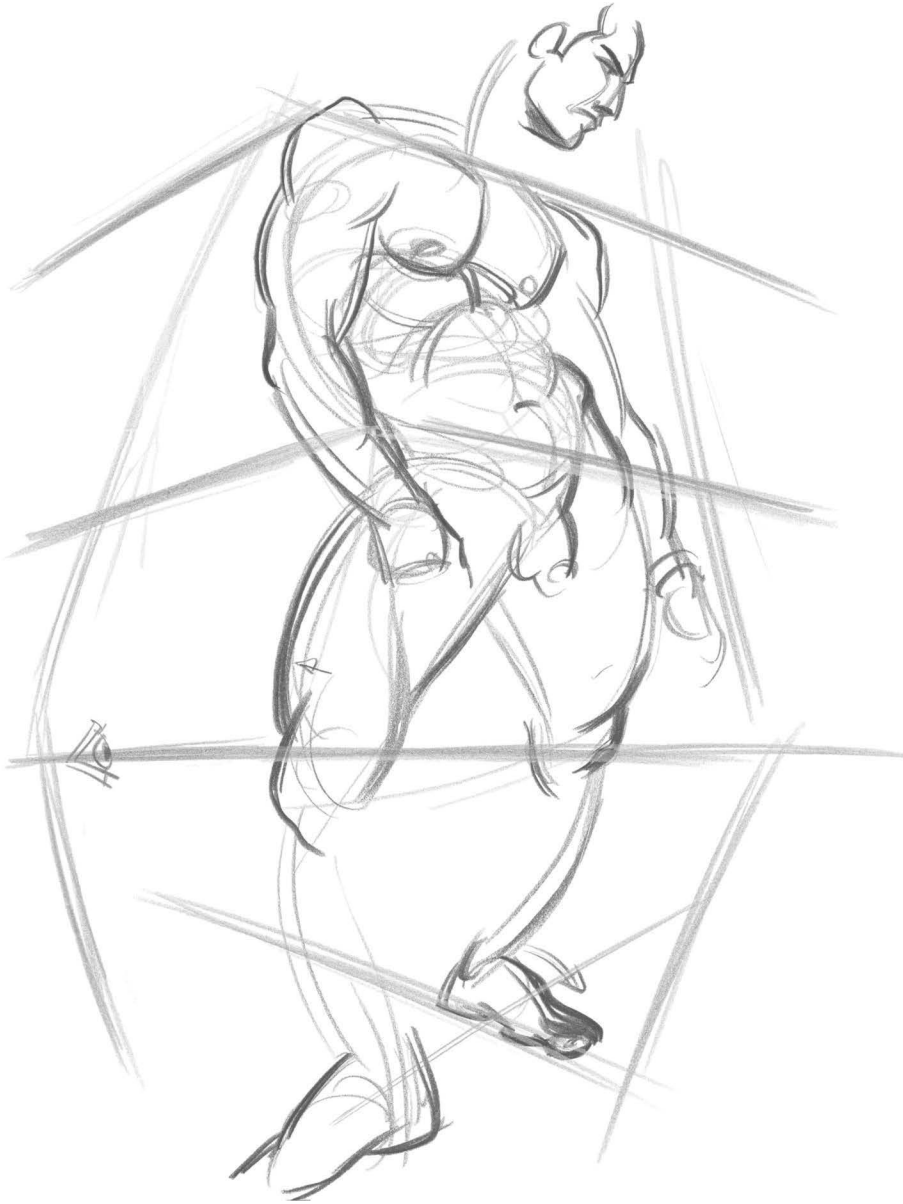
I have chosen these next few figure drawings for you to see the awareness of four-point perspective. See where the artist's eye level was in a drawing. Observe where the body seems to go flat for a moment, a place that you cannot see above or beneath, where you are looking directly at the model. See where the closest edge of the box of space that the model occupies is in reference to you. In most standing poses, my eye level hits right around the midhigh of a model.



This drawing is terrific for seeing the perspective setup between the model's two feet. Since they are connected with a line, we are given a direction toward the left vanishing point. As a visual reminder, when drawing a model's feet, notice the height difference of the two on the page (as I have drawn with the arrow). From there, you can see how the rest of the body is affected by the guidelines of perspective I have drawn. The closest edge of the box of space she occupies is represented by the orange contour line running down the right side of her body.



See the angles of his feet, knees, hips, and jaw. Here, it is the hips that are at my eye level. Look at the line running over his left shin that defines its form and direction of FORCE.



Here, the feet and shoulders happen to fall on the lines of perspective the body is in. See how the hips do not do the same. The model's knees are at my eye level or horizon line. The body is complex and can move to present various perspectives in one pose. You must be aware of your eye line and how the entire pose sits in four dimensions.



Using the color blue, you can see that the angles become more diagonal as they move up to the head. This gives us the illusion that we are looking up at the model. On the figure, small anatomical hints define these angles such as the bottom of the pectoralis, the peaks of the hips, and the bottom of his jaw.



The steps the model sits on are our most obvious clue to the perspective of this drawing. Look at their angle relative to that of her breasts and shoulders, or the straight line that represents the back of her head. There is a strong sensation of looking upward at her.



This drawing gives us a sense of depth through height and from left to right. Here, you can clearly see the perspective angle between the feet. In fact, on her right foot, I put the angle of perspective down the back of the heel and the right side of the foot. Her shoulders also angle down away from us.

2.4 STRUCTURE

Anatomy is the structure of the human figure. If you know you are weak in this area, look at *FORCE: Drawing Human Anatomy*. This book is unique from other anatomy books in that it explains WHY muscles are located where they are instead of only informing you of muscle shapes and their names.

DRAWING THROUGH the figure is probably the fastest way to start your journey on FORCEFUL form. You will see me practice this in many of the drawings found in this book. This shows the difference from someone copying the model to someone attempting to understand what they see. Don't let an arm, leg, or any other part of the body block you from comprehending what is happening in front of you.

2.5 SURFACE LINES

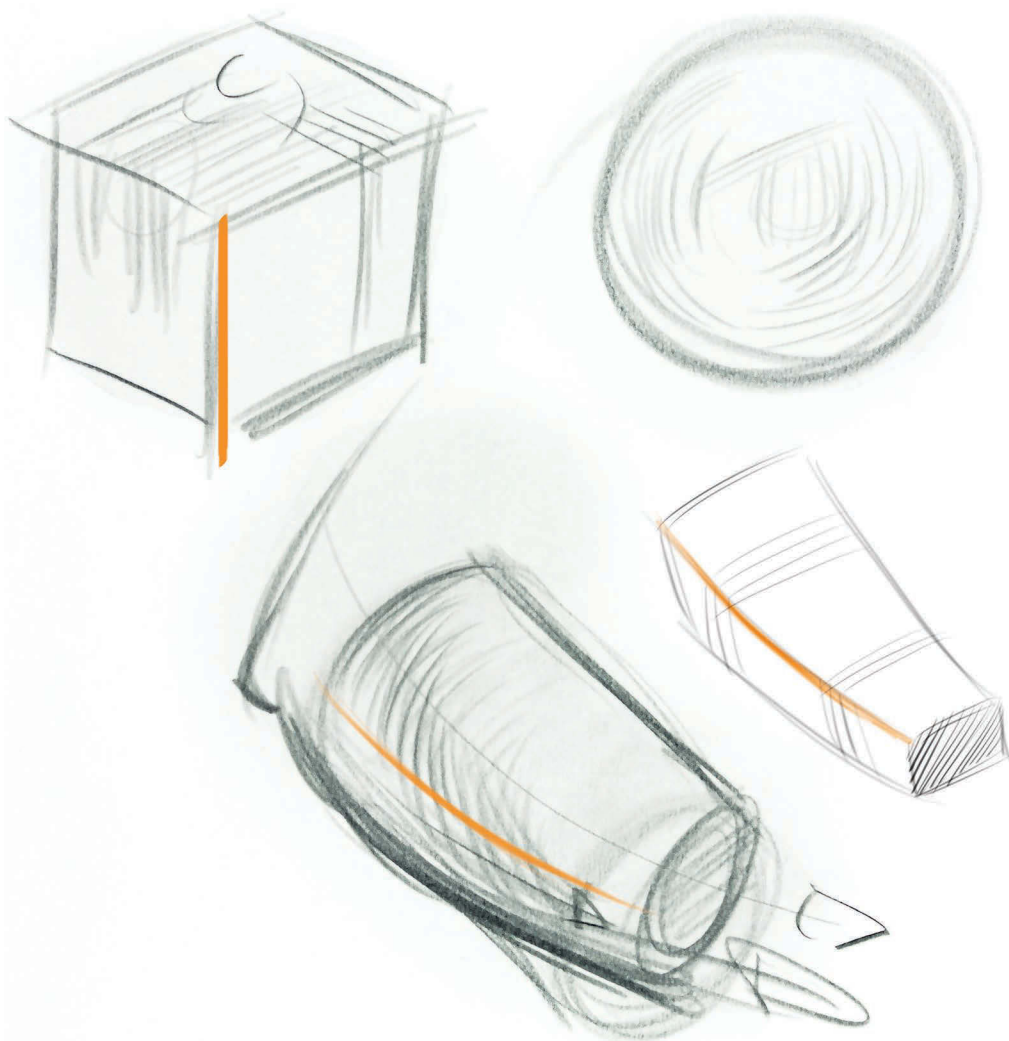
Many art classes teach students to draw the figure with cubes and cylinders. I believe this is a good foundation for artists. It allows you to see the angles and planes of perspective on the body as we just learned them. The challenge is adding form to your drawing without losing FORCE!

The human body happens to be a little more complicated than just boxes and cylinders, though. In this part of Chapter 2, I will show you drawings that possess lines that evoke FORCE and describe form. This will occur with the use of FORCE Surface Lines.

GOING LONG in Chapter 1 was the beginning of seeing FORCE wrapped around form. Now we will focus on the forms.

There are two ways to use surface line:

1. To describe NONFORCEFUL form.
 2. To describe FORCEFUL form.
-



The cube and the sphere are innately NONFORCEFUL forms, and therefore, the surface lines describing them are also. The surface lines create surface within the silhouettes of these simple forms. Notice within the cube how the surface lines change angle when they move across the Turning EDGE, the edge in between two planes. The closest turning edge is presented in orange.

The cylinder or tube on the right is more angular. This is how I see the figure in my mind. The turning edge is very important. I transform the NONFORCEFUL form into a FORCEFUL one using shape and surface lines. In its final FORCEFUL state, see how the surface lines near the elbow move from a perpendicular position relative to the axis of the cylinder to sweeping into its long axis, as if they were pulled so they could move along the length of the tube.

2.5.1 Sculpting without FORCE

Let's start with sculpting NONFORCEFUL form since it is simpler to understand. We basically want to use surface line to define mass.

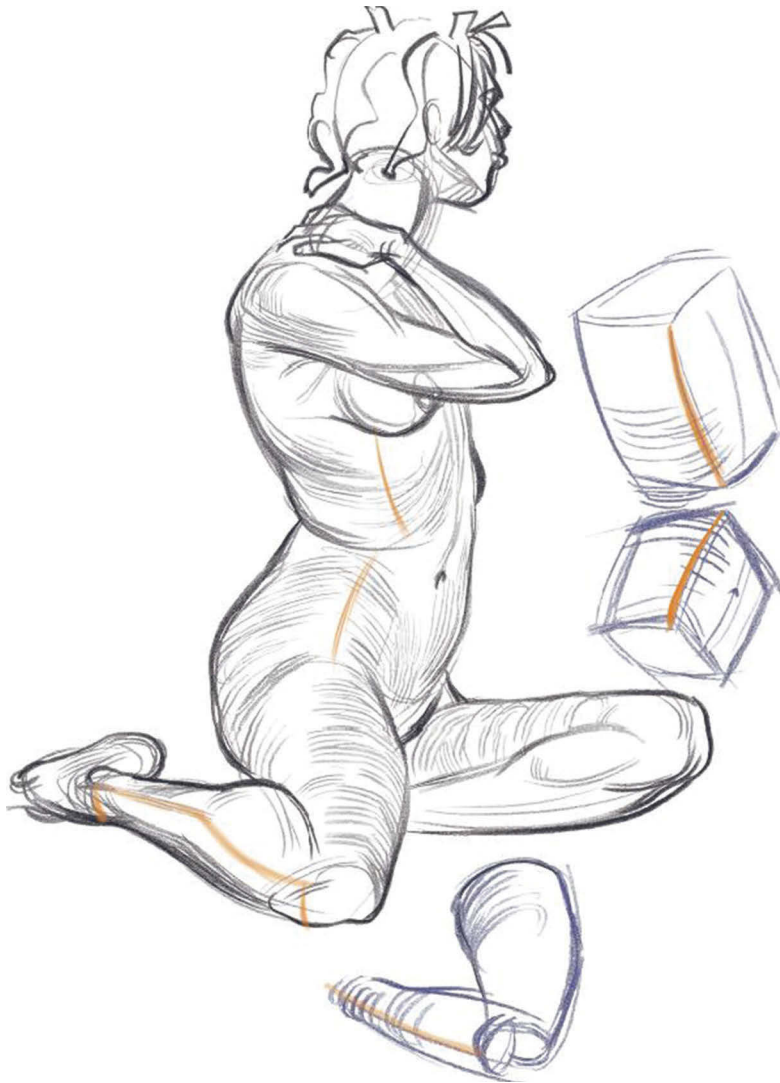
Surface line will help you get away from the edge of the body, or its perimeter. The model takes up space and you want to be able to explain how. Pay attention to the location of the natural center on the forms you understand, for instance, the nose on the face, the center of the rib cage, or the belly button on the stomach. You obviously have the spine for the back. On the legs, you find the model's knees and the top of the foot. For the arms, you can use the center of the biceps or deltoid to explain each of those different planes.

Going back to hierarchy, think about addressing larger structures first and then smaller ones. Understand the direction and form of the rib cage before you draw the muscles attached to it.

Think of yourself as a sculptor, sculpting the model with your pencil. Draw as though you are caressing him/her with the pencil's tip. Feel the forms in your mind and express them on the page. Sometimes, students confuse this exercise with drawing shadows. We are not looking for shadow; we are looking for form. You do not need light to draw form.

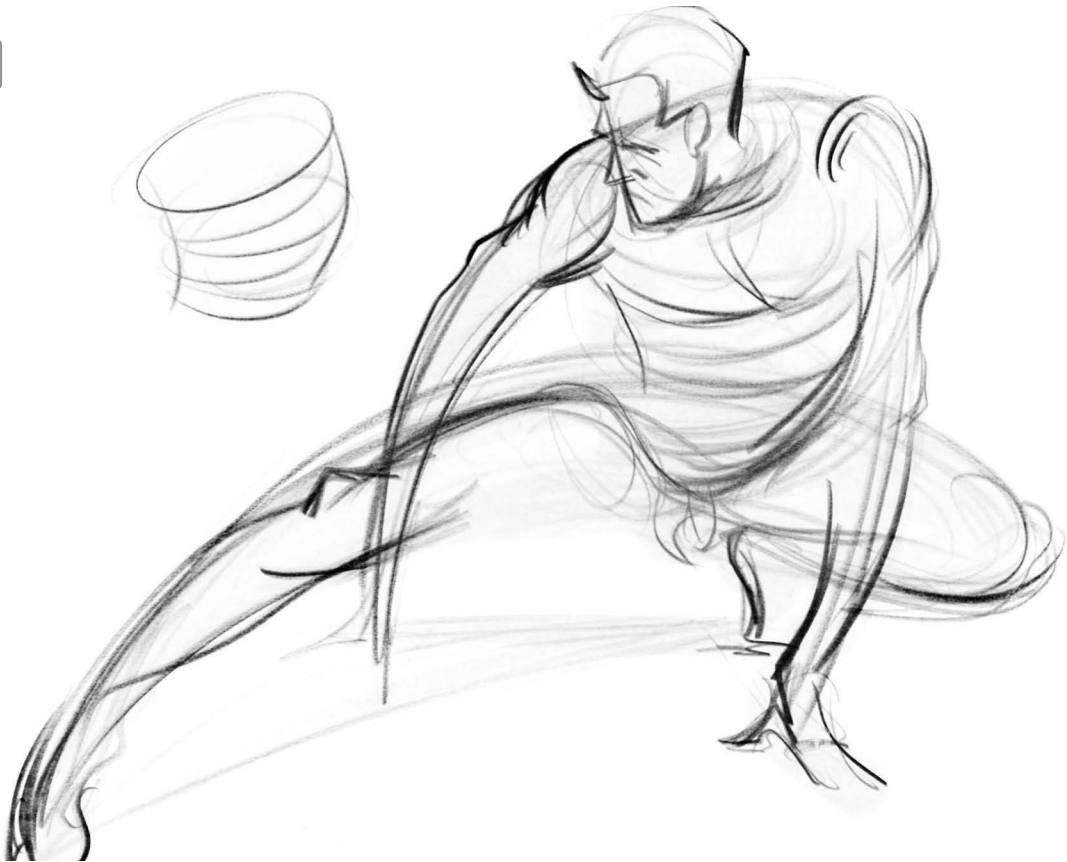
Again, don't copy the model; instead, recreate him or her. You must rebuild them on the paper. I usually give the students 10-minute poses to actuate these exercises. Also start to consistently draw the hands and feet within each drawing. They add another level of expression to the images you create.

In the beginning of the twentieth century lived a man named Charles Dana Gibson. He was best known for "The Gibson Girl." His lines adeptly defined structure. Everything occupied space as he illustrated scenes from that time period. Dover publishes an excellent book called *The Gibson Girl and Her America: The Best Drawings by Charles Dana Gibson*. His drawings are a great example of what we are going to discuss.

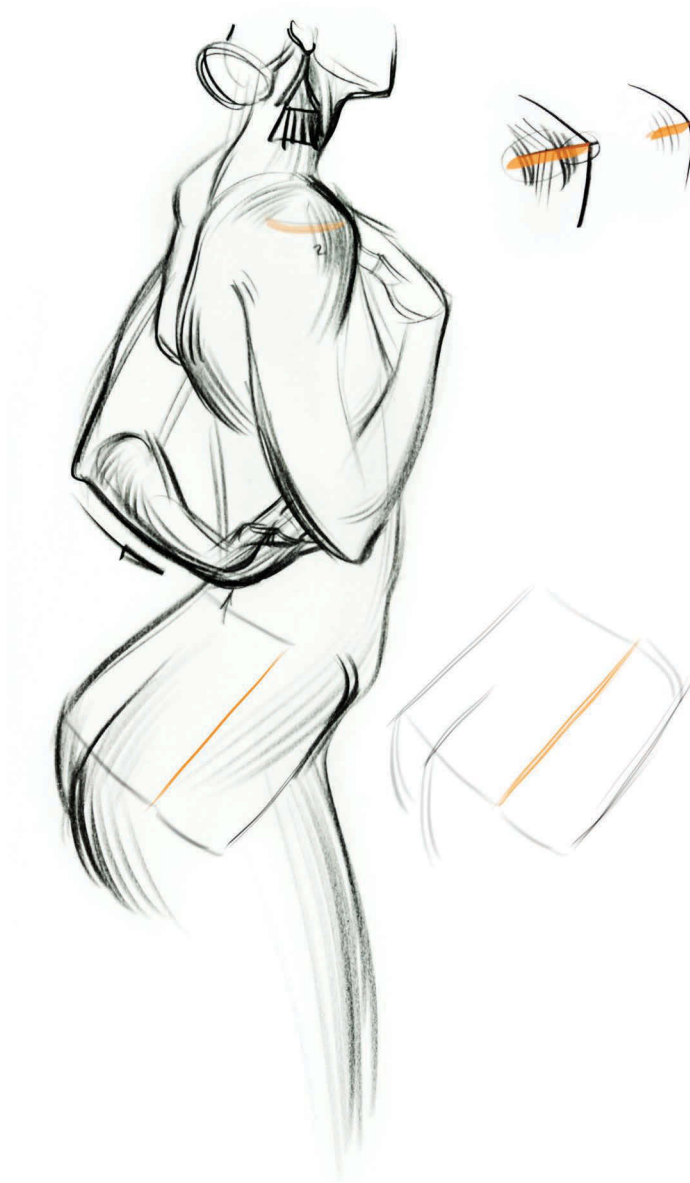


So, here we are, the model in perspective and showing form through sculptural lines. See how most of the surface lines sculpt the model's volume and occupation of space. Also look at how the surface lines of the rib cage and hips help to explain their different directions in space, which aids in telling a clearer story about the pose's ideas.

I've drawn this as simpler masses on the right, the orange lines representing the turning edge. The right leg in relationship to the hip is more severe in perspective. It comes out toward us more rapidly than the hip. The calf also rapidly descends back into the page. The capacity to create three-dimensionality or a sense of deep paper is a miracle of drawing.



Here I used the tube form for the structure of the torso. At the start of form discovery, these simple lines quickly develop structure, as seen in the callout in the top left. Look at how the legs connect together as one idea under the mass and weight of the upper body. Notice the loop of line that moves from the groin and over the model's right leg, thus setting up the tubular structure found here.

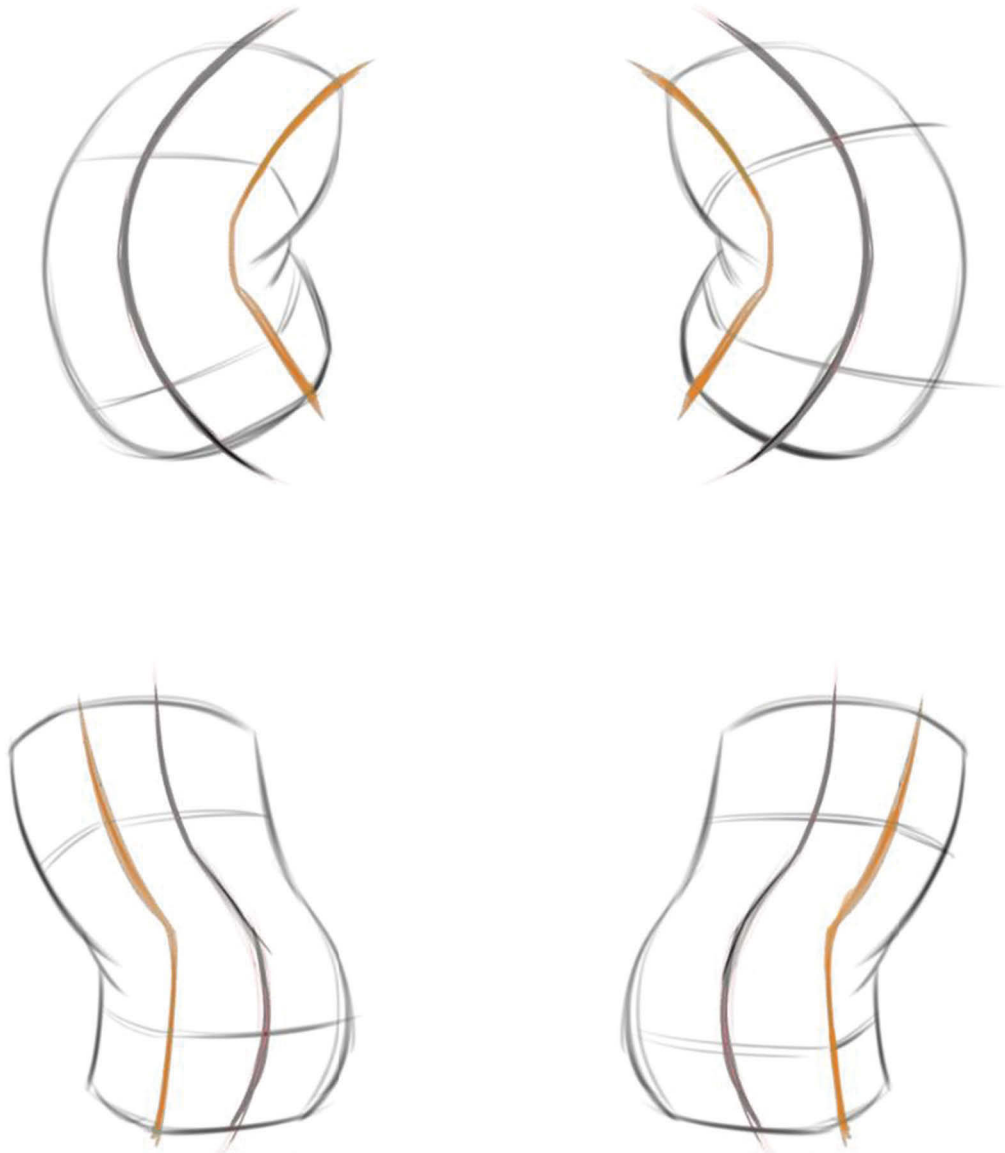


This drawing presents the corner found within the shoulder and the pelvis. This corner, or turning edge, gives us clear separation between the surfaces of the figure. In the shoulder, see how the surface lines soften the hard corner to a softer one, more accurate to the model and her shoulder's contour. Surface lines along the pelvis show its side surface and the subtle angle change in the box that forms the rest of the pelvis.

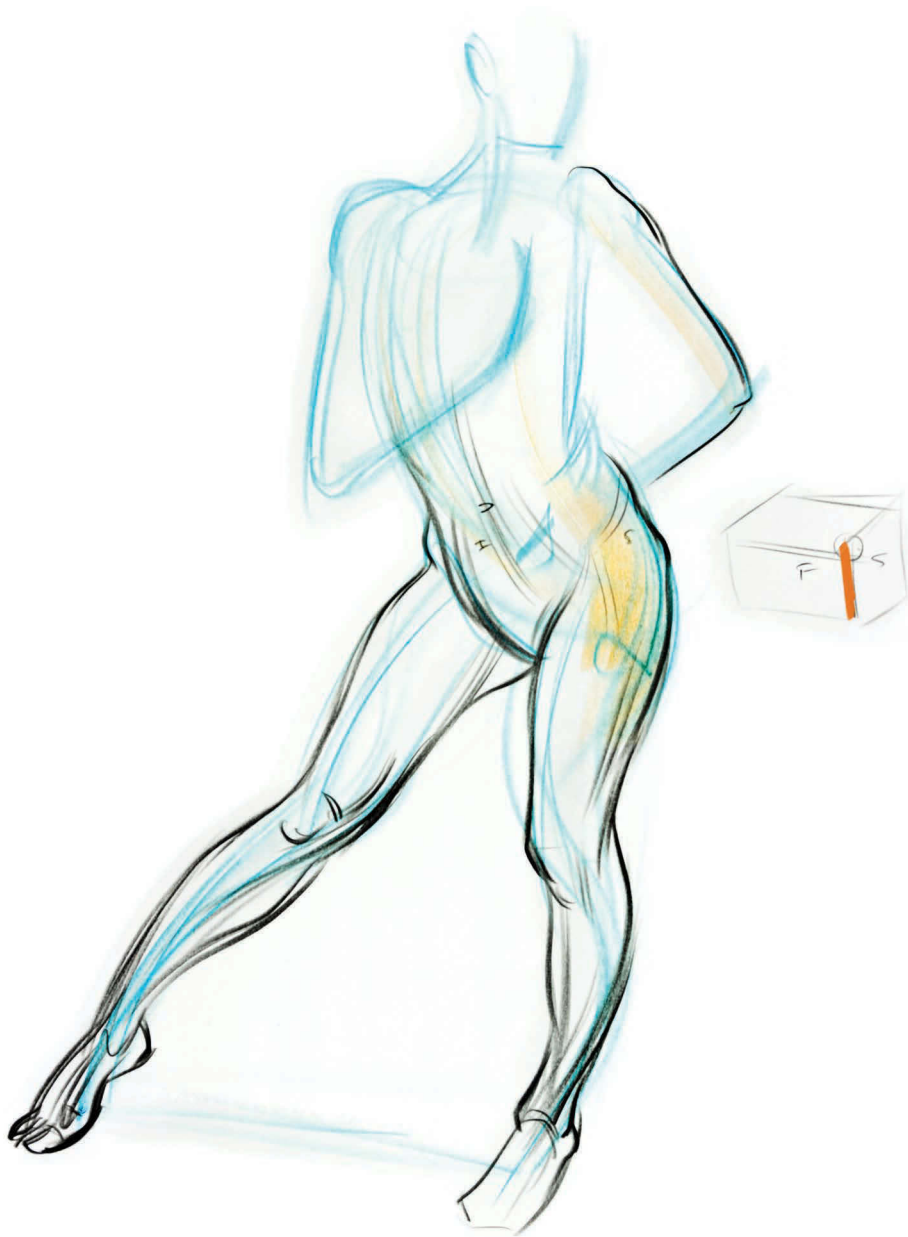


Here, you can see how the rib cage and pelvis forms meet due to the surface lines found in that area of the body. See how I handled the hair to show solidity.

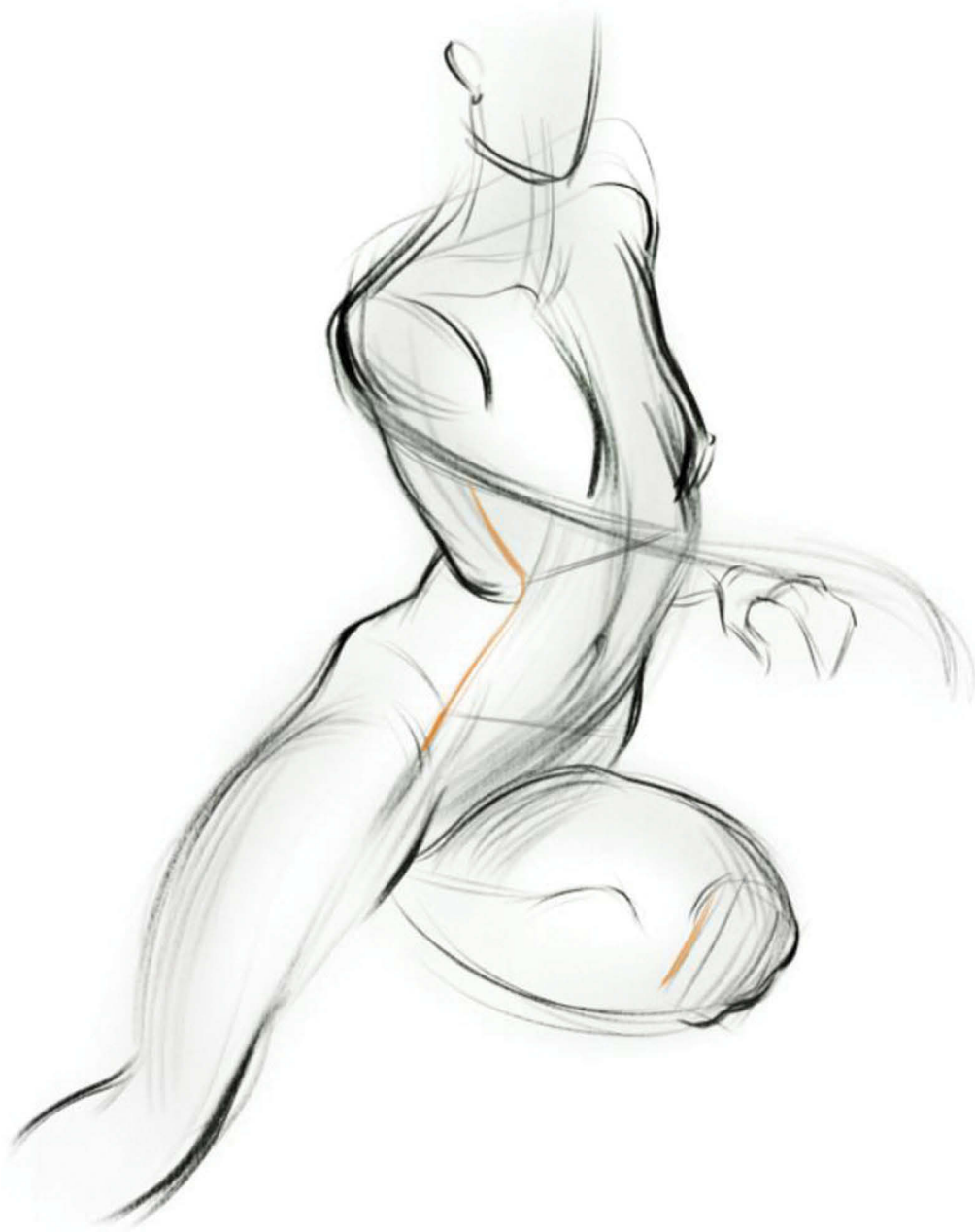
I have students cover as much of the model's body in FORCEFUL line as possible to speed their process of understanding. The more you do it, the faster you will learn it.



This sample shows the torso of the figure and how the turning edge, found in orange, moves with the different FORCES. Notice that the turning edge line closely mimics the far outside contour of the figure, clearly describing the front and side surfaces of the figure.



FORCE flows down into the structure of the pelvis. The small box to the right shows the form, the turning edge, and the peak of the iliac crest, circled. I use the iliac crest on either side of the pelvis as a structural marker to define the front plane of the lower abdomen. The vertical turning edge also helps me see the side plane of the pelvis.



FORCE surface line, combined with the understanding of the Turning Edge defined by the rib cage, pelvis, and the knee, creates a voluminous drawing full of FORCE.

2.5.2 Sculpting with FORCE

Step 1: Blind FORCE

Many drawing classes have an exercise called “blind contour” drawing. In my classes, I have students perform “Blind FORCE” drawing. The difference between the two is vast. Blind contour is done to teach you to copy the “edge” of the model. Blind FORCE is an exercise that persuades you to see FORCE travel through and around the model. It is extremely exciting and ironically eye opening!

So, let’s start the process of seeing FORCEFUL form with “Blind FORCE.” As you are sitting and observing the model, I want you to use your imagination to “fly” from your seat, like a tiny, ant-sized airplane, and make your way across the ocean to the land of the model. The model is hundreds of miles high and wide and has miles of depth. You travel across the model’s landscape to that first sweep of FORCE. You start drawing along with the movement of your FORCEFUL journey. You traverse over mountains, across plains and hills using your knowledge about the FORCE templates as your guide or map across this landscape. As you find an area of interest, you slow down and investigate that region of the body, that neighborhood.

Your eyes, mind, and hand are all in the same place at the same time. You **MUST** concentrate on being present! *Did I mention that you are not looking at the paper?* Yes, that is the whole point! Look and see FORCE without your mind creating what it thinks it sees.

There are other skills we learn through using Blind FORCE. One of the most important is drawing while your mind’s eye is in front of the paper, not behind it, staring at it. Students’ egos are what get in between them and the model. You must move out of your own way to truly see. I remember doing this exercise myself, and after a few poses, the massive weight of responsibility for the appearance of my drawing slid off my shoulders. As I mentioned at the beginning of the book, don’t make the act of drawing about your drawing, make it about your experience while drawing. The drawing itself is but a by-product of your time with the model.

Restrict your self from not looking at the paper at all to looking at the paper when you decide you really need to. The leap that students take during this process is nothing short of miraculous! You become aware of how much you lie when you draw and how much more interesting reality is than what your mind can conjure. Boring drawings occur because you have not yet seen reality.



Here is a 2-minute Blind FORCE drawing. I remember looking at the paper once. I completed the entire pose except for the model's left leg. Look at the information of the right knee and left foot. These locations show FORCEFUL surface lines.



This 5-minute blind drawing shows an exciting experience. Look at the rhythm of the rib cage to the hips. Notice all of the form in the left arm, scapulas, butt, and feet. Look at the line variety again. I love the feel of FORCE trying to explode out of the right hip and abdomen and then reconnecting back into the right buttock.



The entry of this Blind FORCE ride started at the top of the drawing, along the rib cage where I quickly slid down the path of FORCE, across the abdomen, and over to the hip. Notice all of the sculptural surface lines in these regions of the body that express my interest in their FORCES and forms. Travel down the leg presents the speed of transit to the boney ankle and heel in the foot.



During this experience, FORCE and form combine to create the figure. The surface lines over the arms, lower stomach, and thigh all discuss the direction of FORCES over the surface of the body.



Throughout the process of Blind FORCE, I give students more opportunities to look at the page. For instance, at the beginning, they look down every minute, then 30 seconds, 15, and finally when they decide to. Here is a drawing of Mike D.'s that is under his control. Look at the level of specifics with fluidity and form. It feels close to the model. See the interior line work that sculpts the model's form.



While teaching in Rome, I had students go through the Blind FORCE exercise. This drawing was one of my demonstrations of that process. See the FORCE of the upper back push into the bottom edge of the deltoid or shoulder and then travel down the arm. Lots of FORCE surface lines can be found along the side of the torso driving FORCE to the abdomen.

Step 2: Combining Sight and Technique

Having experienced Blind FORCE drawing, you see FORCE throughout the entire figure, and this in turn will make you aware of structural and rhythmic connections. Remember that the edge of the model exists because of where you are seated relative to the model. If you or the model were to change location or position, the edge would change.

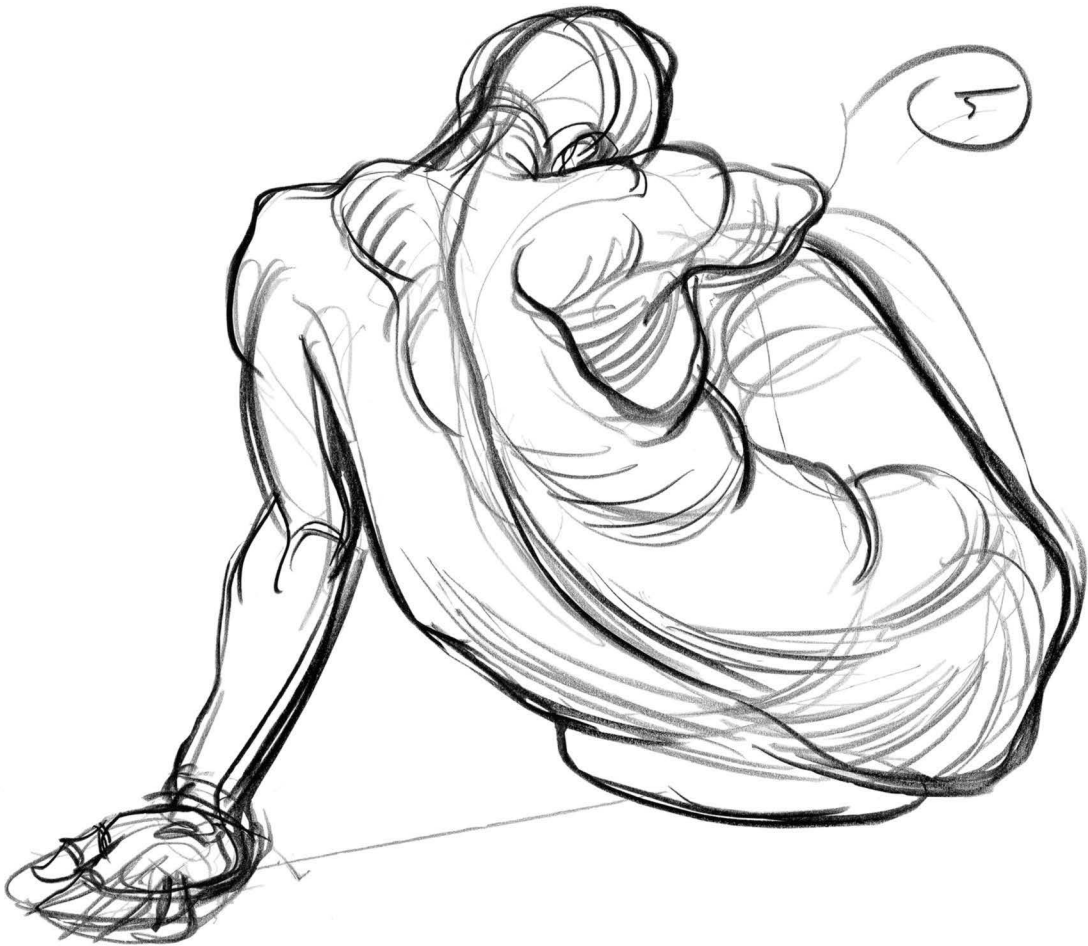
To successfully move forward with sculpting FORCEFUL form surface lines, draw only while looking at the model, not the page. Stop as often as you need in order to get a sense of your location on the page relative to the rest of your drawing. Stay with the model as long as you can. In time, you will be able to look at the model and remember the truth of what you saw and return to looking at the page when you draw. I find that even with over two decades of practice, when I find something wrong with my drawing experience, it is because my mind created a lie that I need to find with my eyes and therefore see the truth instead.

Michelangelo comes to mind when I think about line showing FORCE and form. He was the master at making a complex group of muscles, such as the back, work together as a whole. This is no easy task. The vast sea of bulges and depressions could leave any artist confused and lost.

I had not heard of Heinrich Kley until representatives from Disney told me about him. At that time, I was lacking form and Kley's drawings were not. Kley was a German artist who illustrated satirical cartoons for Germany's newspapers. These illustrations are full of life and whimsy. He confidently drew with solidity in mind and used line to do it. His illustrations depict centaurs and satyrs, dancing elephants and gators, giants, and fairies, all in service of his political opinion. His book is readily available and costs less than \$10: *The Drawings of Heinrich Kley* from Dover. This is a worthy investment.

A contemporary master at imbuing line with FORCE and form is Frank Frazetta. Some of you may know him as the great fantasy painter that he is, but his black and white ink work is intelligent and beautiful as well. His brush strokes evoke solidity and FORCE at the same time. Check out *Frank Frazetta, The Living Legend* to see some great examples of this.

Go and experience the sculptures of Richard MacDonald, another modern-day master. His sculptures will give a taste of what your drawings should evoke in actual three-dimensional space. His work is quite incredible and his representations of figures that occupy space through rhythm, form, and poetic power leave me with a sense of awe. MacDonald's work can be seen on his website of the same name.



Look at how the lines evoke a direction of FORCE and form at the same time. See how the lower back sweeps into the legs. His left arm opposes this major direction and supports the upper body's sweep.



Another Rome drawing tells us about all the form I investigated in the model's lower back and how the form turned over the edge to the side plane.



The surface lines in this drawing truly clarify the structure of the foreshortened leg and the top of the abdomen. Those found in the abdomen drive in the direction of FORCE.

FORCE surface line supports two functions within this drawing.

1. The pull of FORCE from the bottom of the rib cage to the opposite side of the pelvis.
 2. The roundness of the leg projecting out of the page.
-



FORCE surface line pulls once more from the bottom of the rib cage, down across the stomach. It also defines the FORCE and roundness of the legs, again making their way out toward us. Both this drawing and the last use FORCE surface lines in the same way within two entirely different poses.



Combining FORCE surface line with turning edge allows me to develop clear enough form to define musculature. Here we see the deltoid, latissimus dorsi, trapezius, and the sternocleidomastoid. To the right is a callout to show how the upper arm is at first simplified in my mind.



This drawing focuses on building anatomy through using FORCEFUL form line. See how the surface lines all connect from the back to the arm to best present the pulling that occurs due to the raised arm, stretched forward in space. Imagine you are touching the model with the drawing utensil, this helps you land the lines on the surface of the model.



So, here we have an experience in sculpting the model. Look at the surface lines of the left forearm. They show us the volume and how FORCE sweeps down toward the hand. See the shadow on the leg, and how I adhered it to the body instead of creating a flat shape.



I focused on sculpting the bottom surfaces of the model so I could deeply comprehend the effects of gravity in this pose. Look at the sense of speed instilled with FORCE surface lines in the right thigh, shooting back into the page.



Look around this drawing and see how the lines of structure also describe FORCE. I started this drawing with the sweep of the back. These lines describe FORCE and form.



Again, surface line helps describe FORCEFUL form. We see the direction of FORCES and how the forms are affected by them. Look at the rib cage sweeping to the abdomen. You can see rhythm in the deltoid and the outer edge of the triceps. Notice the subtle line contrast on the head between the hardness of the scalp and the softness of the model's hair.



Fewer and fewer FORCE surface lines are used, but there is just enough to define form where needed. The lines along the bottom of the deltoid describe its edge. Along the ribs, the actual serratus muscles pull down to the edge of the pelvis. A few lines on the pelvis and the bottom of the quadriceps present the thickness of the upper legs' musculature.



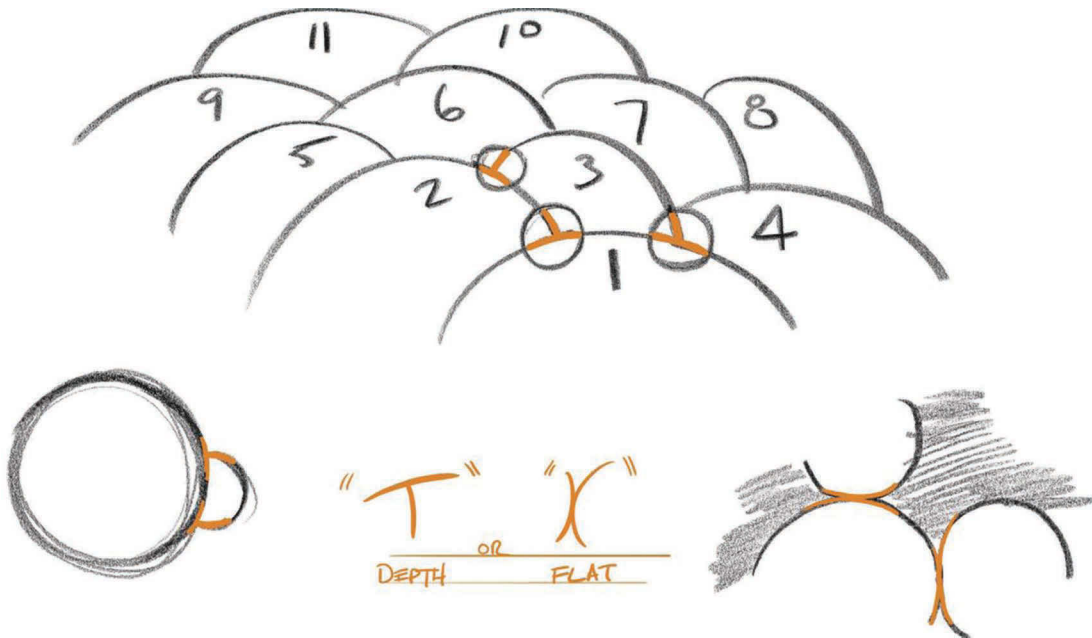
Lines are used in an efficient and effective manner to help us feel the solidity of the model's form. The thickness of the feet and the pressure put upon them by the model's weight are revealed by all of the surface lines. Look at the knees and the roundness of the rib cage for more structure. This is still in four-point perspective.



High drama and speed, coupled with efficiency of form, create the drawing for the cover of the book. When the model took the pose, my first big idea was of a spy, in an action moment, firing his gun while kneeling on the ground. Notice the repetition of grouping two or three marks in strategic areas to show the direction in space of form, for example, the obliques, the top of the leg, and the forearms.

2.6 OVERLAP AND TANGENTS

Let's address some visual rules of space.



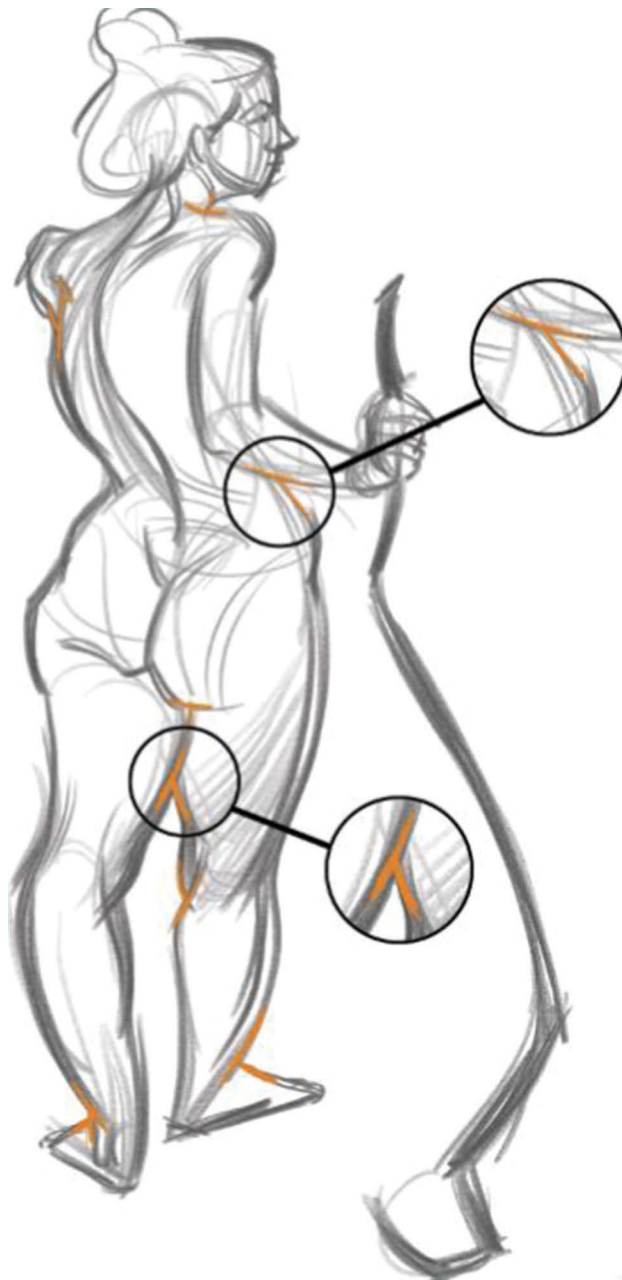
The first visual rule is overlap. See how it is that shape 1 is closest to us and 11 is farthest away. This is all done with overlap. Overlap occurs when one line stops as it touches another. This makes it appear as though it has gone behind it. The circles in the bottom left corner also give us this depth effect. I have heard some instructors call this the "T" rule because of the intersection creating a "T."

At Disney, they made a huge fuss about tangents, and rightly so. As the drawing at the bottom right shows you, if you have a tangent or two lines just touching one another, neither takes dominance in space and this lack of spatial priority causes flatness. "X" linear connections are what cause this. Decide what is closest to you and see the journey back into space. All three of the circles feel as though they are on the same plane. Overlap helps evoke foreshortening, as we will discuss further in this chapter.

With all of these concepts in mind, as you draw the model, ask yourself what is closest to you and what is farthest away. Enjoy the journey between the two moments and present it using overlap ... beware of those tangents!



Minimizing surface line allows us to now see form in a clear manner. This in turn helps us create form and depth with the concept of overlap. See how we travel down into the page, past the latissimus dorsi at 1, down to the lower abdomen at 4.



We have come to the point where we have a solid structural drawing without all of the surface line. The centerline of her back, her spine, helps set up all of the structures. The buttock and hip area show plenty of overlaps describing depth. Look at where two lines meet and which one moves over the other. The two callouts here zoom into regions of the drawing showing the overlap "T."



Here, I have called out all 17 of the overlapping moments that bring spatial believability to this drawing. The most important ones are found where the arm is brought in front of the leg and the upper back. More subtle scenarios are in the abdomen, the neck, and the hand resting on the upper knee.



FORCE aggressively climbs up the model's vertical right leg. When we crest the hip, we quickly shoot back into space over the upper body. See the hip in front of the stomach, with the rib cage beyond it. Look at the lats, and the shoulder blade resting on the rib cage, and the head over the horizon. Overlap helps divide the back into left and right halves.



1. The most telling overlap here is the rib cage stretch beyond the hips in depth.
2. His right arm has extreme foreshortening here. We move from the deltoid to the bicep and elbow into the page. Then, we make our way out from the forearm to the hand with the face lying just beyond it.
3. Here is a more casual progression through space still created by overlap. Also see the sweeping surface lines that assisted me in finding the model's forms.

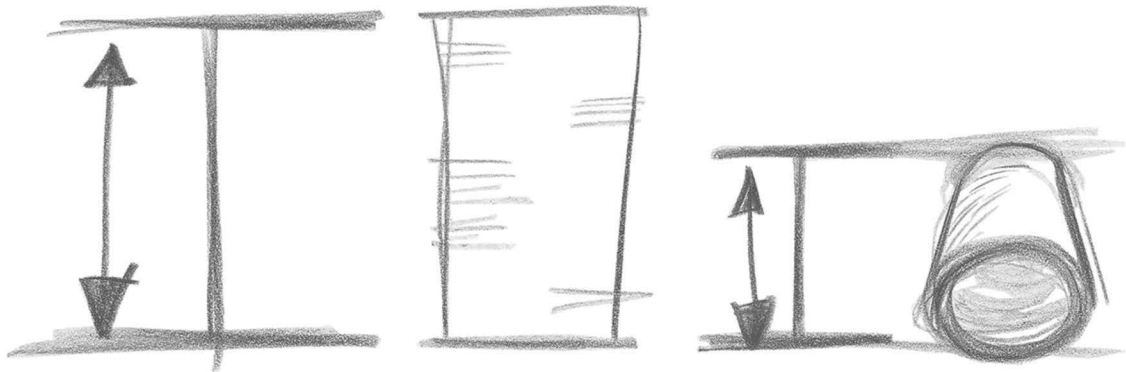


In this drawing, the model's elbow is closest to us. The rest of the model falls behind it due to overlap. A quick visual aside: I was taught that a heavier edge on an object with less interior information makes an object punch forward. Now, when I draw, this comes to me automatically. I see closer objects as having thicker edges to them. In this drawing, it helps push the entire right arm slightly away from the model's body. In the end, you are trying to show your thoughts as clearly as possible, so this is another approach to consider in combination with overlap.

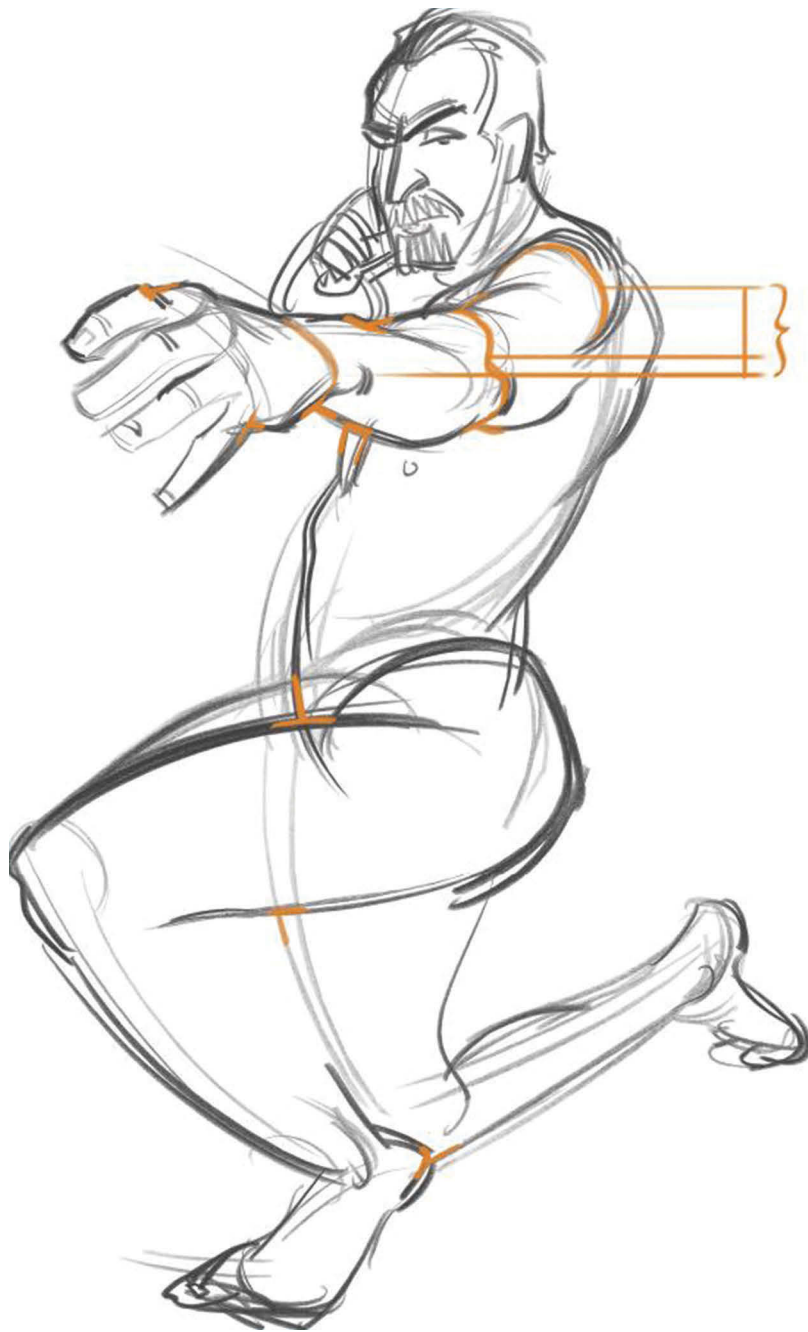


The success of the overlaps makes this drawing legible. Besides all of the overlapping moments, notice the surface lines on the deltoid that sweep us down into the rhythm of the arm.

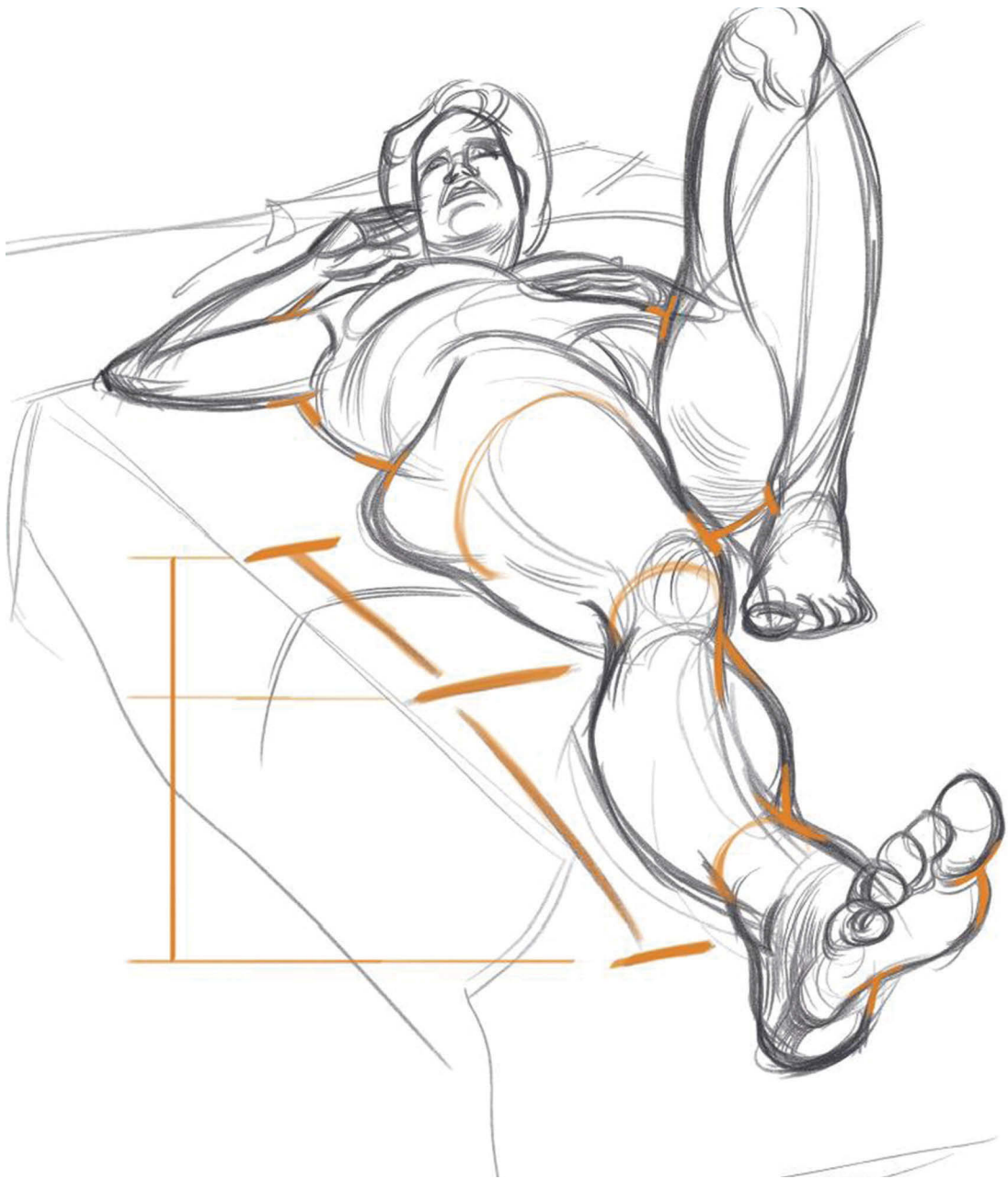
2.7 FORESHORTENING



Foreshortening is the act of shortening the distance between lines in the drawing to create depth. In this drawing, we have a tube. Its distance from top to bottom is shortened in the drawing on the right. This immediately tells our brain that it is coming forward. The combination of foreshortening along with size develops dramatic depth. When students ask me about foreshortening, the first suggestion I have for them is draw what you actually see. Your mind wants to flatten out what you see. Accept the truth. When a leg for instance is foreshortened, look at the distance between the joints. Notice how close they are to each other.



The foreshortening here is quite dramatic. I marked off the shoulder, elbow, and wrist joints in orange so we can see just how close to one another they are vertically. Overlap helps describe form in this foreshortened space along with the shortened distances between the joints of the arm.



I drew the distances between the joints of the model's right leg. Imagine her standing and how much longer those distances would become. Notice that the distance between the hip and knee is shorter than the distance between the knee and ankle. Distances shorten as they move back into space. I also called out many of the overlapping moments to present their support of depth in this drawing.



Our triangular trip through space takes us from the model's right foot to her head and then to her other foot, where we see a digression in size that makes us see space or depth. Again, also notice the overlapping to push space. See the foreshortening of the model's right leg relative to the left. Look at how close her big toe is to her hip!

All of the topics covered in this chapter are to assist you in describing FORCEFUL form. You need to be capable of describing forms moving with rhythm in a four-dimensional space. In animation, surface lines are not evident in the finished product. Moving shapes are important. These shapes are created via a true understanding of FORCE and form, or in simpler terms, curve to straight. That is the topic of Chapter 3, FORCEFUL Shape.

FORCEFUL FORM POINTERS

1. Learn four-point perspective. See the world through space.
 2. Practice Blind FORCE. Travel with your mind's eye, beyond your paper, to the model, and follow the path of FORCE around the surfaces of the model. Time yourself from not looking at the paper at all to looking at the paper when you decide you really need to.
 3. Sculpt the model. Think about actually touching them with the tip of the drawing utensil.
 4. Draw the human head many times to see two- and three-point perspectives.
 5. Pay attention to anatomical centers.
 6. Learn anatomy.
 7. Walk around the model to become aware of roundness and the change in the contour.
 8. Sit close to the model to see more obvious depth.
 9. Get in front of your page while drawing, not behind it.
 10. Pay attention to foreshortening and overlap.
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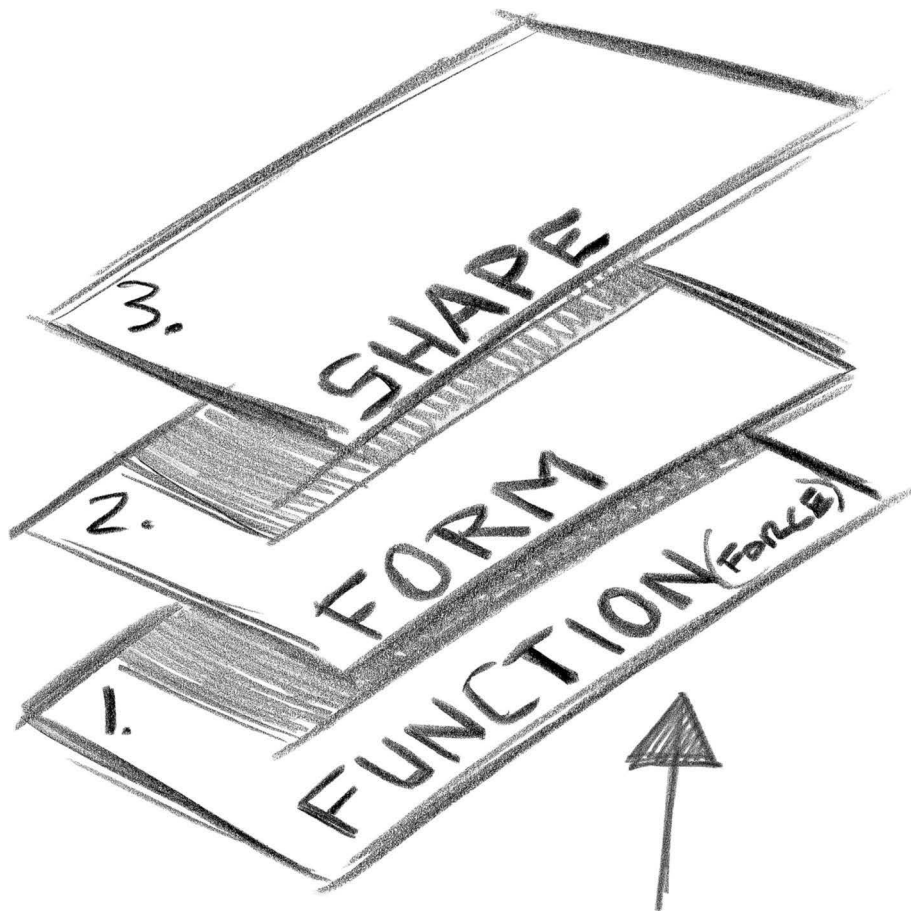
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Chapter 3

FORCEFUL Shape

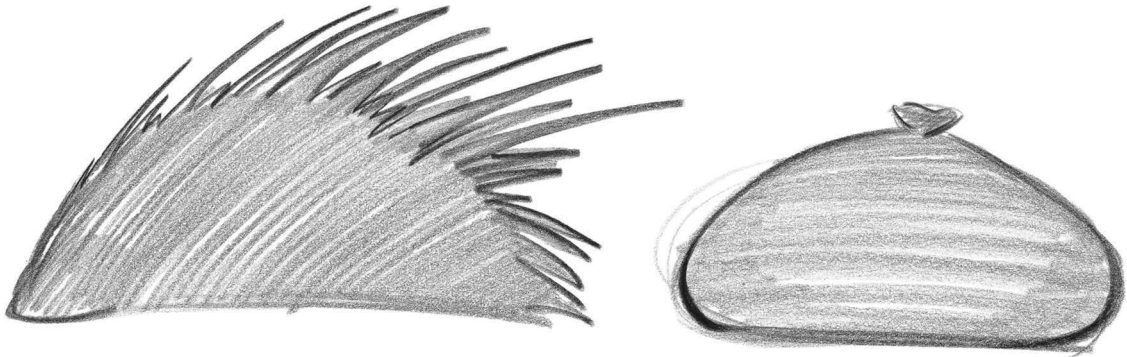
John Ruggieri and the late Jack Potter, both of whom were instructors at the School of Visual Arts, helped me recognize shapes while looking out at the world. I became curious about the expressiveness and efficiency of shape. Seeing the world as shapes is exciting and somewhat abstract.



Let's make believe that we are looking through filters when drawing. In Chapter 1, the filter we peered through was FORCE and its different aspects. Chapter 2's filter was form and some pictorial tricks that gave us space or depth. This chapter's filter is shape. Shape exists because of the first two filters.

Shape gives us immediate length and width. Shapes insinuate depth through overlap and scale. The goal by the end of this chapter is to see that FORCE, form, and shape are one! There is no form without shape, there is no shape without form, and FORCE dictates the function of them both.

3.1 FORCEFUL SHAPE



Here, we have the silhouette of a porcupine and a water balloon. One shows us hard, pointy aggressiveness, while the other is soft and placid. Nature has done a tremendous job of designing its world based on function. To break both of these shapes down to their simplest components, they are both created by the relationship between a straight and a curved line. The curve represents an upward FORCE, while the straight tells of the hard surface on the bottom of both forms. This straight to curve shape is the beginning of FORCEFUL shape. Look for this shape in the figure drawings that follow.

Working at Disney made me realize that there is such a thing as appealing and unappealing shapes. I prefer FORCEFUL and NONFORCEFUL shapes. If you truly understand something's function, it will be appealing.

To discuss NONFORCEFUL shapes, look at the old cartoons where the characters had rubber-hose arms and legs. The shapes of their appendages did not lend themselves to asymmetrical, FORCEFUL energy. Their parallel quality created dysfunctional shapes.

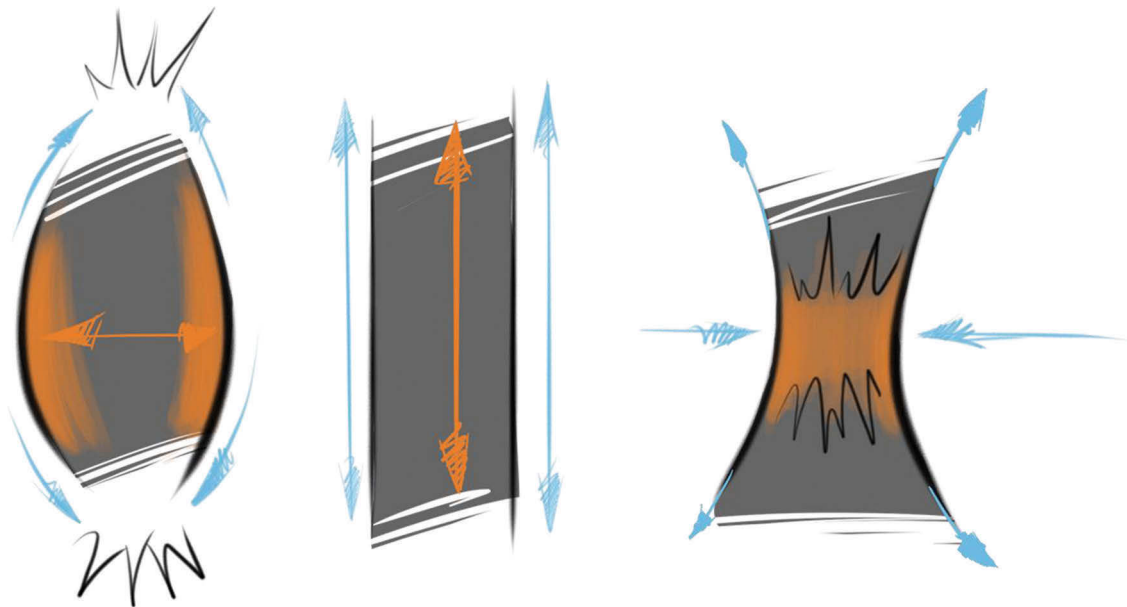
Appealing design, or FORCEFUL shape, helps us see FORCE and form in the construct of a shape. We do this through awareness of straight to curve. We touched upon this in Chapter 1 as it related to FORCE. Now, the relationship of the different FORCEFUL lines creates FORCEFUL shapes. Straight is hard structure and curved is flexible FORCE.

The trap I find students fall into while drawing with shape is forgetting about FORCE and form. The theory of FORCEFUL shape is not something you have to assert upon the figure. Like the previous topics we've discussed, FORCEFUL shape is a reality. Learn to see it.

Effective shape comes from the combination of FORCE and form.

3.1.1 The Don'ts and Do's of FORCEFUL Shape

Since we have gone over what kinds of lines create FORCE and form, let's discuss what kinds of shapes don't and do. Notice their similarity to the rules of FORCE from Chapter 1.

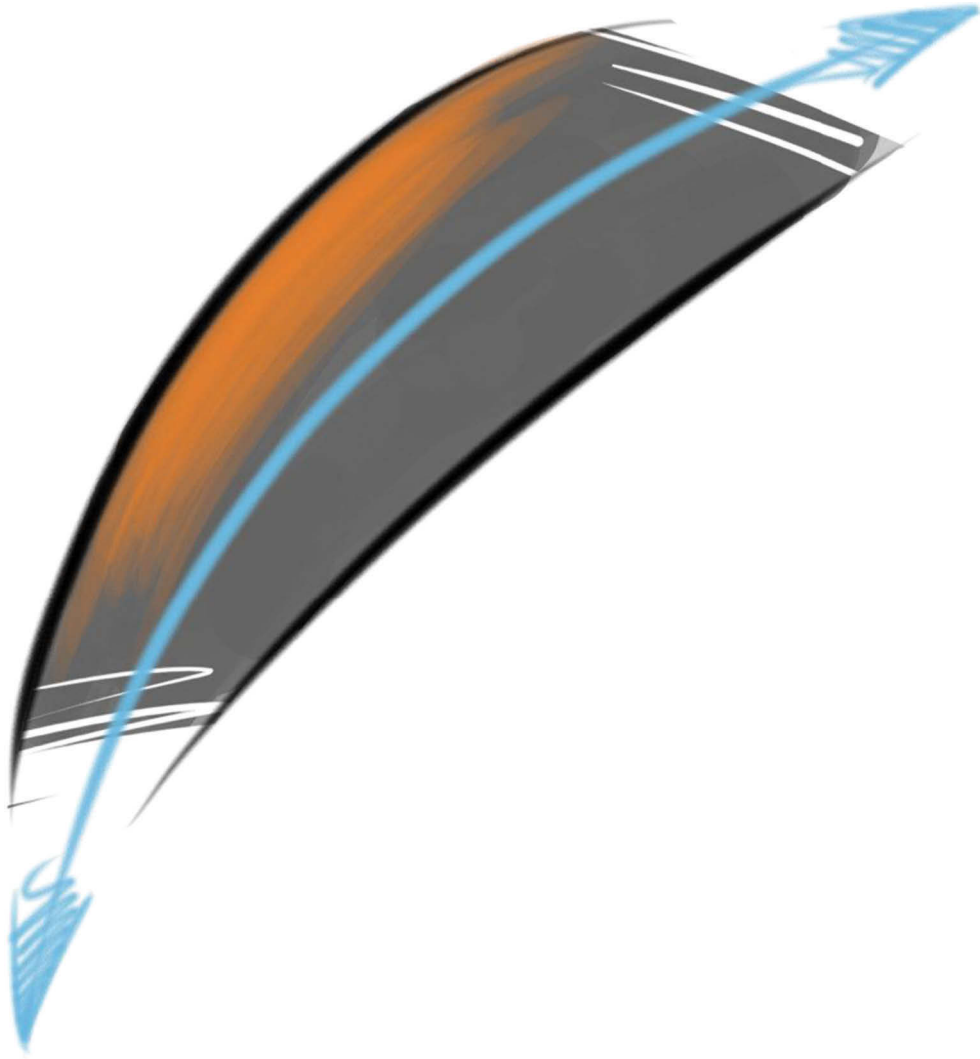


First the don'ts.

Left: This is the wrapped candy or sausage shape. FORCE collides at the top and bottom of the shape due to the symmetrical outward Applied FORCE on either side in the center.

Center: Here is the pipe or tube; parallel lines create the symmetrical shape. There is no opportunity for FORCE to move to a new location across the shape.

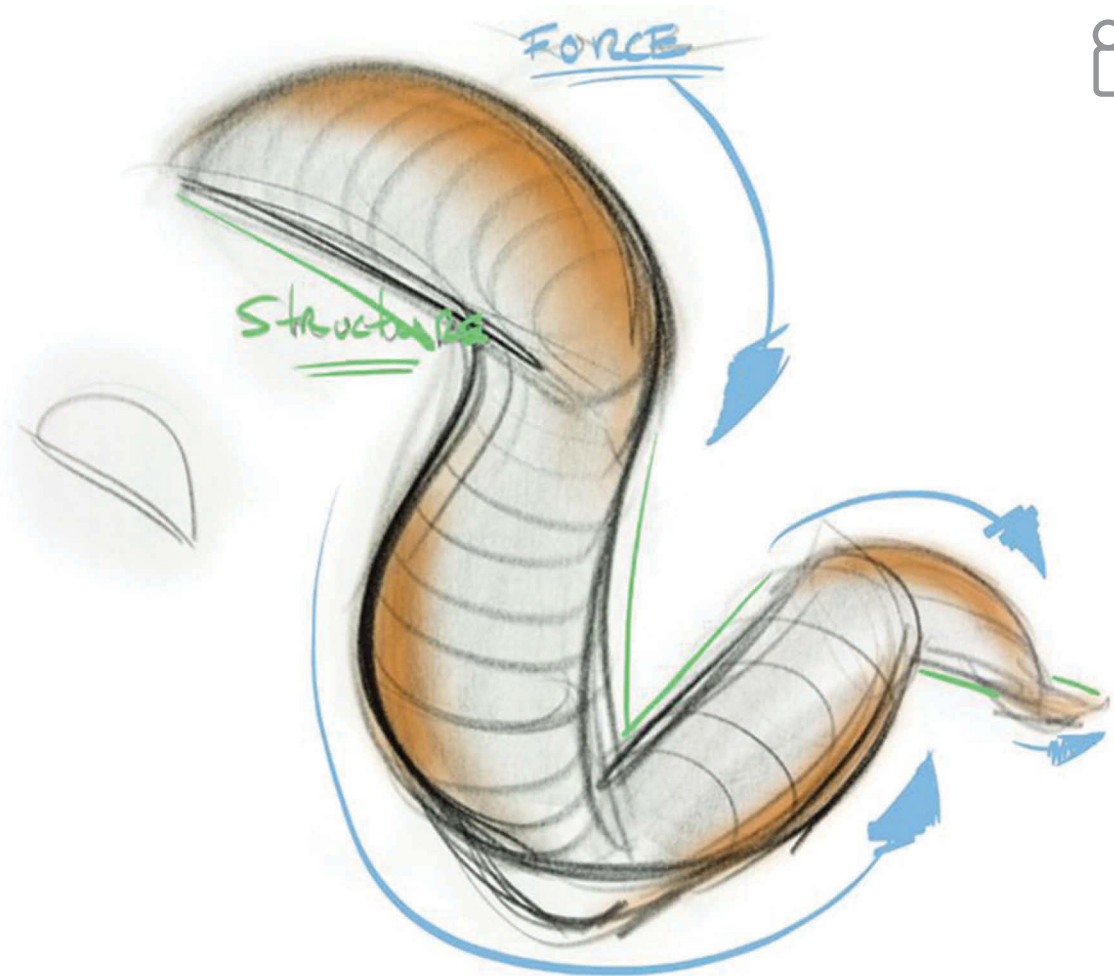
Right: The pinch squeezes FORCE symmetrically on either side of the shape. FORCE flares out on either side, not contained in the rhythms of the body.



Now let's talk about the do's.

1. Draw oblique FORCES. This is what creates rhythm. Think of the skiing analogy I made earlier.
 2. See the straight to curve simplicity in the figure. Here, we have created a shape that has function or FORCE to it. It is appealing because of its contrast in ideas, and it also has direction. There are no mirroring moments.
 3. The curve is the energy that moves through the shape, and the straight helps direct its path and give it structure.
 4. See the massive variety in which these rules can be applied. As long as the rules are not broken within shape design, there is much variety that can take you to realism or abstraction.
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3.2 FORCE BLOB

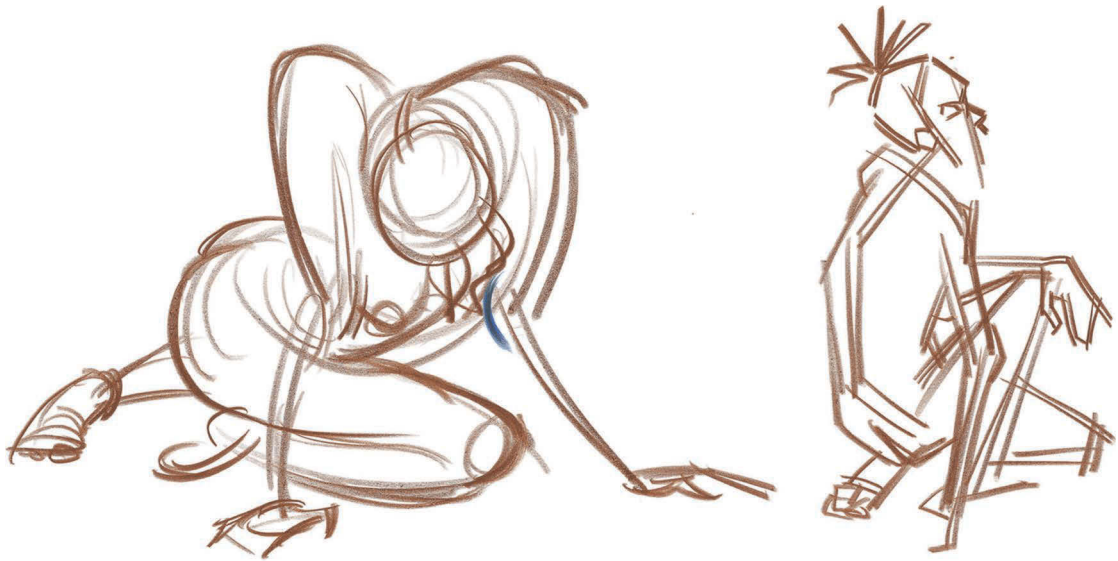


The FORCE blob is where we inject form into our two-dimensional FORCE shape. Also notice how one blob connects into the next based on rhythm. Green represents structure through a somewhat straight line.

This blob idea allows your mind to control the malleable form and shape combination that functions with FORCE.



The top of the page shows us three shapes: a circle, a square, and a triangle. None of these shapes evoke FORCE or form. They have no FORCEFUL direction due to their equalization and symmetry. They are without FORCE. The shapes underneath are full of life and fluidity. See how the top shape was transformed into an arm and the one below it into the torso of the human body. At the bottom is an abstract shape filled with form lines. This is the underlying concept to this chapter.



Before we move any further, I want you to see the differences between the effects of straight lines versus curved ones on a figure drawing.

1. Here is a FORCEFUL drawing with strong curves that move us through the model.
2. Look at what happens to energy when the figure is drawn with only straight lines. There is no FORCEFUL power. The drawing seems to be more about angles. If a figure is drawn out of only straight lines, it has no energy, and if it is all curves, it lacks strength and structure. The balance of the two within every shape gives us drawings with a sense of believability through contrasting ideas.

3.3 SILHOUETTE

Let's enjoy shape in a hierarchical manner. The biggest, most encompassing shape is the silhouette. The silhouette is the filled-in shape created by the outline of the entire object. It is a vital element to drawing. A silhouette helps us see the whole body clearly, without any interruption. You can see the story of a pose simply in its silhouette.

Silhouette allows you to see how all parts relate to each other on a flat plane. Here, it is the size of shapes that gives us depth. Shape will give you FORCE. A good silhouette can even imply form by its overlapping shapes and change in scale. Silhouettes can imply character, emotion, and much more.

“What is conceived well is expressed clearly.”

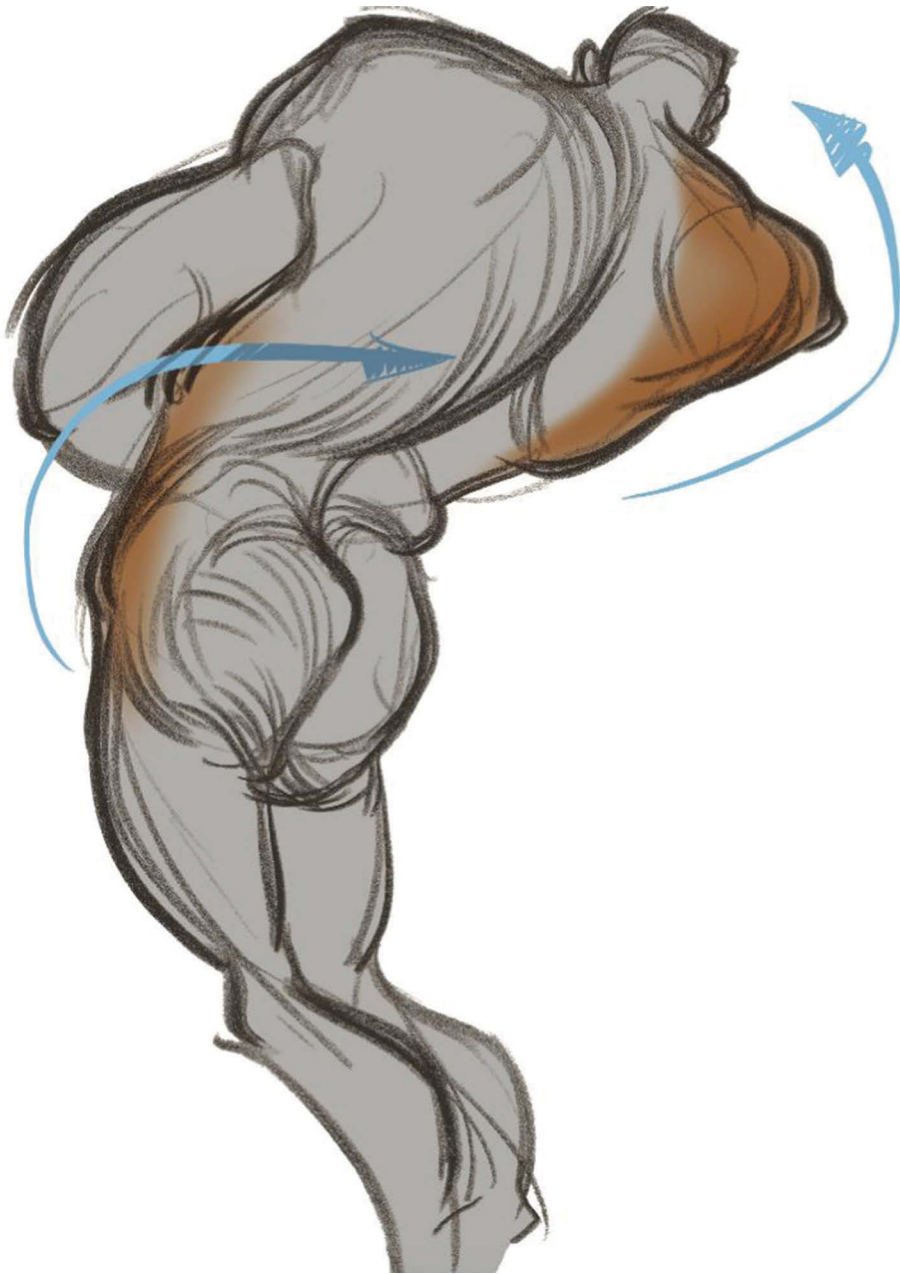
Nicholas Boileau



Here is a silhouette of a full female figure. Notice the positive and negative space. There is much said with just the silhouette of the figure. We can still see how FORCE pushes this flat shape from left to right down the page. Don't forget that the silhouette comes from form. That is why it is the third chapter! You must clear your mind to see that these flat shapes come from structure.

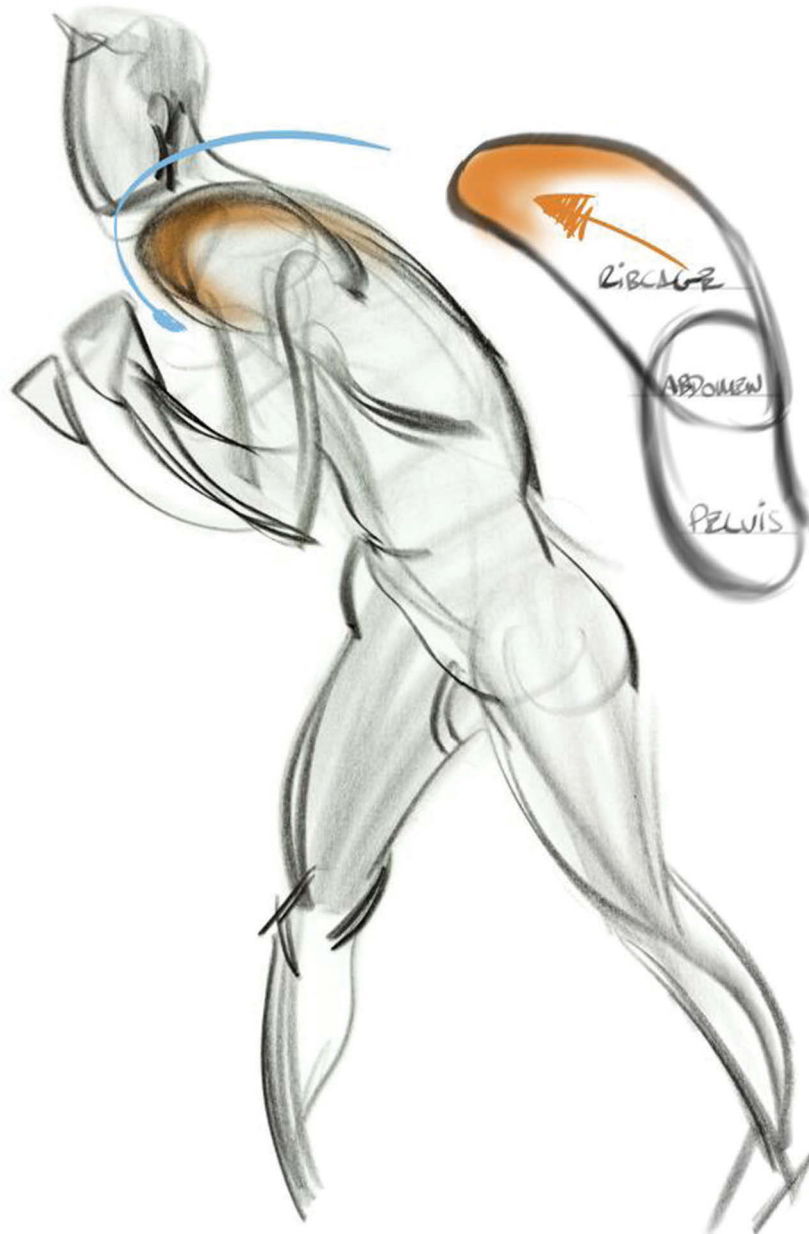


Keith's drawing has a great deal of FORCE and form. You can tell he saw the connection between the upper and lower body. I love the "drawing through" in the left arm and also the head seen through the hair. The FORCEFUL shape he saw in the model's left hand is excellent. The drawing's major problem lies in its silhouette. The orb that the model is holding gets lost within the shape of the body. The left arm is a clear read. I don't have students make things up to suit their needs, but what Keith could have done was physically move to obtain a better vantage point of the pose for a clearer silhouette.

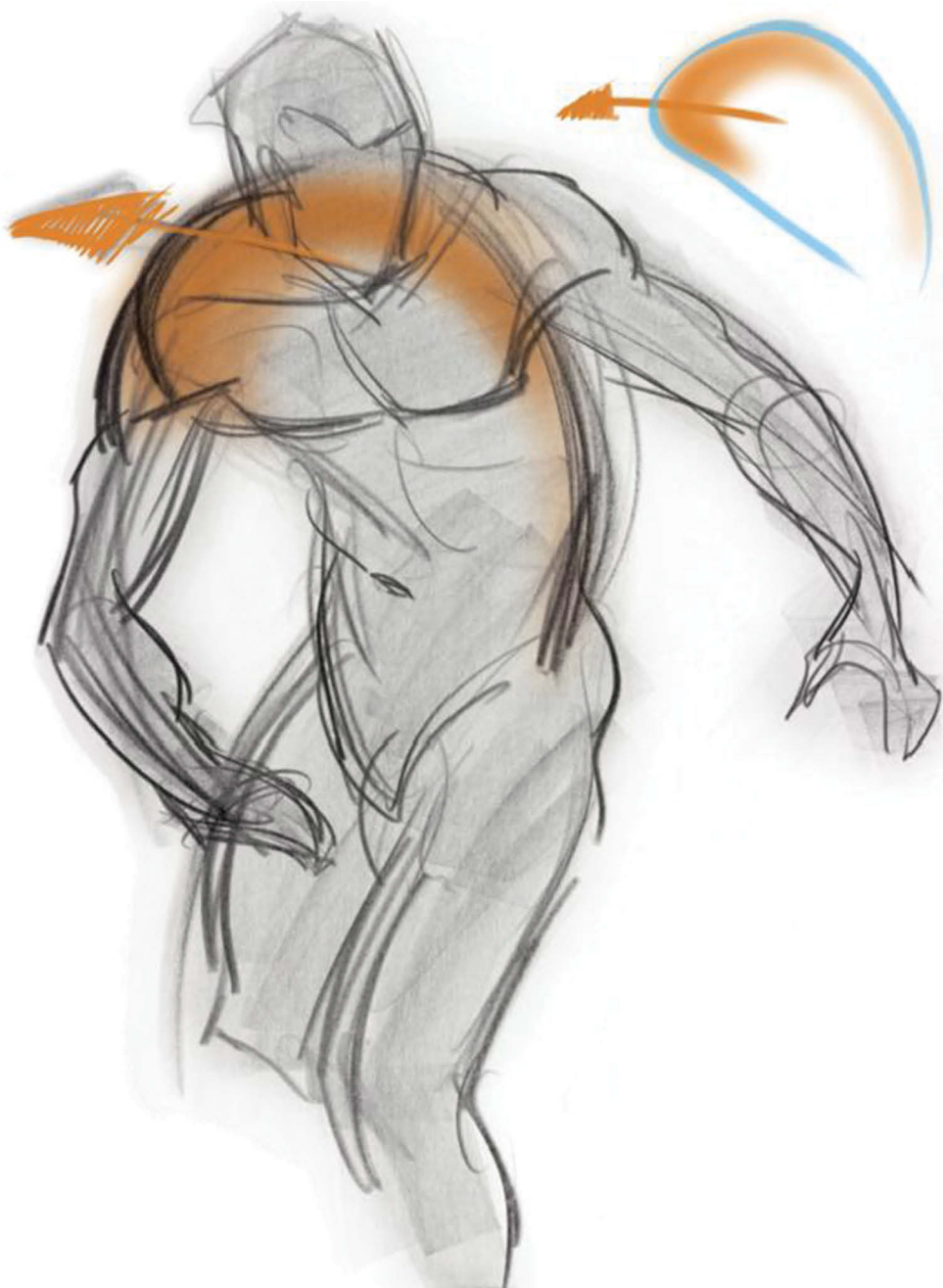


This drawing by Mike D. shows clear silhouette that was designed from FORCE and form. See the rhythms and how Applied FORCE created the push in the far-reaching right shoulder and then its connection to the left side of the pelvis. This rhythm is the body's attempt to balance itself against gravity. The right shoulder is the leading edge in this pose.

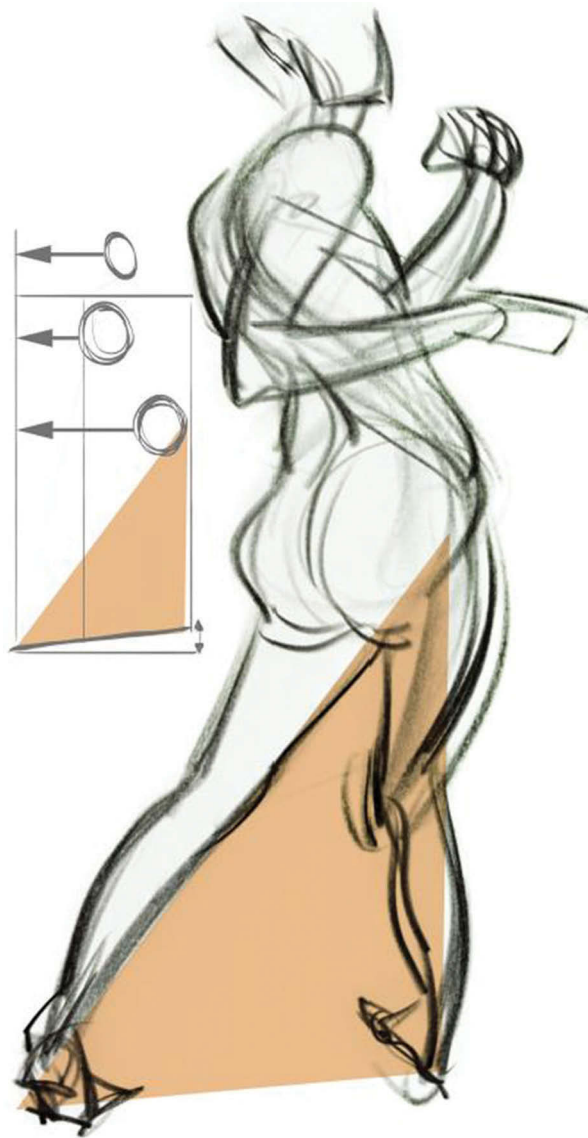
3.4 THE LEADING EDGE WITHIN SHAPE!



Shape has a clear LEADING EDGE, at times easier to see in a shape than just line. The leading edge is the edge of a shape found in the body that shows the direction it is moving in. Here, we can see that the shoulder lives at the leading edge of the upper body's shape.



Here, the leading edge resides in the top left side of the back, shown with the orange region. The opposing direction in the arms and the model's head make for a dynamic pose.

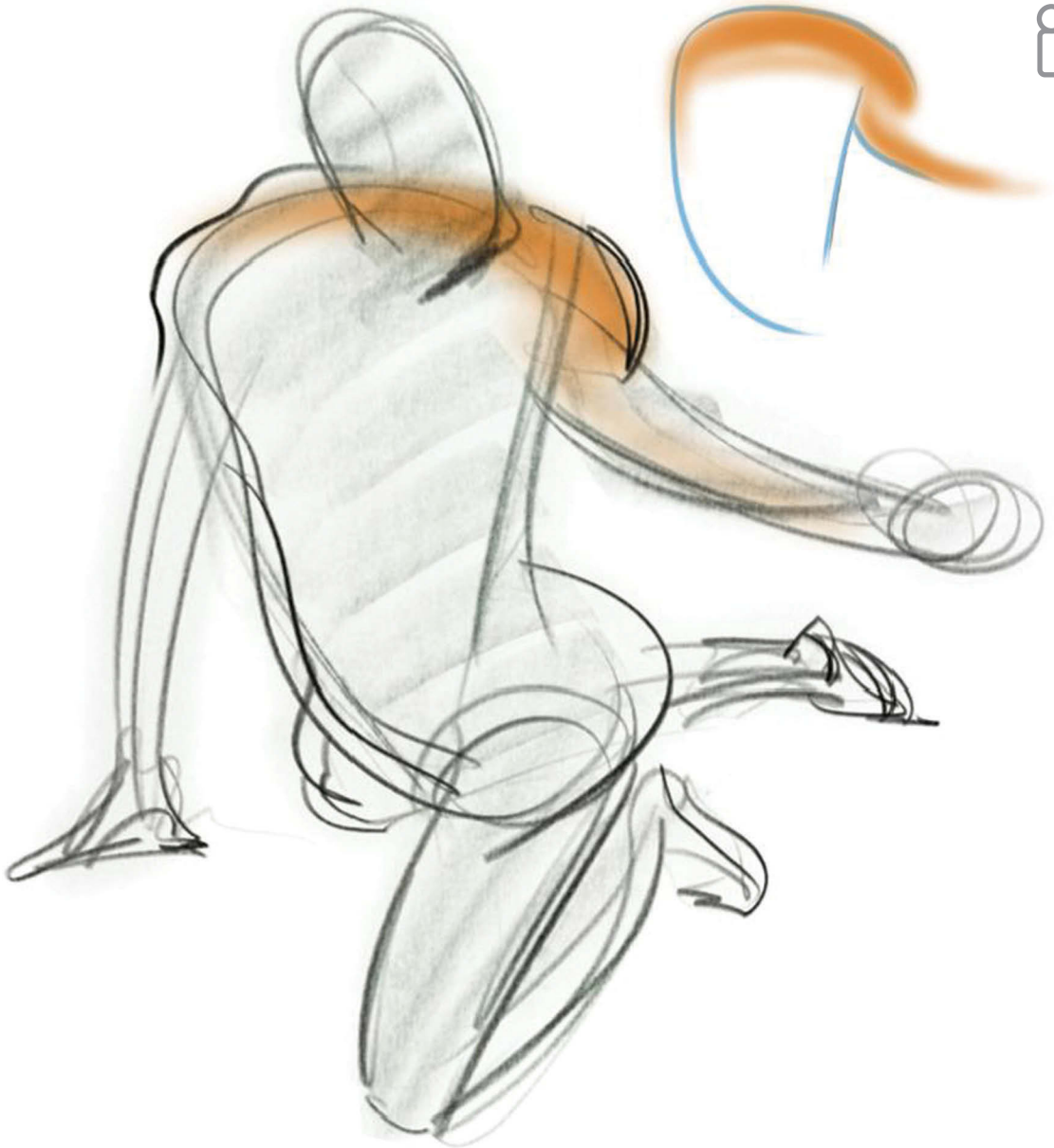


Once more, the leading edge is in the upper back, defining the rotation of the upper body over the right hip. Since we are in the shape chapter, I want to share another tactic I use to support balance. During standing poses, look for the triangular shape created by the negative space between the legs. This space, along with the perspective line on the ground, defines the triangle.

This triangle is important because based on its shape and location relative to the masses above it, it helps you see if the figure is balanced or not. Notice that none of the body's masses goes beyond the extended, left foot. They all reside over the width of the triangle. A pose can extend parts of the upper body over the triangle of the legs, but balance must be kept, usually by cantilevering with the arms.



Each of these full figure drawings was accomplished in 1 minute using FORCE, form, and shape. I extracted the torso shapes so you can see the design and where the leading edge is located due to the amount of Applied FORCE. Let's take a closer look at the FORCE shape as it moves to the limbs.



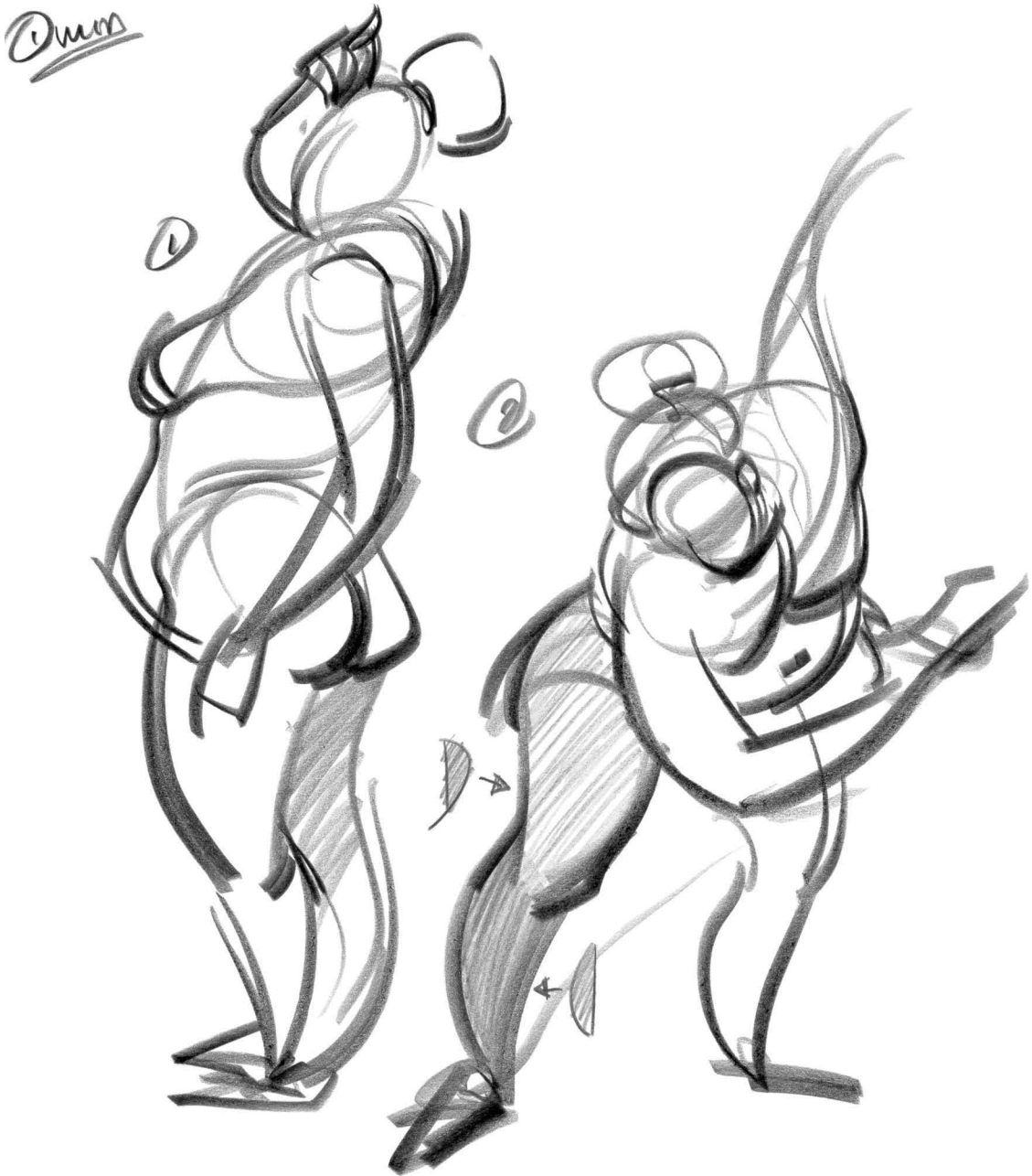
In this 1-minute drawing, the first idea I go after is the curve of the chest to the straight of the back's edge. Then the arms, leg, and head extend off of that main shape with smaller FORCE shapes.



This 2-minute drawing illustrates the emotional potential behind understanding FORCEFUL shape. The strong curve of the back is supported with a hidden straight of the chest region. The shapes are created with lines, and here, the dark lines of the shoulders inform us of the amount of FORCE applied there.



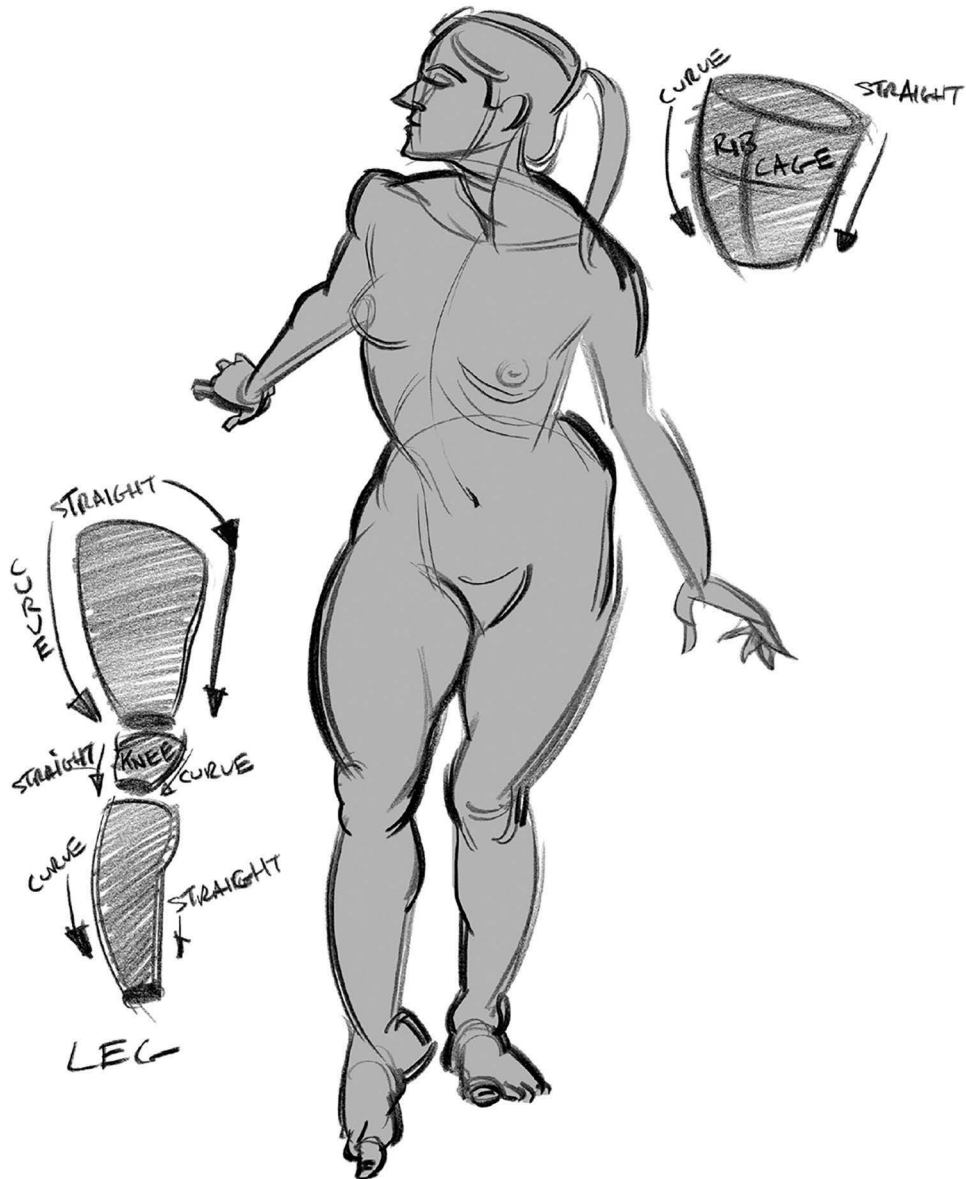
Straight to curve shapes can be found here from the torso to the legs and within the head. The callout in the top left is the shape of the torso into the arm. The long curve is affected by Applied FORCE, especially at the top of the right shoulder.



Here are some fast drawings that show the efficiency of using shape. Shape, along with some overlap, gives immediate form. The leg has straight to curve and the knee overlapping the shin gives the leg structure.



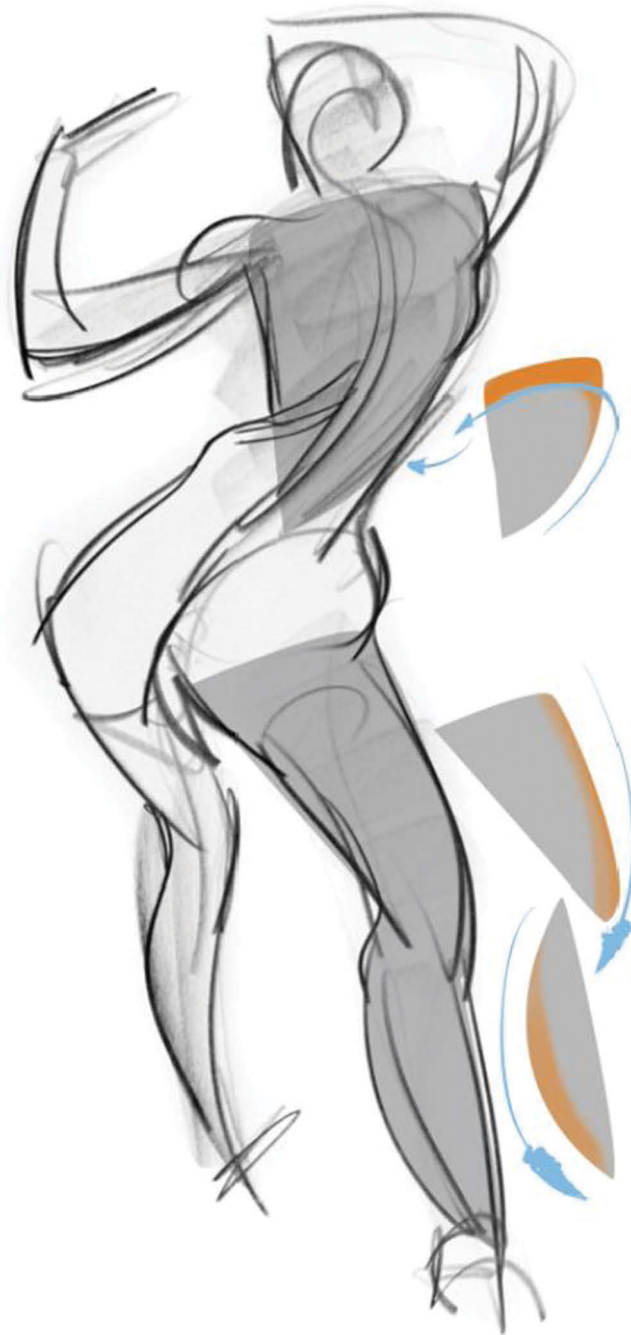
Look at the extremeness of the pose. See the straight of the chest relative to the curve of the back. We can see a smaller representation of this in the model's arm. The straight to curves move us from the deltoid to the triceps to the forearm and into the hand. Also notice the size difference in the feet for depth. See the thumbnail for clarification.



This silhouette gives us a clear contrapposto pose, the oblique balance between the torso and hips. This originates with the straight to curve of the upper body. We can see the plane of perspective that she is standing on because of the location of her feet relative to one another. Look at the straight to curve shape of her left hand and the size difference between both hands. This implies depth. Her facial profile gives us the direction that her head is pointing to. I also reveal the design of her right leg. See how it is structure that creates the shapes.



Mike R.'s drawing has simplified the body into the straight to curve shapes. Look at the back relative to the front of the rib cage. The right arm and leg are other good examples of this theory. The fluid hair shape is fun as well. See also the size effect of the foot here.



In this quick, full-page drawing, I aggressively move through the pose using FORCE shapes to define the rhythms of the figure.



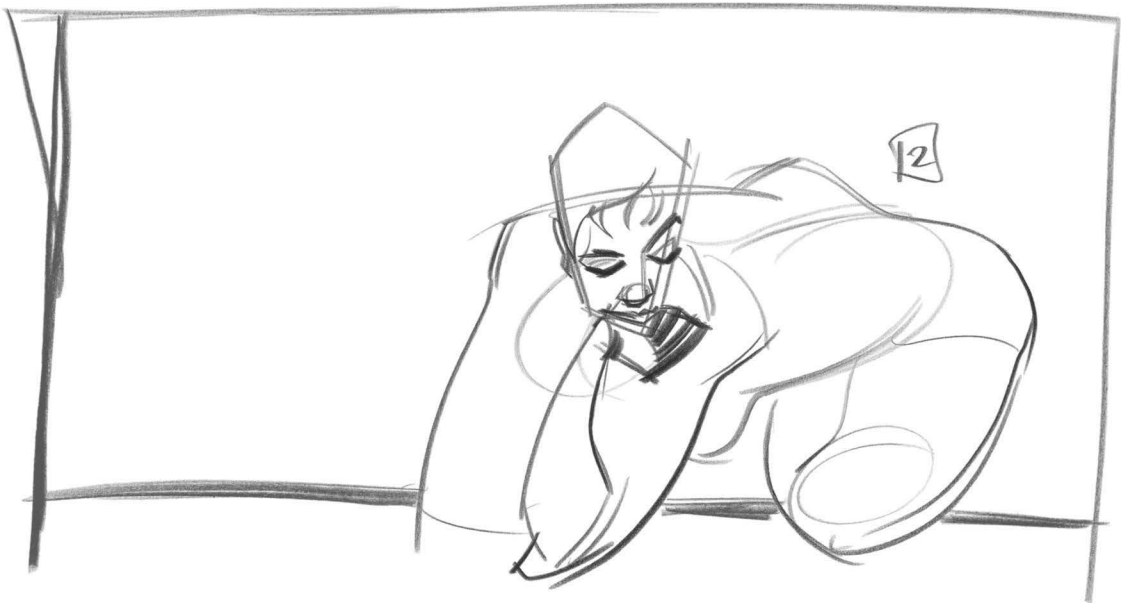
In this drawing, let's look at how straight to curve strengthened the story of the pose. The curve of the front of the model's rib cage and belly is not strong enough in the large drawing. He weakly leans to the left side of the page. Through seeing silhouette and the concept of straight to curve, I strengthened the push of the back into the belly with the straights in the upper back and hips. This helps the clarity of the rest of the pose as seen in the thumbnail. I like the strong curve of the left arm pulling on the belt.



The sense of straight to curve in this drawing starts to create an abstract and appealing quality to the work. Like a pole of strength, the straight of the lower back supports the FORCEFUL connection between the rib cage and the pelvis.



This experience was exciting in combining FORCE, form, shape, and some texture. Remember to see the big straight to curve ideas of the body to create a more FORCEFUL silhouette. You can see the straight line I thought about, going down the right side of the body. That helps us push the curve out on the left.



Here is a sample of just how efficient you can become with your line through the power of FORCEFUL shape. Look at the level of abstraction found here. Overlap becomes essential to fooling us into seeing depth on the page.

Going back to the hierarchical way of thinking, shape can be used on a large scale, to address first the greater issues and then the smaller ones. Again, we will start in a generic, graphic manner to pursue the issue of straight to curve design and then move on to specifics. Big straights to curves first.

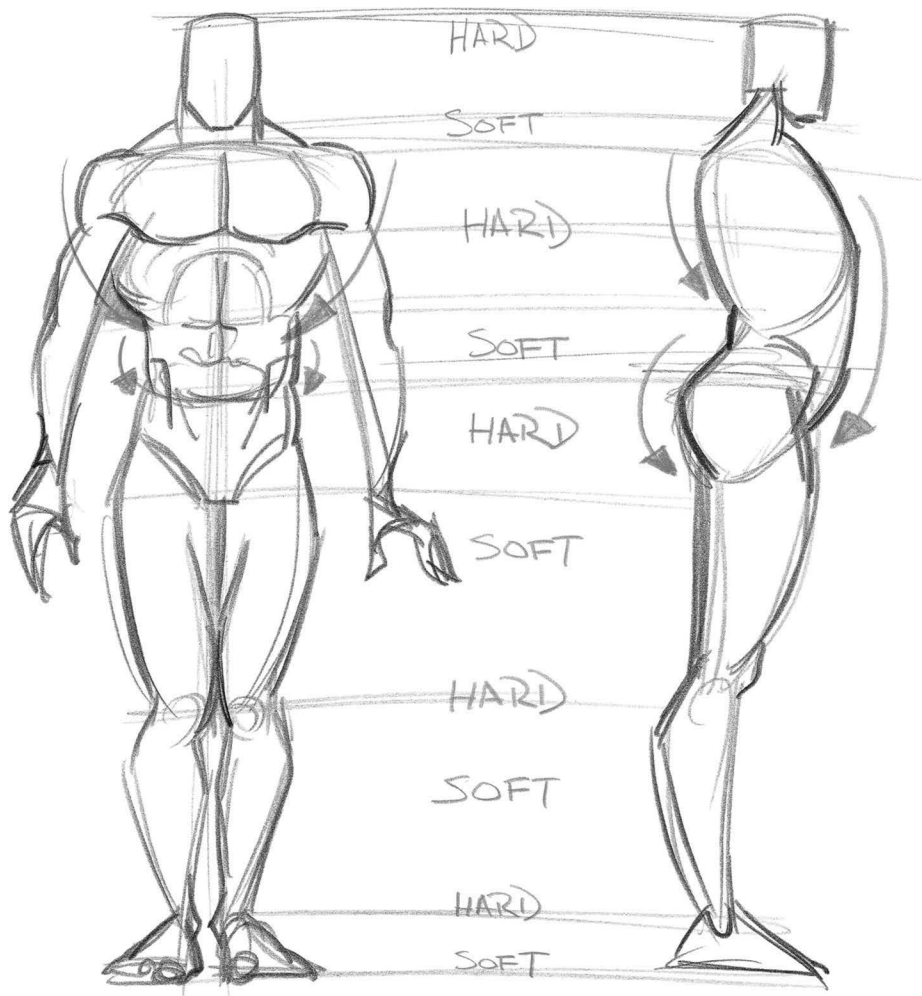


The largest example of FORCEFUL shape is her upper body. The left side is the straight and the right is the curve. This drawing is full of stronger against weaker curves, like the one in her right foot. This same shape appears again in the legs, arms, and the fold of skin, in orange, that wraps around her rib cage. Also, there is a subtle straight that runs from one knee, through her hips, across to the other knee with the bottom of her butt as the curve. I want you to understand that the idea of FORCE shape is hierarchical and can define the silhouette of the figure and also a particular muscle.

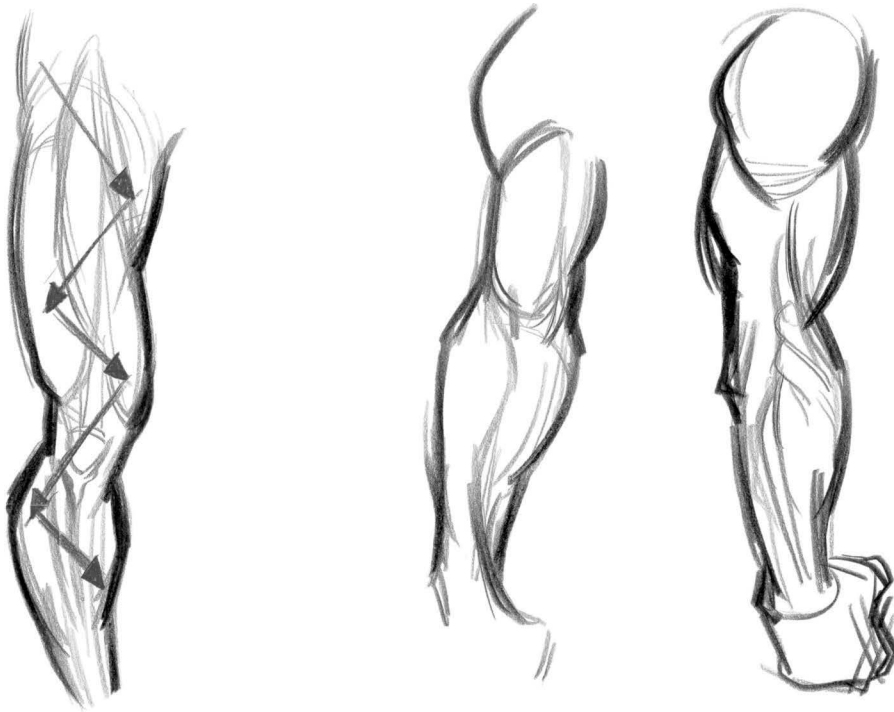
3.5 ANATOMY AS SHAPE

FORCEFUL shapes can be more specific. I want to discuss some powerful theories about the anatomy of the body that pertain to FORCE and rhythm as seen by FORCEFUL shape. The body, as I said earlier, is built to move. Its anatomy is designed in oblique angles from one area in the figure to another. These relationships allow mobility. If you exercise or are a physical therapist, you know exactly what I am talking about. The biceps are opposite in function to the triceps. The biceps bring your hands to your shoulders, and your triceps help straighten your arm. In my book *FORCE: Drawing Human Anatomy*, I discuss further the ideas around seeing the shapes of the muscles and how they reflect the function of the anatomy. I also introduce CONTRACTION, another FORCE in the body.

In the following drawings, we will travel from simple to complex depictions of the power of the human form through FORCEFUL shape.



At this time, I also want you to be aware of the fact that the body is built in a hard bone and soft muscle pattern. The head is hard, neck is soft, rib cage is hard, abdomen is soft, pelvis is hard, thighs are soft, knees are hard, calves are soft, ankles are hard, and the bottom of the feet are soft. The soft areas are what make it possible for us to move the hard ones. Why does this matter? Well, when it comes to line quality, softer regions of the body should be treated with a softer, thicker line. Harder regions such as the head or knees can be drawn with much firmer, crisper lines.



The limbs of the human body, although always paired, have asymmetry within themselves. Look at the drawing of the leg. Look at how its musculature creates asymmetrical forms and, therefore, a functional and appealing shape. The same goes for the drawings of the arm. There are no moments of mirroring or equal FORCES being found on both sides of a shape. The shape of the body's anatomy always gives us a feeling of functionality. A simple way of seeing this is to notice the peaks of FORCE on the sides of a shape and making sure that they are not directly across from one another.

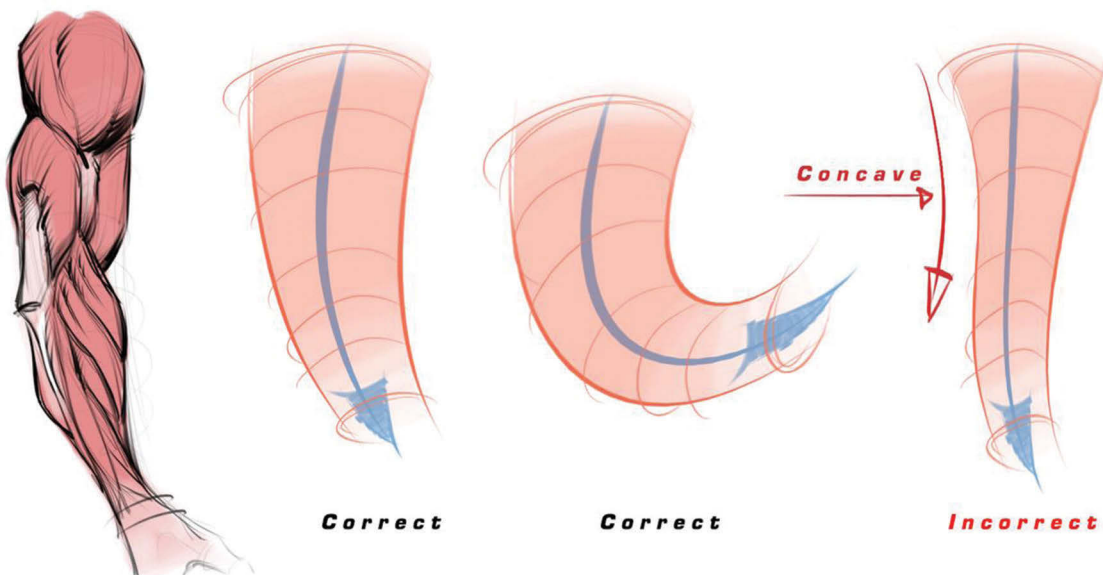
J.C. Leyendecker was the master at putting everything we have discussed so far into his work. He was an illustrator from the earlier part of the twentieth century. His work shows decisive shapes that are full of FORCE and form. They are created with clear straights and curves. There is no laziness in his work. Leyendecker would have been a great character designer had he been alive today. I strongly suggest looking at his work. It is difficult to find much of it. There is a poster book called *The J.C. Leyendecker Collection: American Illustrators Poster Book* that is available for sale. There is also an older book that is extremely rare, but full of his paintings: *J.C. Leyendecker* by Michael Schau.

Dean Cornwell is another artist from this time period. I would like to make you aware of him before we move on. His **FORCEFUL** design is not as strong as Leyendecker's, but he is powerful in the area of structure. His work leans toward straighter, harder moments. He also has some great definitive shapes in his work. There was also a book published on his work called *Dean Cornwell: Dean of Illustrators* by Patricia Janis Broder.

The theory of straight to curve allows you more exaggeration, clearer opinion. Make a statement with every shape.

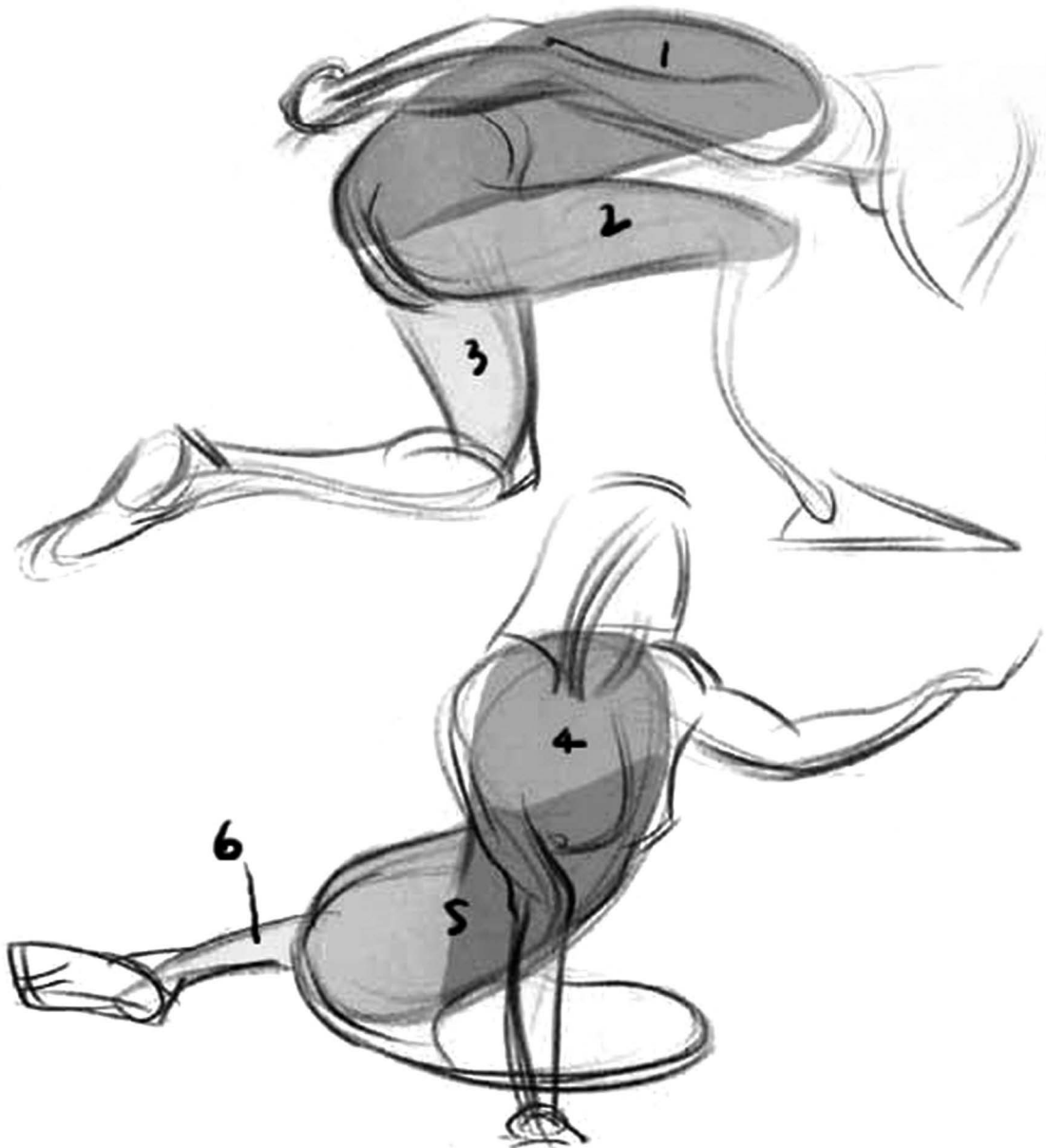
"Exaggeration, the inseparable companion of greatness."

Voltaire



The arm has numerous muscles within it, as seen on the left. Use the simplicity of shape to drive **FORCE** from the shoulder to the wrist. Even when it bends, you can witness the same shape concepts. As seen on the far right drawing, do not add any concave curves on the back or tricep side of the arm. This removes from the flow of **FORCE** from the arm.

This concave weakness occurs anywhere in the figure if incorrectly applied. Remember that pressure of the figure is always pushing outward. Let's look at all of these shapes moving throughout the figure, allowing us to draw successful, rhythmic figures in only minutes.



See the FORCEFUL shapes in these drawings. See the silhouette and notice the absence of mirroring and how there is a straight for every curve of FORCE. Shape 1 and shape 4 both represent the torso of the body. In this comparison, they are opposite in function. Shapes 2 and 3 are basically the same idea for both legs.



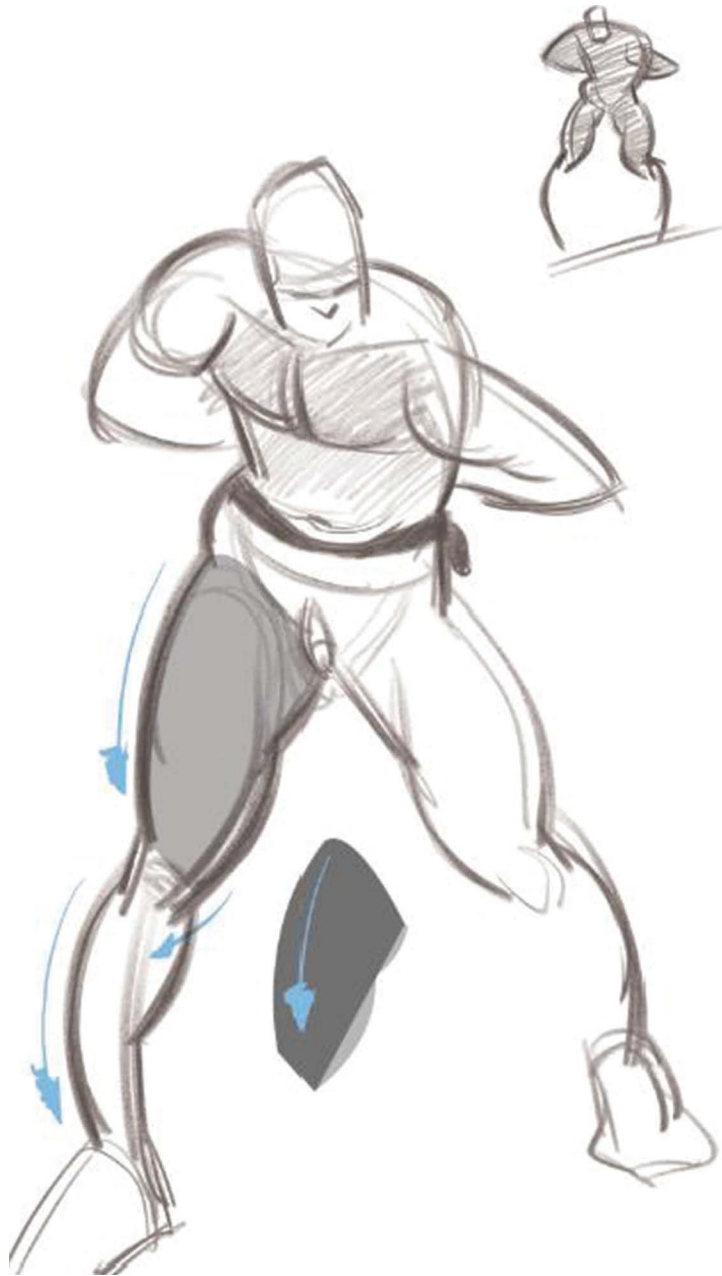
The road of rhythm is created by the overlap of FORCEFUL shapes from 1 to 4. Shape 1 is our first in the pyramid, explaining the majority of the body. Then we move down the figure with the flipping of the FORCE shape to design rhythm.



Here is an example of the simplicity of the arm shape. The long curve of FORCE is balanced with a long slightly curved line that represents the straight. As long as the two lines do not become parallel, the FORCE shape works.



The calves are designed with simple straight to curve FORCE shapes. The light gray shapes add the secondary calf muscles to the lower leg and bring us closer to reality through abstraction.



Here, you can see the exact example of the asymmetrical legs at work. In the shape callout, you can see how the small curved additions add accuracy to the thighs. Look at the straight to curve of the rib cage, the hips, shoulders, and arms. Notice the apexes of FORCE and their asymmetry. Look at the thumbnail for straight to curve silhouette.



The clarity and understanding of this pose epitomize all levels of drawing, FORCE, form, and shape. Its simplicity is what makes it so successful.



I love the sense of thickness conveyed in her back and buttocks by the curve in those areas. See the small straight of her lower back to define structure. Look at the asymmetry found throughout. The simplicity of straight to curve of her left arm gets the idea of FORCE and form across. Notice the structure of her head and the shape of her hair. Last, look at her left hand and how it also has straight to curve or FORCEFUL shape in it. The knuckle line gives the flat shape its structure.



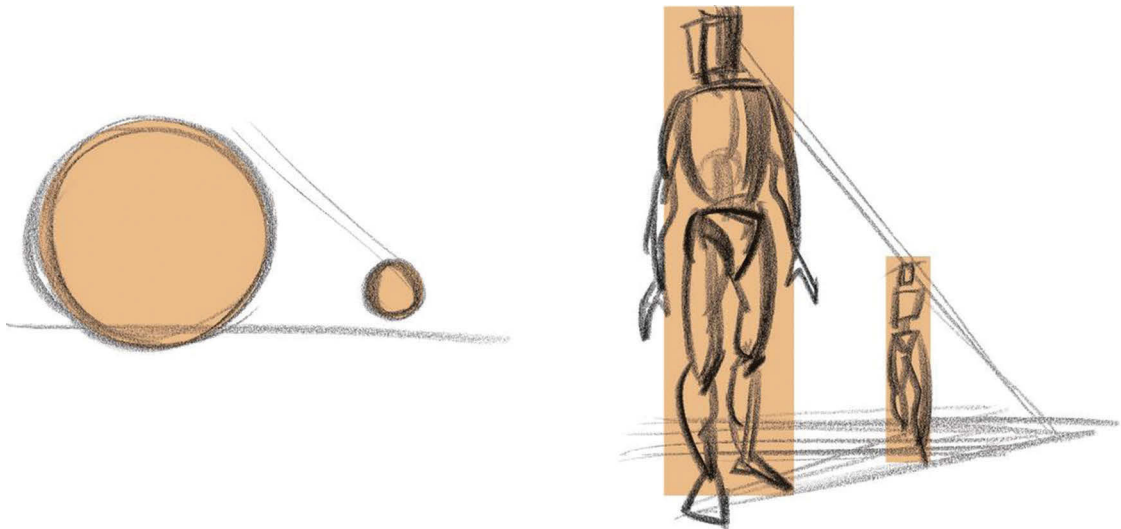
Definitive lines show us a lucid understanding of the FORCES and forms of this model's pose. Look at the asymmetry in the arms and upper body. See how the structure of the back created its shape.



Look at the efficiency. This pose is complex in its idea. The model is turning over his left hip and sustaining this torque with his left arm. His right leg is closest to us and is also under a certain amount of tension, caused by the rotation of the upper body. The model's figure consistently moves away from us in space. See the subtle references to depth in the overlap and the light structural lines. I enjoy the quiet reference made to the left shoulder blade and how it relates to the operation of that shoulder. I reveal the FORCEFUL design of the rib cage and right thigh.

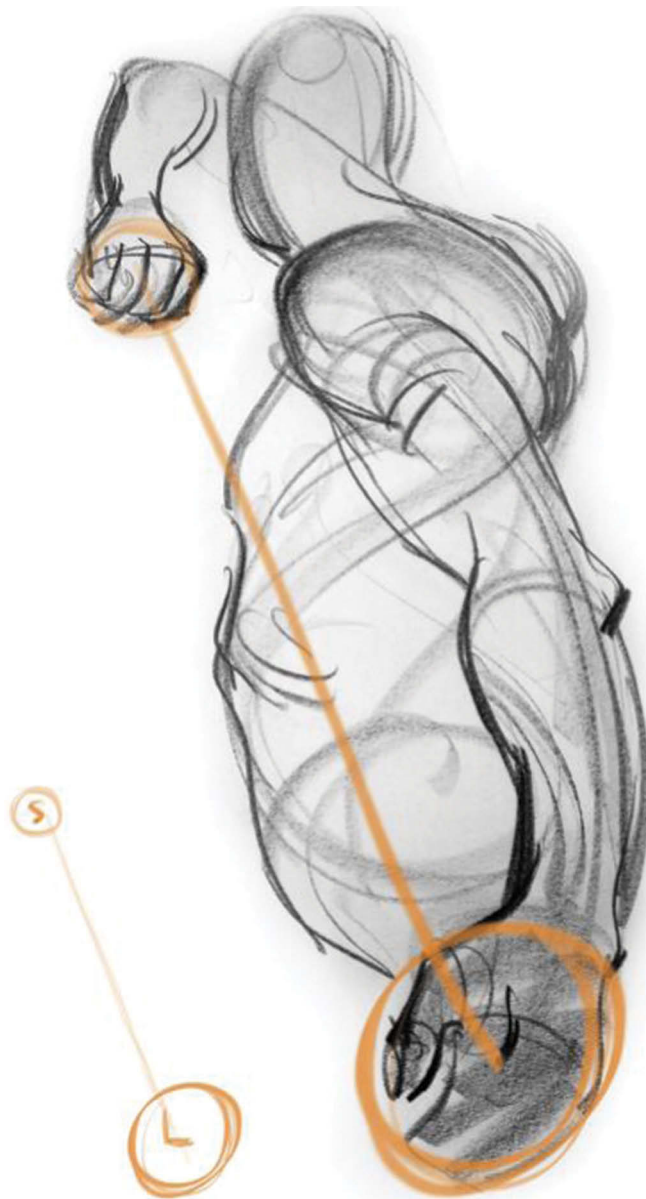
3.6 SHAPE SIZE FOR DEPTH

The larger a shape is, the closer it will appear. Therefore, the smaller a shape is, the further away it appears. This rule will help explode the boundaries of the paper, thus fooling the eye into seeing depth. We are so conditioned to this rule in our everyday lives that something as simple as the size of a circle fools us into seeing space. The more you FORCE space into your drawings, the more conditioned you will become to seeing it in everyday life. To provoke the sight of space, try drawing the model from a closer position than you usually do and exaggerate size. This shorter distance will help you experience more depth. The further the model is from you, the flatter they will seem. Make things ridiculously small or large. This will help you experience the power of size.

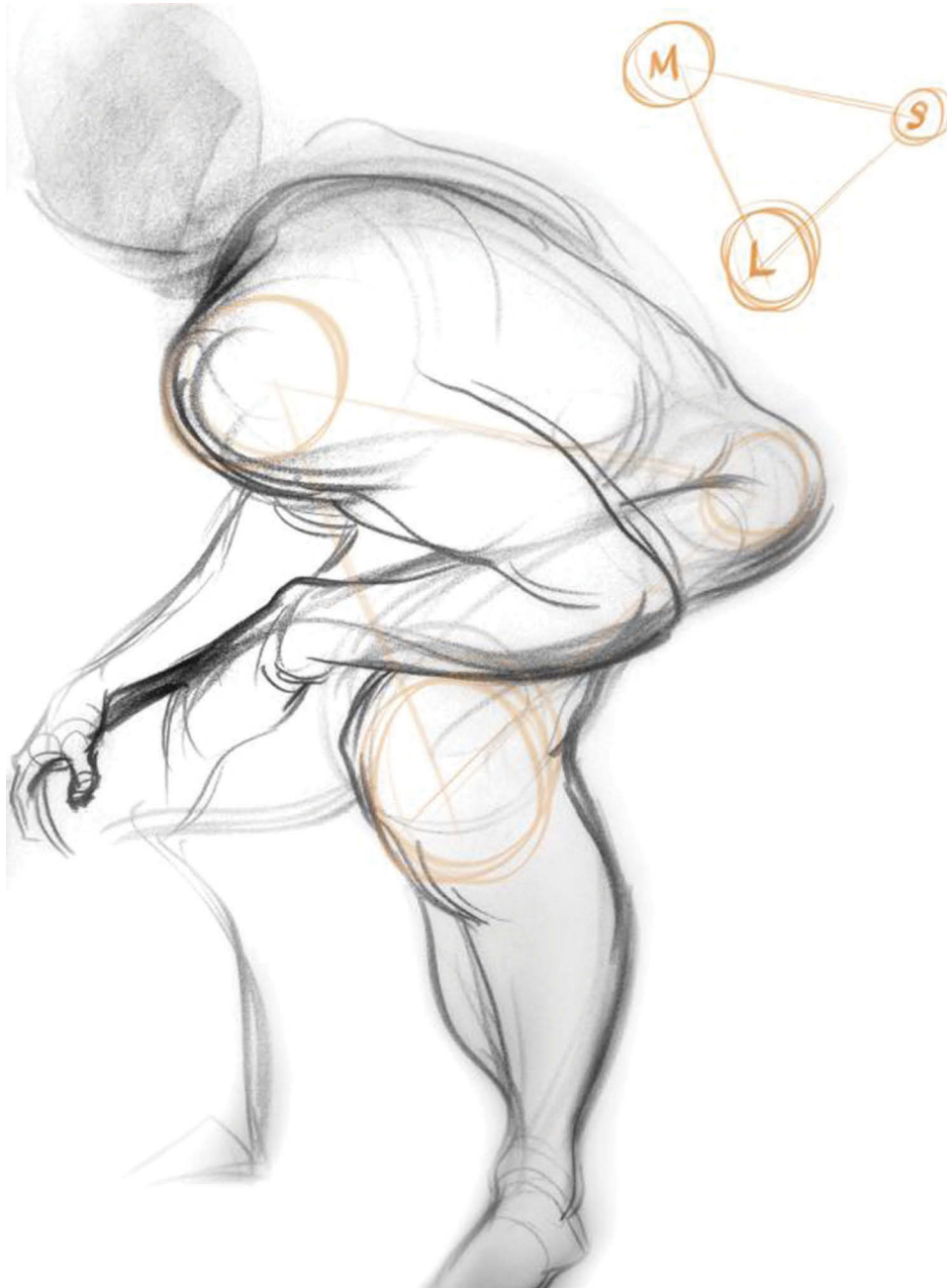


Look at how effective both examples of this are, the circles and the figures. We are FORCED into believing we see depth when it is only the size of the object that has changed.

Imagine what would happen if while driving, all of the cars on the freeway around you were the same size, no matter how close or far from you they were. Size tells our brain about the drama of depth.



Using the idea of pairs creates depth on a flat two-dimensional plane. Since there are two hands, we imagine the amount of depth it takes to create this amount of size or scale difference. This tool is so simple and so effective.



I have circled the shoulder, pelvis, and the knee to callout the three anatomical markers I used to create depth. In the top right corner is a diagram exhibiting those callouts in terms of scale, small, medium, and large.



Abstractly speaking, the first idea that defines this drawing's dynamic appearance is the powerful 45-degree angle the pose rests on. Along this angle resides much depth from the close knee to the model's face and the down to the hand that endures the majority of the model's weight. Tight foreshadowing and overlap on the raised arm present intense FORCES in a compact area on the page. The knee is much larger than the head, using scale to further depth.



Here is a fast and aggressive drawing showing a vast amount of depth. See the hands relative to the model's face. Look at the distance in the feet. The back foot is tiny in comparison to the other foot and the hands.

3.7 REACTION, THE LEAP OF FAITH

A great deal of drawing is academic, but what finally gives it power is your reaction to the reality in front of you. This reaction is pure opinion relying on academic knowledge. Reacting means you don't have time to copy. You go after full concept and feeling. The more you learn how to draw, the clearer and more powerful your reactions to the figure will be.

It is time to have faith in your abilities. Put yourself out on the line, take the leap of faith, and fearlessly enjoy your experience with the model. Give the drawings some of your heart. With the closing of this half of the book, I want to share with you some drawings that express my exhilaration in drawing the model.

Shorter poses are a great way to force yourself into reacting.



My opinion here was, wow, look at how immense his upper body is. His feet are so flat and thin. I enjoyed the fluid quality of his arm and thickness of his leg. These moments are all ideas that occurred in my initial reaction, ideas which I stuck to instead of getting caught up in copying the model.



Sloped head, extreme pose, and thin legs are just some of the reactions I had to the model in this pose.



Here, I was going for the model's thin legs and massive shoulders and upper body. The trick to this design is to keep it fluid.



Long thin legs and feet are expressed here. The weight is on her buttocks and the FORCE is on her right shoulder. The expression on her face has also been captured.



This drawing is a great example of FORCEFUL shape and playing with size for depth. Look at the fluid shapes from the close hands to the feet down on the ground and off in the distance. Efficient line overlaps take us through space.



I love the cartoony musculature in this drawing performed by Mike D. You really get a sense of how much fun he had during this experience. Look at the fluidity, form, and shape.



Flat shape design supported the concepts in this image. The small head shape against the large chest, along with the large hands, implies heroics. The strong curve of the back against the straight of the chest drives FORCE down into the abdomen. A few simple anatomical centers like the sternum and the navel fill the shapes of the upper body with structure.



Here is another entirely different story. It was a godlike quality that I was after. The massive shoulders, large hands, and crazy hair make for an interesting statement. Notice the lack of under drawing. Each opinion about the model is expressed as I reach it.



Yes, there is the obvious, but I also shortened the upper body and size of her head to push my ideas.

3.7.1 All Steps Combined

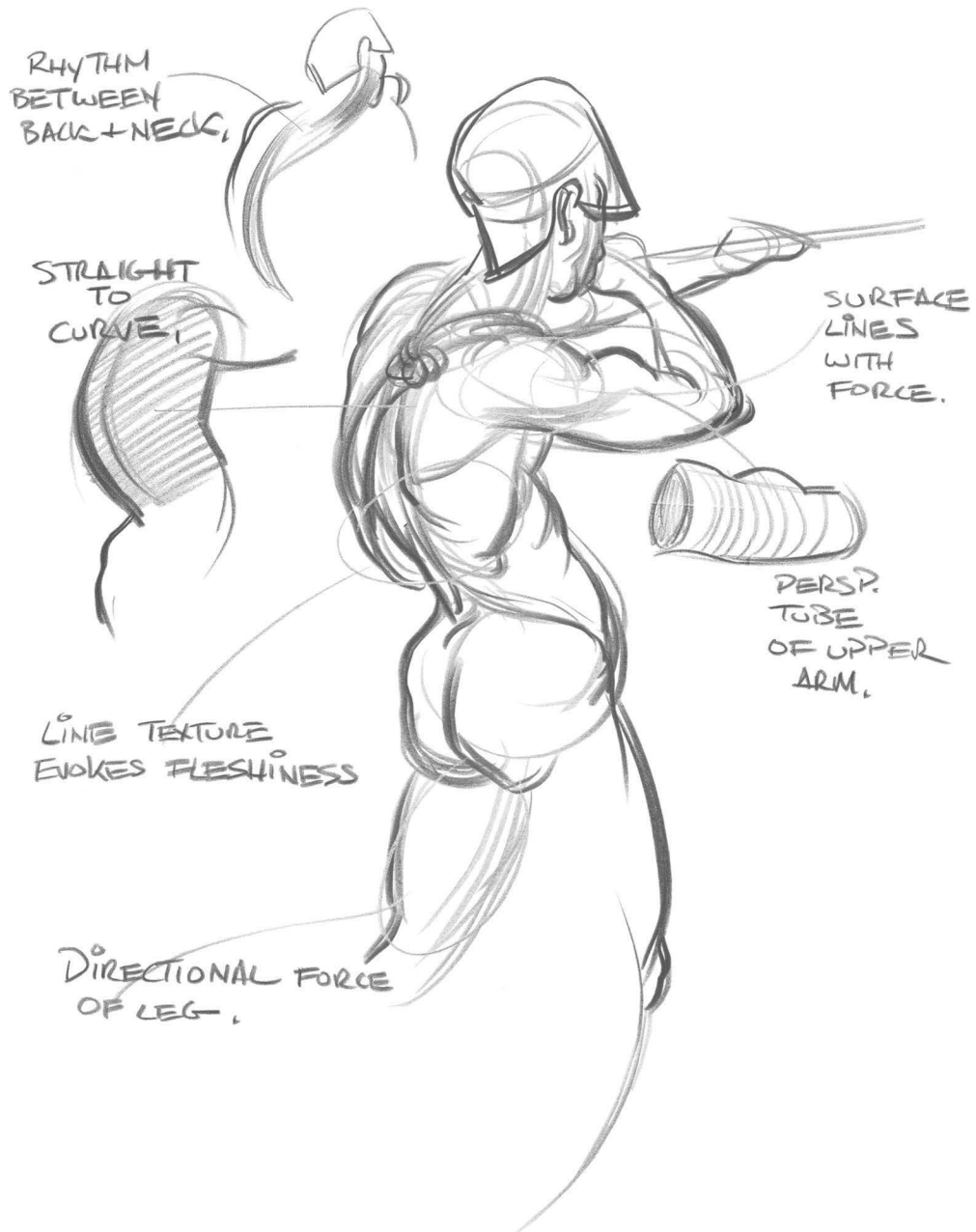
All processes combined. The following drawings show how FORCE, form, and shape all make their appearance in drawing the model.



I love the graceful flow that brings us up from the belly through the back and shoulder into the left hand. The fleshy lines let us enjoy the model's muscularity. See how the small hard straight of the lower back is enough to give us strength between the rib cage, belly, and hips.



This drawing shows a combination of all three disciplines. Blue denotes Directional FORCE, orange shows Applied FORCE, and black defines the forms and, in the arm, the shapes. In the bottom left, I show how to NOT turn the forearm into a turkey-leg-like shape. Stay away from those bad shapes!



Look at the wide variety of ideas expressed. Of course, there are FORCE, form, and shape, but beyond that, the variety of line pressure brings us closer to the reality of the model. See the hard point of the shoulder blade against the meaty thickness of the latissimus dorsi. See how specific you can get about a model without losing your sense of the pose's rhythm.



So here, we see FORCE, form, and shape again. Notice that the relationship in the size of the knees gives us depth.



FORCE, form, and shape combine—In the efficiencies of this drawing, we can see the elegant combination of the core three topics of this book on FORCE.



Finally, we come to this last drawing, the cover of the self-published version of the FORCE book in 2003. This drawing shows you the combination of all three chapters. Look at the shapes created by the anatomy and how much FORCE they imply. His right arm and buttocks are two unmistakable moments of this. See the structure in the straights and the FORCE in the curves. His silhouette can be easily understood. See how his legs work relative to the torque in the upper body.

Line has no form; shape does. In this chapter, FORCE has been described in the rules of straight to curve. That led us into asymmetrical anatomy. Last, to modify everything into successful shapes, we turned to the silhouette. Its clarity is as strong as a magnifying glass in looking at all of the preceding concepts. Here you can see if everything is working successfully.

FORCEFUL SHAPE POINTERS

1. Stay aware of the rules of FORCEFUL design. See abstract straight to curve.
 2. Go after your ideas.
 3. See poses as silhouettes! Notice how the body works in this simple, flat state.
 4. Move hierarchically from the big shapes to medium shapes to small shapes.
 5. Think about the figure as flat shapes and form at the same time.
 6. Think of analogies as you draw.
 7. Tone in shapes as you create them.
 8. Try drawing in two tones. Get down FORCE and form first then use a second color to clarify shapes.
 9. Have models create a character and moment for themselves. See if you can figure it out and draw it. Find out afterward how close you came to the character.
 10. Think about the history of the model to help you form opinion.
 11. Draw the model with all straights. Then apply one curve at a time to each new pose.
-



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Closing

I believe that great drawing starts with an understanding of the fundamentals. For me, the most important fundamental is FORCE. Through this understanding, one is freed up to start forming opinions based on an understanding of function.

In the end, you want to bring as much of yourself as possible to your work. Fight mediocrity with your opinion. Learn to understand what you find interesting. That will be where your individuality lies.

“All the knowledge I possess everyone else can acquire, but my heart is all my own.”

Goethe

Every day, I take a moment and realize the beauty of the life around me. Drawing is a miraculous vehicle with which to do this. Let it be your window to awareness of the remarkable world around you. In turn, this will revolutionize the world inside of you.

I hope that you have enjoyed this journey with me, and that you're leaving it with something new and inspiring. Keep drawing!

Visit me at www.drawingforce.com. I would love to hear from you.

Sincerely,

Mike Mattesi



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Recommended References

- The Drawings of Heinrich Kley
 - Patricia Janis Broder's *Dean Cornwell: Dean of Illustrators*
 - *The J.C. Leyendecker Collection: American Illustrators Poster Book*
 - *J.C. Leyendecker* by Michael Schau
 - Glen Kean's Drawings
 - *The Art of Hellboy* or Any of Mike Mignola's Comics
 - Any Disney Book
 - Claire Wendling's *Drawers*
 - *Frezatto Sketchbook*
 - Any Frank Frazetta Book
 - John Singer Sargent Drawings
 - Bernie Wrightson's *A Look Back*
 - Carlos Meglia's Comics
 - *The Art of Richard MacDonald*
 - George Bridgeman's *Complete Guide to Drawing from Life*
 - Charles Dana Gibson's *The Gibson Girl and Her America*
 - The Sculptures of Bernini
 - Michelangelo's Art
 - Raphael's Art
 - Sean Galloway's Art
 - John Nevarez's Art
-



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Glossary

Applied FORCE	A past Directional FORCE transferring itself to the next Directional FORCE.
Asymmetrical	Not symmetrical or not balanced; having contrast.
Contrapposto	The oblique balance between the torso and the hips.
Directional FORCE	A FORCE in the body created by the pull of gravity on human anatomy.
FORCE	Any push or pull exerted on an organic form because of gravity and the object's posture relative to gravity.
FORCEFUL shape	An asymmetrical shape that moves FORCE from one location to the next in whatever organic form it is describing.
Hierarchy	The concept of thinking from a big idea to a small one. When it comes to drawing FORCE, that means going after the largest rhythms in a pose before the smaller ones.
Leading edge	The edge of a form that presents the clear direction it is moving.
Overlap	Where one line stops another, causing the illusion of depth.
Rhythm	Two Directional FORCES connected by one Applied FORCE.
Roller coaster of rhythm	This term is used to describe rhythm with more attention to gravity on the page as it moves through space at varying speeds.
Silhouette	The filled-in shape created by the outline of an object.
Surface line	Line that lands on the surface of the subject to help describe its FORCEFUL volumes.
Tangent	The moment where two lines describing two forms touch each other. This causes equality in space of both forms, which in turn takes away the opportunity for page depth.
Torque	Twisting FORCE mostly found between the rib cage and hips.



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