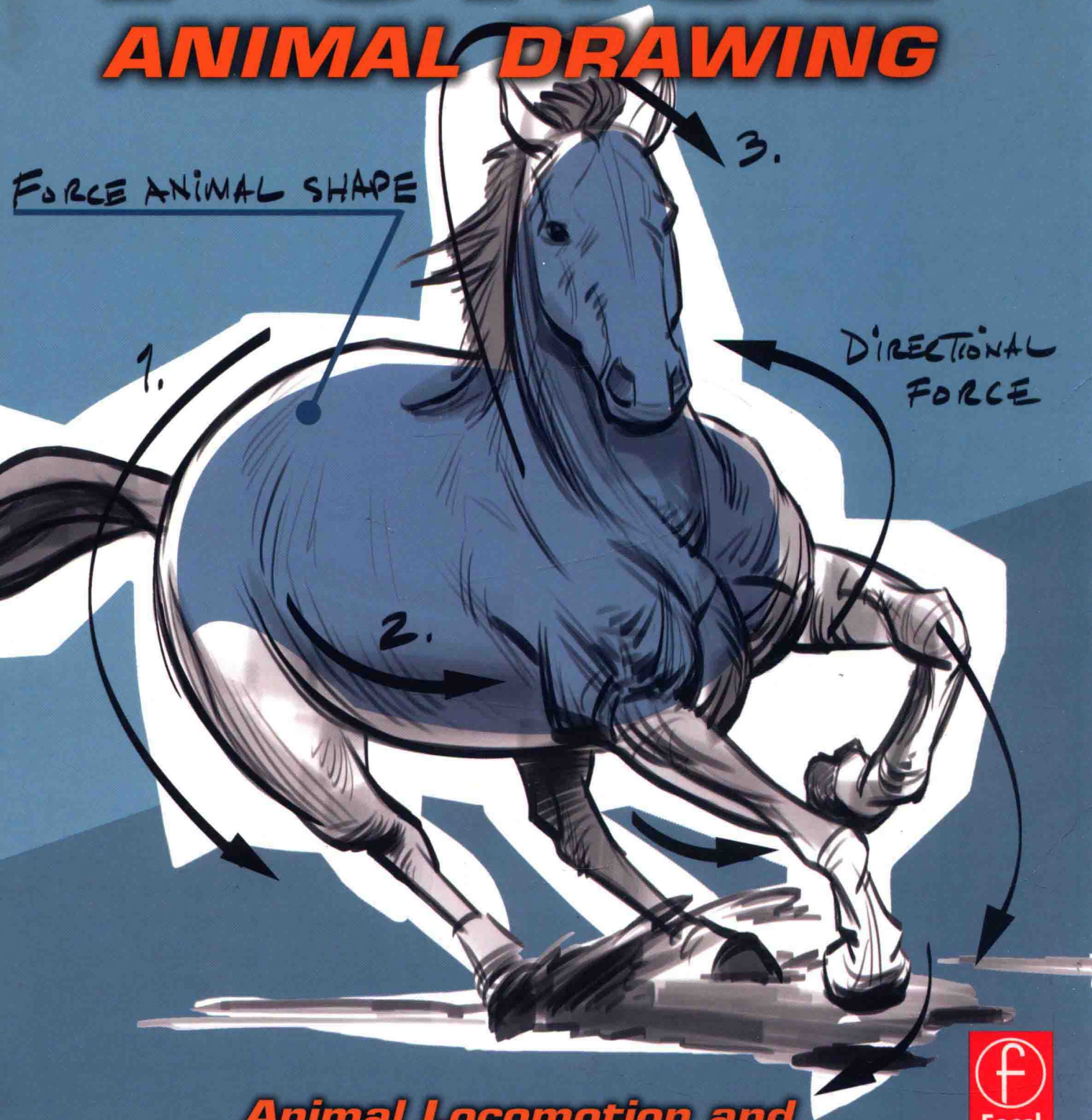


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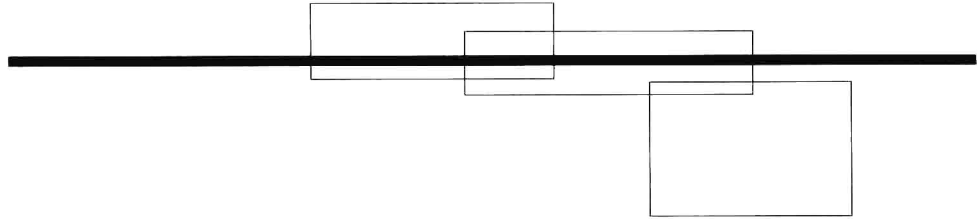
FORCE

ANIMAL DRAWING



***Animal Locomotion and
Design Concepts for Animators***





FORCE

Animal Drawing

Animal Locomotion and
Design Concepts for Animators

Michael D. Mattesi

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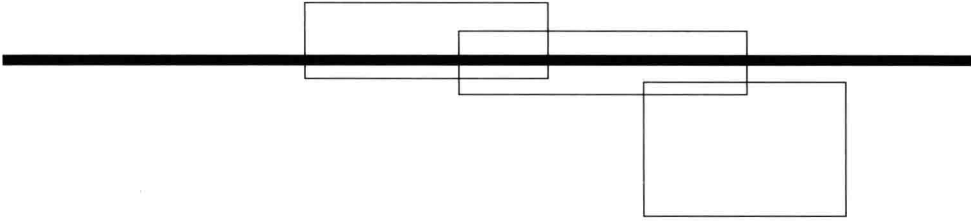
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FORCE

This book is dedicated to my parents and my parents-in-law,
for their support, kindness, and love...and to Zoe,
the family hamster; she was a great pet.



Special Thanks

In any endeavor, there are many great people behind the scenes that share in a vision and allow it to become reality. First and foremost there is my family. My ever-supportive wife Ellen and inspiring kids, Marin and Makenna. They consistently encourage me to follow my dreams and aspirations.

To Katy Spencer, my editor at Focal Press, who believed in the value of this book and who always responded exquisitely to my demanding emails and phone calls. Lauren Mattos, at Focal, thanks for supporting the cause. Melinda Rankin, the Senior Project manager on this book, thank you for your clarity and diligence. You helped me perfect the book in its final weeks prior to press!

Sherrie Sinclair, thank you for entrusting me with the students at The Academy of Art University in SF and for introducing me to Terry. Thank you Terry Whitlatch, you are invaluable as a friend and resource, keeping me on track with my anatomy and ideas.

To you, the reader of my books, whose growth and curiosity I love to feed with my epiphanies of our world, thank you!

Mike Mattesi

Foreword

Many students of animation are understandably challenged by the convincing portrayal of animals in motion. The sheer number of different species alone can make this task seem overwhelming. Yet, there are basic principles that, when followed, create a useful roadmap in negotiating this territory.

This marriage of biophysics, gravity, time, and motion can be learned and expressed in different ways. For some, like myself, it is an intuitive process, from a lifetime, beginning in earliest childhood, of unconscious yet focused and intense observation on what makes each animal and animal group special unto itself—the beauty first of all of the anatomy and then the beauty of that anatomy in action. All animals, from the tortoise to the tiger, have their own variation of dance. I was fortunate, through my parents and grandparents, to have been constantly exposed to animals of all kinds, from tadpoles to horses, nearly all of my life.

Not everyone, however, has that opportunity, especially in today's lifestyles where more people spend increasingly vast amounts of time indoors staring into digital screens rather than outside viewing reality, where animals live and have their being. Thus, there is a mental disconnect. What makes the cave paintings at Lascaux and Altamira so living and vibrant to this very moment is that those ancient artists abided in the animals' world and observed them every day.

It is absolutely essential to understand animal anatomy, and indeed, it is a lifelong vocation, if one is to become a successful wildlife artist and animator. But to take that anatomy and animate it, one must go that extra step. This book is a useful tool and guide in doing just that, breaking down motion and form into a formula that is easily grasped by both students and professionals alike. Rather than concentrating on anatomical subtleties, Michael distills the essence of motion and form, and how they work together, looking at the big picture of gesture and action, rather than the morphological details, which can be added later depending on the nature of the intended audience, project, or artistic vision.

Thus, this book bridges the gap, and the fact that Michael observed these principles in nature, whether in zoos, the countryside, or his own backyard, should likewise encourage all aspiring students of animal art, animation, and creature design to get outside and, using this volume as their guide, rediscover these delights, and the animal world, for themselves.

Terryl Whitlatch
October 31, 2010



Design by Terry Whitlatch

This is one of a number of concept sketches for a giant elephant creature, based on prehistoric proboscideans, and combined with a bit of sauropod and dimetrodon. She's alarmed by something, and has arrested her walk to swivel toward it. It must be something significant or unusual, because she has no natural enemies....

Preface



The photo above was taken at The Starlight Cafe in Greenville, North Carolina, in December of 2009. I described to my wife, Ellen, the secret sauce for this FORCE animal drawing book I committed to write. This was the first time I had put my ideas on paper. The sketches revealed to me that I had something new to share with the art community, and I was very excited to get started.

Here I am now ten months later, in my basement office—or what Ellen likes to refer to as my man cave—a little wiser to and more appreciative of the complexities of drawing animals. I have spent a great deal of time at the Oakland and San Francisco Zoos, visited Safari West three times, and spent numerous hours watching videos frame by frame from any channel that would telecast animal life. Let me humbly say, my first two books were MUCH easier to write and illustrate than this one.



The above photo of Ollie Johnson, Walt Disney Feature Animator, presents the studio's dedication to studying from life. © Disney.

FORCE: Animal Drawing and Design describes how the abstract theory of FORCE relates to the animal kingdom! This book marks the third in the FORCE series and rounds out the library for drawing live subjects. The ability to draw humans and animals is a requirement for a portfolio to secure a job in the world of animation at the top studios. These present requirements are the same as sixteen years ago when I was accepted to Walt Disney Feature Animation. The question to ask here is "Why do Disney and other animation studios want you to be capable of drawing people and animals?" To help answer this question, let me begin with another question: "Why do we bother drawing a live human being in the first place?"

The answer to this question is ... (drum roll) because you and I are human beings and, due to this fact, we can RELATE to the human model. We can understand physically what the model is experiencing because we are extremely similar to him or her. We understand how the model's body works, pulls, stretches, and bends. We understand that certain poses tell certain stories and represent emotions. A slumped-over pose with a person's hands covering their eyes usually depicts sadness. A pose with arms stretched straight above the head, fists clenched, and chest pushed out means triumph. Imagine Rocky Balboa reaching the top of the stairs at the end of his physical and emotional journey and then slumping his shoulders forward, bending his head down into his hands, and rejoicing in his accomplishments. We are so accustomed to what postures signify that we take for granted their universality.

How does this relate to the entertainment industry or, even better, to this book? Everyone else who spends money on the entertainment industry is a human being! So what? Well, other human beings are what you can most relate to, right? A film about motionless, expressionless rocks will not move you in a heartfelt, entertaining manner.

So why are there so many films with animals representing people? First off, many animal emotions are expressed using the same mannerisms and poses in which we humans express ours. My theory is that an animal is not a specific human, so more people can relate to the specific HUMAN emotions of the character without the need to see past the specifics of the character's facade. Sometimes tough subjects can be approached since it involves a character one step removed. We have in many ways humanized animals. These are some of the reasons why animation studios want to know whether you can draw humans and animals. Obviously, I did not know any of this when I was attempting to obtain a job by learning how to be the best draftsman I could be.

I am here to tell you I have come full circle in answering why I do it. I draw animals and people because I want to CONNECT to my subjects. I want to empathize with them in some deeper manner than just copying what I see. An amazing method of deeper expression is *FORCE*. Through this method, you learn to understand the abstract ideas of *FORCE* and how gravity, anatomy, environment, and many other factors affect the subjects you are experiencing. The method of drawing with *FORCE* will allow you to better experience the physical and emotional expression of your subjects, bringing you closer to their experience.

“Our task must be to free ourselves...by widening our circle of compassion to embrace all living creatures and the whole of nature and its beauty.”

Albert Einstein

Here are a few reasons why this *FORCE* animal drawing book is unique:

1. You will learn how to draw animals through the theory of *FORCE*.
2. This book is organized by the different types of animal locomotive anatomy. That structure makes this the first book of its kind. Within each chapter, we investigate how *FORCE*, form, and shape affect that specific type of anatomy.
3. I take one revolutionary, simple animal shape based on *FORCE* theory and apply it to the different types of animal locomotive classes. This approach will simplify your outlook on drawing animals.
4. The last chapter of this book discusses a method with which to exaggerate animal designs.

Let's get started with some of my top-level, key concepts learned from the act of drawing.

KEY CONCEPTS

Fear

Since writing my second book, I have taught at Pixar and DreamWorks, and I am here to say that whether or not you are a professional, there is still fear to conquer! Fear is the most detrimental blockade to the forward pursuit of education. Fear comes in all forms, some more obvious than others. The top reasons for fear I have witnessed from myself and my students are:

1. Fear based on perfection. "My drawing has to be perfect. If it is not, then I have failed and thus I am a failure."
2. Fear of the teacher. "I hope I am doing the right thing."
3. Fear of judgment. "I don't want others thinking I am stupid."

The fastest vehicle out of fear is listening to your internal dialogue. Notice when and why you are indecisive or concerned. Allow drawing to be about your experience and curiosity, not the final product. YOU create the fear, so rid yourself of it! It will only slow you down. Remember, you are drawing, not jumping out of airplanes, hunting sharks, or living in the Depression, so fear nothing!

"The greatest barrier to success is the fear of failure."
Sven Goran Eriksson

Risk

To be able 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. To have opinion, you **MUST** be able to take risk! You **MUST** move beyond your fears. You **MUST** be willing to fall on your face to pursue your creativity and become more than who you are today! Once you break the bonds of fear, and love feeling risk while you work, you will never turn back.

Opinion

Strengthening your ability to take greater and greater risks allows you to get out of the "kind of" mindset. New students look at life and "kind of" see it. You must see truth 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?

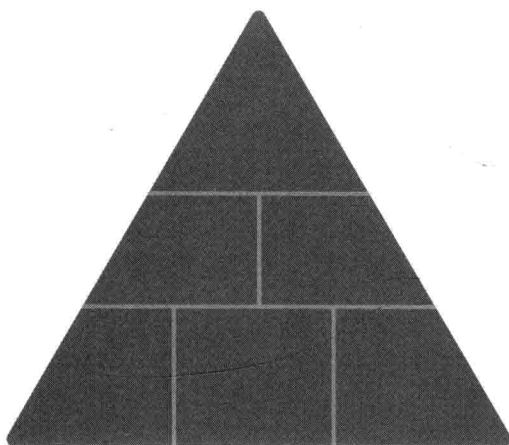
Use creative ideas when drawing animals. You might have a thought that is an analogy. Perhaps the animal's pose reminds you of a natural power, architecture, a culture, a time

period, a character, an automobile, or another famous artist's work. Draw upon your intuition to inspire your experience.

Vision and Empowerment

When I was in school, I would play games with my own mind. I would look at the model and then envision what my drawing would be on the page. My image of my drawing was far beyond my abilities at the 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 you that you will be amazed by your abilities.

Hierarchy



Thinking hierarchically, or from big to small, is a profound method to assess challenges. Hierarchy creates a clearly defined path and priorities that then assist in the comprehension of complex ideas. It seems to be human nature to initially resist this idea. We want to get mired in the details instead of seeing the big picture. Hierarchy is so profound that you can use it on anything, not just your drawing experience. It could be used to organize work procedures, your process for food shopping, the flow of automotive traffic, personal relationships, and more.

When you are drawing an animal, the whole pyramid represents the main idea of the pose or moment. Then within it, the top of the pyramid is the biggest idea, and the ideas get smaller as you travel down the levels of the pyramid. So, a pose is the whole pyramid: The top is the hip to ribcage to head relationship; the next tier is arms, legs, and tail; and then the last is hands, feet, fingers, and toes. As you get more sophisticated, the top of the pyramid might be the face and right paw because they best represent the main idea or story of a pose.

Contrast and Affinity

While I was working at Walt Disney Feature Animation, one of the best rules I learned was "CONTRAST CREATES INTEREST." Never forget that. Beware mediocrity through the lack of contrast. Look for idiosyncrasies. Watch out for symmetry, parallel moments, and monotonous 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 forty-five degree angle? Is there variety in the weight of the line? How long or short is the line? Does it go off the page? All 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!

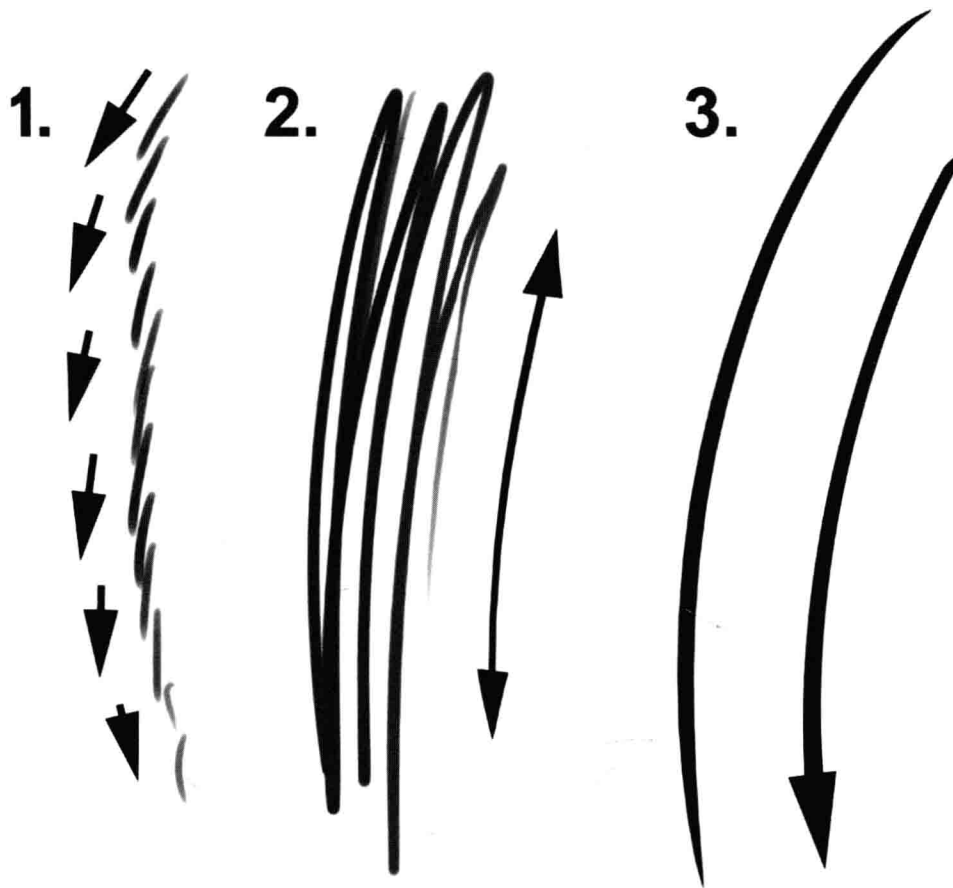
Affinity, or unity, means the similarity between items in the drawings. Now, with the animals, there is the obvious, such as two hands or two feet. In experiencing them, there can be patterns in shape, color, tone, line, and much more.

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.

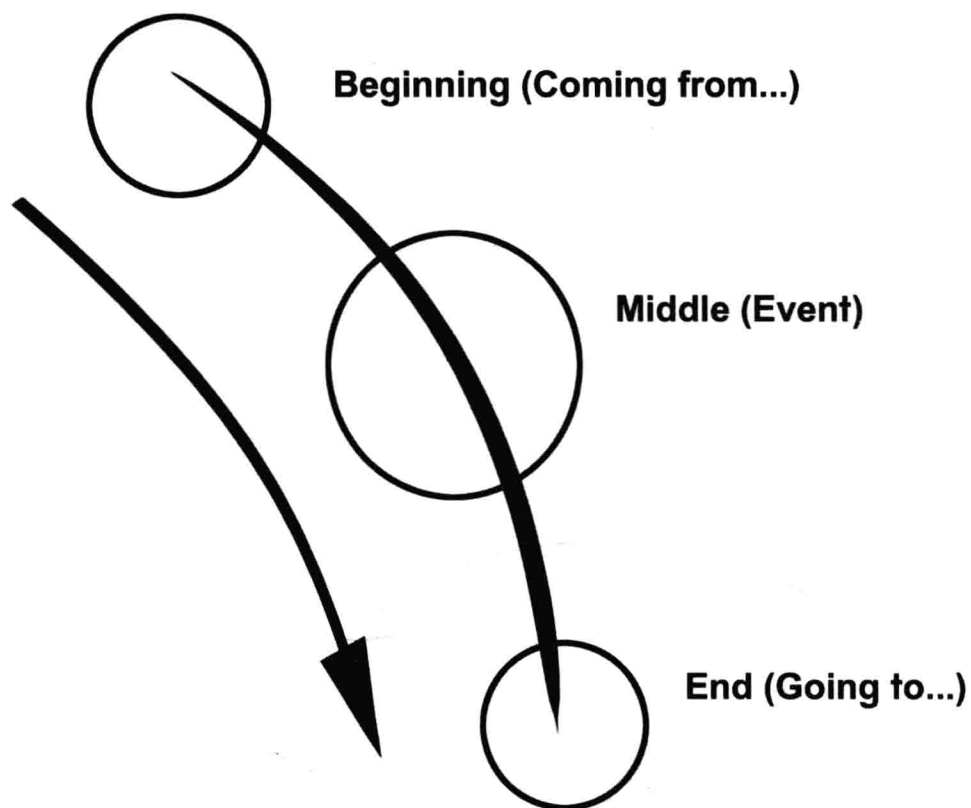
Now let's get down to brass tacks: how to illustrate and experience FORCE.

FORCE: LINE IS AN IDEA!

As a refresher to some of you or a new concept to others, the idea behind FORCE is to comprehend and experience a live creature's energies created by its anatomy relative to the pull of gravity. In my first two books, *FORCE: Dynamic Life Drawing for Animators* and *FORCE: Character Design from Life Drawing*, I was focused on the functionality of the human form. In this book, we are obviously focused on animals. If this is your first FORCE book, this will be an exciting and new method with which to experience the life around you through the process of drawing. If this is not your first FORCE book, the new concepts on how to draw animals through similar processes you have been using with the figure will be enlightening and liberating.



So, let's start with line. The preceding image shows three examples of line. The two on the left represent common methods of mark making with which an artist executes a line or, in my terms, the artist's idea. The lines you place on a page are a direct reflection of your thoughts and emotions—nothing more, nothing less. That is why the way in which you draw a line is **SO IMPORTANT!** Due to this point, the line on the right presents the **FORCE** line. It is one stroke that represents one idea. Example number one represents small thoughts and two is typically careless thoughts. Power lies in its clarity and meaning.

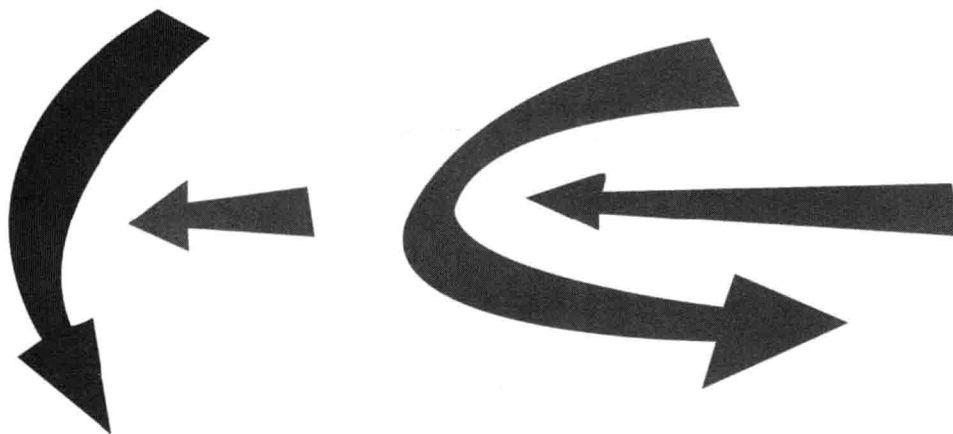


Directional FORCE

Did I say one idea? Actually, the FORCE line represents three ideas. That's right, three ideas in one darn line! Line can represent even more than that, but for now let's focus on the FORCE line's three main components. They are the beginning, middle, and end.

When you are thinking about FORCE and confronted with your subject, focus on a main event that clearly jumps out at you. That will lead you to feeling that FORCE by stroking your way into it, which is how you find the COMING FROM segment of the forceful line. Then you push your way through the event, feeling its power, and as you do, you look to see ahead where this FORCE is GOING TO!

I call this FORCE the *directional* FORCE because it directs FORCE from one location in the subject through an event to another location.



Applied FORCE

The vertical arrows in the preceding image represent directional FORCE. The horizontal arrows in the image represent *applied* FORCE. Applied FORCE directly affects the curvature of a directional FORCE. The image on the left shows a weak amount of applied FORCE. The small horizontal arrow, pushing upon the vertical directional FORCE, presents this. The directional FORCE on the left has barely any curvature; this tells you the applied FORCE was weak. You can take the same directional FORCE and add more applied FORCE to it from the side, as shown in the right diagram, and see how much more curved the directional FORCE becomes.

It is crucial to understand applied FORCE for a few reasons. When you are in the act of drawing a directional FORCE, the strength or weakness of the curvature of that line is dictated by the amount of applied FORCE driving into it. Also, the energy that you are about to apply to the next directional FORCE is decided while you are drawing the directional FORCE you are involved in at the moment. These two thoughts are the COMING FROM and GOING TO that we just discussed regarding the prior illustration. Whew, a lot to swallow. This will make more sense with the next illustration.