

INTRODUCTION

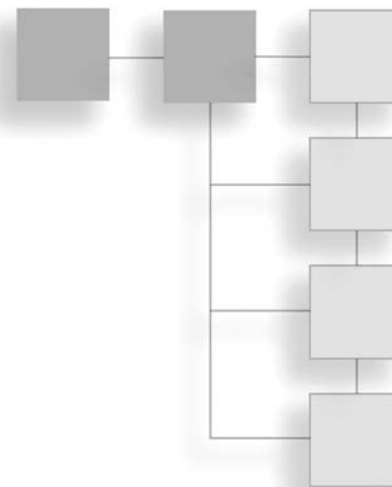
RAPID VIZ—NOT ANOTHER DRAWING BOOK

When I mentioned to an architect friend of mine that I was thinking of writing a book on drawing he just stared at me. Then he bellowed with hands waving in the air, “All we need is another drawing book. Why you could fill this room with those kinds of books. There are thousands of them covering everything you could possibly want to know about drawing.” Then he pointedly asked, “Why on earth would you want to do another?”

It is a good question. Why would I want to do another? The answer comes from personal experience. It involves my own development; I want to explain to you what I feel drawing, thinking, and visualizing are all about.

My visual education began later in life than it does for most people. It began when I was in college. My only previous exposure was doodling on scraps of paper, around the borders of English themes, on the pages of the phone book, and other such random places. In college, I floated around various majors and finally landed in

design. In that college you had to learn to draw if you wanted to get your ideas across. Drawing was something you were made to learn—something you had to go through and get over like chicken pox. And so I did it. After taking several classes, putting forth considerable effort, and filling innumerable waste baskets with discarded drawings, I finally reached an acceptable level of proficiency. But the whole education process seemed too long and too involved and too filled with unnecessary and inefficient teaching for what I finally gained.



I realized, however, that something else had happened along the way. Yes, I had learned to draw, but more importantly, I learned to *think*. My whole method of thinking underwent a complete metamorphosis. I began to *see* the world more clearly. As my hand sketched the lines, my mind revealed a whole new method of thinking that I had not known before. Being able to visualize things gave me a tool that I could use in all facets of life. What happened to my mind was much more important than the sketches I produced.



Learning to use pen and paper had thus revealed talents I didn't know I had. Not the great talents of a fine *artist* in the traditional sense that you might expect, but I had discovered the important, practical ability to visualize. I gained the ability to picture something mentally, and then quickly convert those thoughts into visual reality on a piece of paper. I could nail down my ideas on a sheet of paper.

I realized that converting these ideas had to be a rapid process taking a minimum amount of time, trouble,

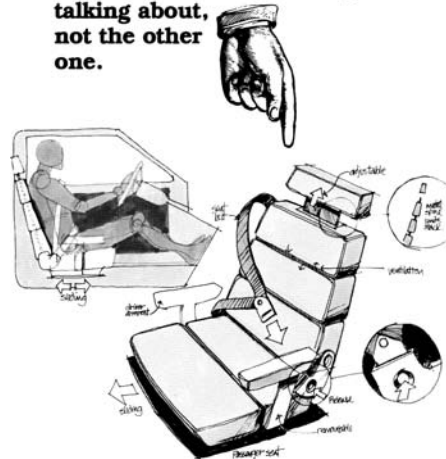
and work. An idea is a very delicate and fleeting thing and if it is not quickly crystallized into reality, it just slips away never to be found again. A rapid conversion from thought to paper is critical.

I found myself asking the questions: Can this new-found skill be taught to others? And can it be done without all the hassle, redundancy, and expense that I had gone through in my own education?

As so often happens in life, I found myself regretting my former criticisms of teachers as I became a teacher. In a classroom situation I began to challenge students to learn the kind of drawing that had become such a valuable asset in my life.

For the next couple of years, my students and I developed a method that worked. The students helped me reduce drawing to the essentials. Instead of a fine art approach, we developed a simplified approach to drawing that people can use for thinking, learning, and communicating.

This is the kind of drawing we are talking about, not the other one.



This book is an outgrowth of classroom teaching. By trial and error we discovered the best teaching approach. I hope that you, too, will gain by the experience many students went through to develop this condensed teaching approach.

Earlier Education Can Hamper Our Thinking

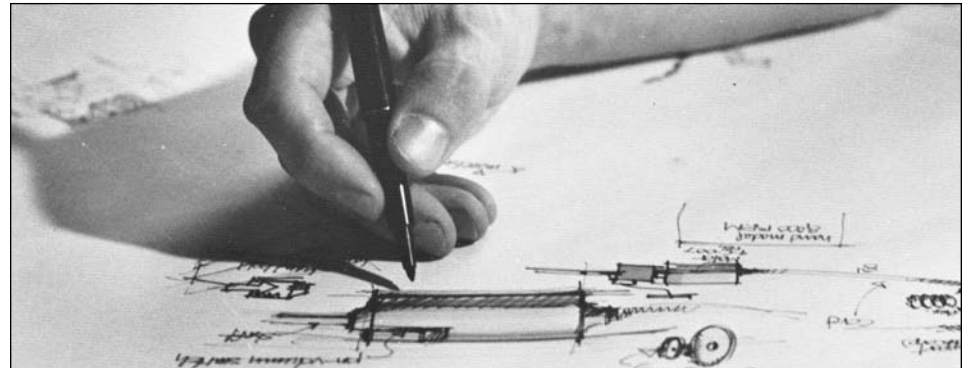
Through my teaching I found that often the less you know about drawing the better off you are when learning to visualize. The less you know, the fewer preconceived ideas you have about drawing and visualizing. You have an advantage in that you do not have to unlearn what you already know. I can remember one class in particular in which I had two separate groups: one made up of architecture and landscape architecture students who had a lot of previous drawing experience, and another made up of beginning interior design students who had no experience (they had no idea what a “T square” was). At first the experienced group excelled over the inexperienced group. But the interior design students with no previous drawing experience just kept plod-

ding along until, in the end, their performance actually exceeded the more experienced students’ performance. I’ve found that experience often breeds indifference to what may seem to be simplistic and rudimentary exercises. But simplicity has an uncanny way of positioning itself behind genius.

About This Book

The objectives and guidelines used to develop this book were to:

- Produce a practical workbook to help individuals visualize their thoughts.
- Use examples and exercises that have been tried by students.
- Use tools, technology, and definitions that relate to a student’s understanding.
- Design the content of the book for students and professionals in the fields of architecture, landscape architecture, engineering, industrial design, interior design, and other sciences and arts in which visualization is vital.
- Emphasize speed in mastering actions and concepts, reducing time, effort, and cost of learning.
- Use materials and equipment that are easily attainable and economical.



- Structure the information from simple to complex, from concrete to abstract, from general to specific.
- Apply visualization to real-life situations whenever possible.
- Provide positive reinforcement to students to prove that they *can* draw and visualize their own ideas.
- Have students learn by doing.

This last objective was especially important because while visualization is more a mental process than a physical one, the mental process is learned by actually doing.

Goals of the Rapid Viz Technique

I've found it easier to teach rapid visualization by starting in a logical sequential manner—the conventional teaching method. If a radical new concept like Rapid Viz is taught in a radical new way, people feel overwhelmed. By starting off teaching the Rapid Viz concepts in a conventional manner, students become comfortable with the techniques and slowly transition to intuitive learning.

The exercises that accompany each chapter may seem strange, but they have each been created and tested to be effective in reinforcing the techniques presented in the chapter text.

The Rapid Viz techniques featured in this book are designed to do the following:

1. To help you develop your own unique style of visual expression. This book is not designed to help you become a master illustrator, but rather a visual thinker and communicator. The exercises take you from copying someone else's visuals to making your own. As the book progresses, you should develop your own style that is comfortable and works for you.
2. To push your abilities. Improving your visual expression skills is a skill, and as such it requires practice. Just as a weight lifter improves his performance by lifting more weight and a runner improves her time by running faster or longer distances, you must push yourself to work faster in shorter periods of time to produce results.

3. To help you defer judgment.

One of the most dangerous pitfalls of learning visual skills is the tendency to judge your work too soon. You may think that your drawings look silly at first, but keep working through the exercises and you will see progress.

4. To maintain your sense of humor. Many artists would turn up their noses at cartoons and nonsense doodles that are often featured in this book. However, if you can find the humor in your drawings, you can defer judgment and allow yourself to develop your skills. Taking things too seriously too early in the learning process discourages some would-be visual thinkers from developing their skills.
5. To set tight parameters. The exercises attempt to restrict your freedom temporarily. Tight restrictions as to what is to be drawn, how long to take, and so forth make drawing easier during the early stages of the learning process. Do the same for yourself. Set your own tight goals. Too many choices breed

confusion and non-performance. Decide specifically what to do and do it.

6. To reinforce that Rapid Viz is a progressive process. You will learn a little at a time. Go back over sections of the book to see your own improvement. Progress in small steps instead of trying to leap immediately to an end result.
7. To create a sequential learning system. Like many things, the Rapid Viz techniques are more easily learned after first mastering preparatory skills. Follow the order of this book so you can build upon the skills step by step.
8. To apply the techniques to a variety of scenarios. You may wonder why some exercises seem applicable only to a specific profession, such as architecture or city planning. The point of applying the techniques to areas beyond your own work or study is to reinforce that the principles are the same. When you learn by drawing objects outside your normal

frame of reference or comfort zone, you will learn a great deal and avoid falling into old habits.

9. To keep a visual record of your progress. Save the drawings you create throughout this book. Record the date or sequence in which you created the drawings. When you go back to review your progress you will be amazed at how far you have come.
10. To provide an accessible teaching medium. I believe that a live teacher is the best way to learn the Rapid Viz techniques, but this book is the next best alternative when a live instructor is unavailable to you for whatever reason. The methods used in the book have been tested and improved through feedback from many years in a classroom environment. The self-study available in this book will require effort on your part, but the effort extended will be worth the rewards. Learning Rapid Viz will not only change your drawing abilities; it will expand your thinking abilities.

Another Way of Learning

There are at least two ways of learning and knowing something. One way is the traditional method taught in the educational system—reading, writing, and arithmetic. With this method you read something, you memorize it, and you are supposed to be able to recall what you learned.

There also are other ways to learn and know something. One way involves the “feeling” method in which you know something because you feel it. Drawing is more the feeling and intuitive kind of learning and knowing than it is the sequential, rote memorization method of learning. Drawing is much more dependent on the intuitive, creative side of the brain.

An example of “feeling” learning is when I learned to shoot a rifle at targets thrown into the air. As a youngster I took pride in my ability to shoot accurately. One day a friend and I went shooting together—he outclassed me terribly. He was a magnificent shot, and I wanted to be at least as good a shot as he was. I had learned about a method of shooting wherein you shot from the hip without taking aim. You aimed by “feel” rather than

by looking down the sights of the gun. So I set out to learn this “feeling” method of shooting.

Another person would throw items into the air and I would shoot from the hip. It’s like pointing your finger—you don’t need to look down your finger to know that you are pointing in the right direction. As I became able to hit the thrown targets, I progressed to shooting them from a greater distance. Then I progressed to smaller and smaller targets until I became very proficient at shooting moving targets in the air.

With time and practice, I eventually became a very good shot by feel. You may assume that the best way to learn to shoot is by looking down the sights of a gun, but I actually became a better shot by feeling as opposed to the logical, traditional method. And wouldn’t you know, my friend even improved his own already magnificent shooting ability by adopting the feeling method too.

Intuition vs. Logic

Another example of relying on feelings or intuition is speed reading. Conventional reading experts will tell you that it’s impossible to read a book in 10 minutes and comprehend what you read. But some speed readers do it all the time and have better comprehension than regular slower readers.

What’s their secret? They “feel” what they read. They give you correct answers because they feel the answers are right. They don’t rely on logic and sequence to recall what they have read. Speed readers utilize the visual, intuitive, holistic half of their brains.

Visualization is to drawing as shooting by feeling is to feeling by sight. Visualization is to drawing as speed reading is to conventional reading.

Let me describe how the feeling method works in drawing. You know what perspective drawing is—it is when you draw things in three dimensions giving the appearance of distance and volume. The conventional method is a laborious method of connecting lines and projecting images. It is an elaborate method of drawing that is difficult to under-

stand, more difficult to learn, and extremely difficult to do well. It’s no wonder many artists don’t do perspective drawing.

A teacher once told me there is no other way to do perspective than by the conventional method. Wrong! The rapid visualization method is better and easier. To provide it, I have taken students that seemed to have equal abilities and taught one the traditional elaborate method and taught the other the rapid visualization method. Invariably, the rapid visualization method works better. The Rapid Viz student learns in a few minutes rather than a few hours. The end result also is unquestionably better than the work done by the student using the conventional method.

Getting the Most Out of This Book

Please do more than just read this book. If you only read and do no more, it won’t work for you. The book must be used to be of any value to you. Write in it, draw in it, insert your own pages in it, and do whatever else seems helpful to you.

Far too often education becomes too restrictive, filled with constraints and negative comments. The only possible result is to make the student an outsider—a bystander looking in. But to really understand anything you must actually do it. Second-hand learning from someone else telling you about it never is very effective.

You can't learn to visualize by osmosis. Over the years I've had a lot of students who have tried. They seem afraid to fail; scared of criticism about their awkward sketches. But they—and you—should not let fear inhibit learning. Learning takes time, involves making mistakes, and involves effort. No one has learned to run without walking; no one has learned to visualize without drawing.

I hear and I forget.

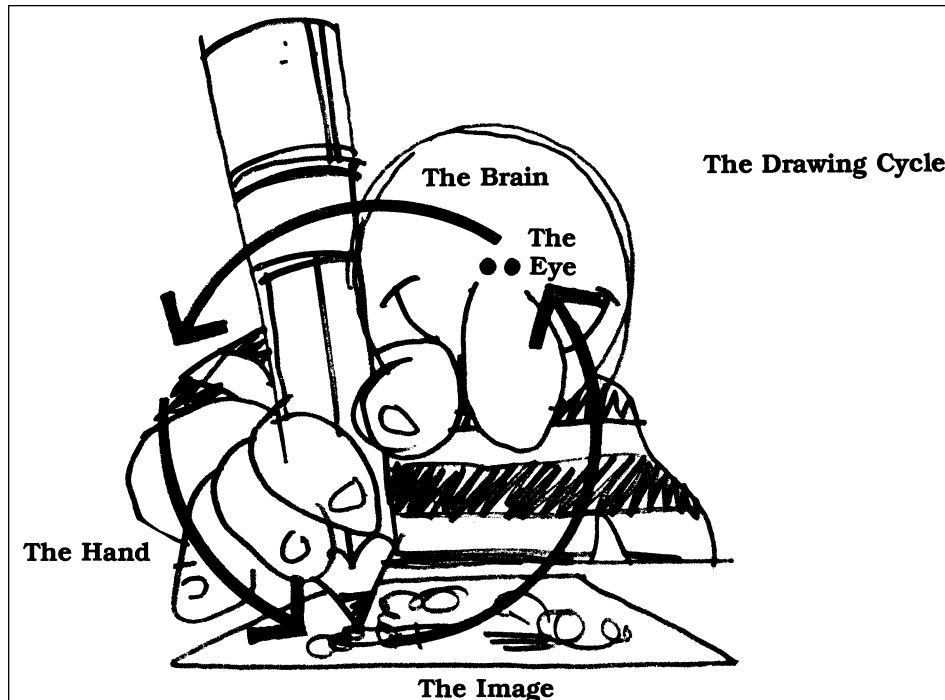
I see and I remember.

I do and I understand.

—Chinese proverb

The brain is like a muscle that must be used. If not used, it atrophies and becomes weak and ineffective. With Rapid Visualization, the brain, in essence, becomes connected to the muscles in the hand. Coupled with the eye, the brain and hand muscles begin a continuous cycle of expression and feedback that enables you to transfer thoughts from your head to expressions on paper where they can be refined and recorded.

What I really want to encourage is your participation through your mind, your hand, and your eyes. All this participation is important because, as noted earlier, while drawing is more a mental process than a physical one, it is learned by physically doing. You have to push those thoughts out of your mind with a pencil, and then draw and develop them before your eyes on paper.



Make this book yours. Force it to give you what you need. Don't separate yourself from your own education. By itself, this book is not the best method for learning—not as good as an interactive classroom situation—so you must force the book to fill your needs. You must take an active part in your own learning process.

In case you are wondering, my architect friend who expressed so much skepticism about this book eventually changed his mind. In fact, he helped refine and develop this book. There is a great need for Rapid Visualization in his profession as well as many others.

I do not think that we have begun to scratch the surface of training in visualization.

—Jerome S. Bruner,
Educational Psychologist

What You Need to Get Started

A frightening thing awaits you. It has made strong men cry and sent women fleeing from its very presence. It is a blank piece of paper. What are you going to do with it? What threat lies beyond its snowy white innocence? You are going to have to make a mark on it—you are about to violate its purity. Can you do it? Of course you can!

First, you will need materials. You can play the game that some illustrators and designers play, which is to buy the “best of the best” exquisitely made and guaranteed for 40 years or 40,000 miles pen or you can simply buy a regular felt tip pen. I recommend that you choose the simple felt tip pen. It is cheap, easy to use, and always there when you need it. For now get any pen or pencil you can find. We'll have none of this “I can't go on with the work because my special order pen has not arrived yet from Walla Walla.”

Use whatever you want as long as it's simple, cheap, and you can carry it in your pocket or purse at all times. Don't be one of those designers who is crippled without special drawing tools.

The kind of pen I prefer is a simple felt tip pen with a flexible point. Flair, EG, and Pentel (to name a few) make the inexpensive pens that I like. The only really important thing to me is that the point be able to draw thick lines when I press down firmly or thin lines when I use a light touch. Ball point pens don't allow this flexibility.

You may decide upon a pencil. I like drawing with pencils but prefer that you begin drawing with a pen. With a pencil you can easily erase and fix up rapid drawings. You should be learning to do rapid drawings correctly the first time, not learning to fix up your drawings. A pencil causes many people to become “fix up” artists. You need to be committed—once the pen makes a mark the deed is done. So, for now, use a pen; save the pencil for later.

When it comes time for the pencil, what pencil should you buy? Pencils are rated 6H (hard) to 6B (soft). If you like to scratch your message in the surface with a nail, then 6H is the pencil for you. If you are a real soft touch, then 6B is the one for you. For me, 2H feels right—not too hard, not too soft.

Also, you may want an eraser, in spite of my earlier remarks about erasing. To erase pen lines drawn with a felt tip pen, I wet the end of a pencil eraser. To erase pencil lines, I use a kneaded eraser.

You may want to keep a ruler handy as well as a variety of colors of felt tip pens. I find it fun to draw in black and then use some other color to add emphasis. The second color is my way of doodling with a drawing. You won't necessarily need these other colors or a straight edge, but you may find them fun and inspiring.

Remember that intimidating blank piece of paper? Well, obviously you will need paper to write on. In the beginning use the paper in this book. If the instructions are to complete an

Many people have the tendency to load themselves down with tools they cannot afford, cannot easily use, and don't really need.



exercise in this book, do it! Don't be afraid of ruining the book with your drawings. This book is designed to be used as a workbook. It's not a book to look pretty on your library bookshelf.

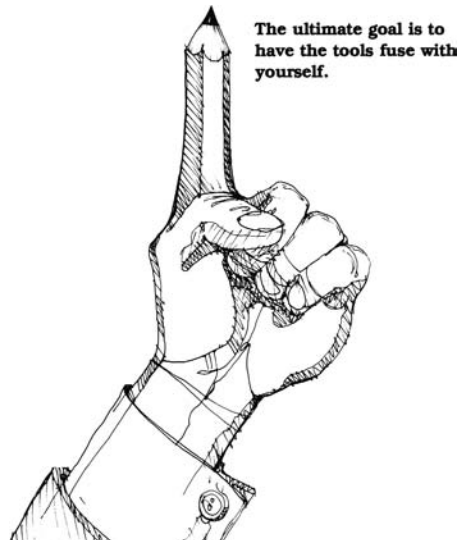
You'll need two other kinds of drawing paper as well. A good basic paper is regular bond paper—the kind you write on and type on. Most drawings will be done on cheap bond paper. You'll need tracing paper as well. In one part of this book we cover how to evolve drawings. To evolve a drawing

you will need to trace and refine your initial sketches. I prefer a 14" x 17" pad of tracing paper that is easy to see through but strong enough not to tear when you write on it. The least expensive paper you can buy that will do those things is the kind you should buy.

You need to get to know your pen so that it becomes an extension of your hand. Your pen becomes part of you. You need to become so familiar with it that you don't think about it. This comes from drawing or doodling a lot.

A tennis player's racket becomes an extension of the player's arm and hand. He automatically knows how far it will reach to hit the ball. Until a tennis player becomes one with his racket, he can't play tennis well. The way a player learns to control his racket is by hitting tennis balls. He doesn't jump right in and play a championship match with it the first time out. He just hits the ball over and over again at walls, fences, other players, whatever.

You are like the tennis player. You are trying to fuse your hand permanently to the pen. The way you do this is by drawing. Scribble and doodle often. Practice every chance you get.



Lines seem deceptively simple, but they are a critical drawing tool, and the first drawing technique you will learn. There's good reason for mastering lines:

- Line drawing is a quick way to visualize ideas with a minimum use of time and materials.

- Line drawing tools and materials are usually the easiest to use and the least expensive.
- Line drawing is the natural way to draw—children begin with line and adults usually continue with it as they doodle throughout life.
- Lines emphasize the basic structure and composition of a drawing, which ensures more probable success and a more effective sketch.
- Lines provide a framework on which to hang other drawing techniques such as shading and color.
- Lines are easy to reproduce on copy and blueprint machines.

Exercises

Now that you have the necessary tools, you are ready to begin. The first few exercises may seem a little too easy, but they are really the start of the learning process. The important thing is for you to begin doing something to get familiar with your pen and paper. Every exercise featured in this book has been created and tested to be

effective in accomplishing a specific purpose or mastering a specific technique.

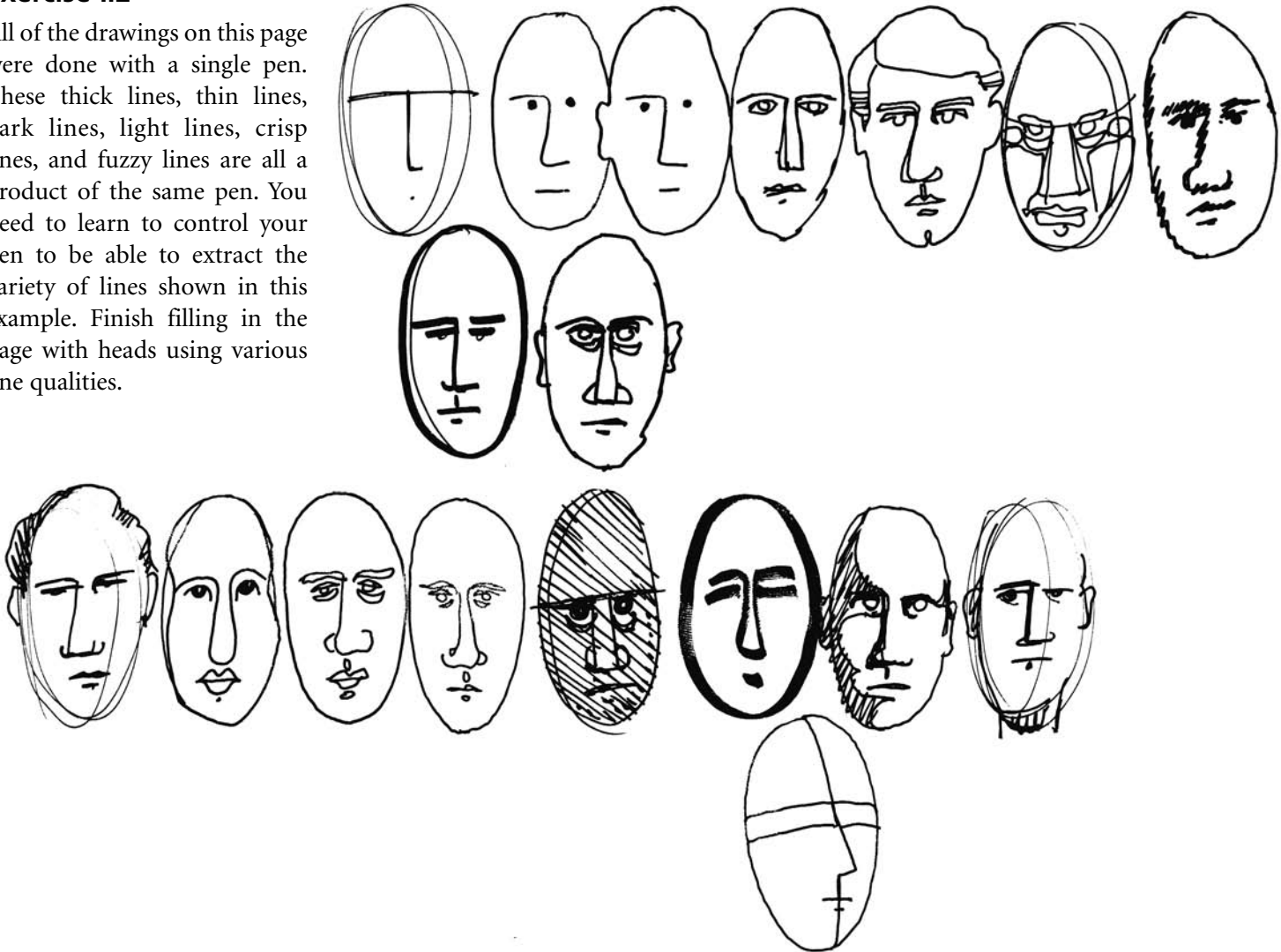
Exercise 1.1

Start with lines. Make some lines with your pen—thick lines and thin lines. Try different pressures on the pen point. Lay the pen down on the paper; use the side of the pen tip to draw a line. Become familiar with the results you get from varying degrees of pressure and angles of the pen.



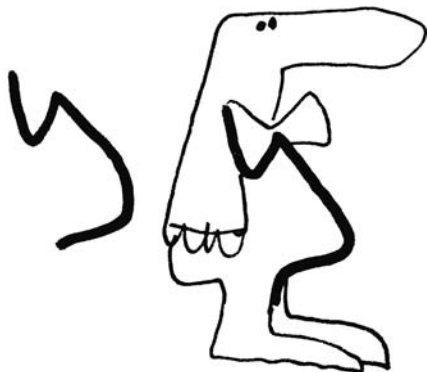
Exercise 1.2

All of the drawings on this page were done with a single pen. These thick lines, thin lines, dark lines, light lines, crisp lines, and fuzzy lines are all a product of the same pen. You need to learn to control your pen to be able to extract the variety of lines shown in this example. Finish filling in the page with heads using various line qualities.



Exercise I.3

In an attempt to get your mind in the groove of thinking visually, draw your own simple doodle. Ask a friend to make something from the doodle. Here's an example of how it is done.

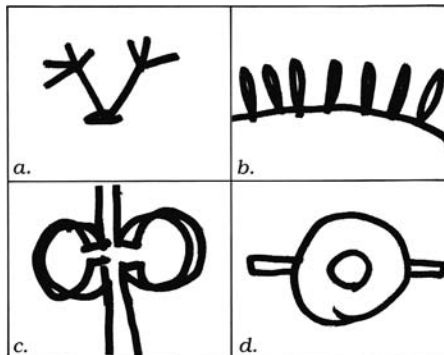


Now make something from your doodle. Quality of drawing is not an important consideration. Just make sure that your drawings are recognizable.

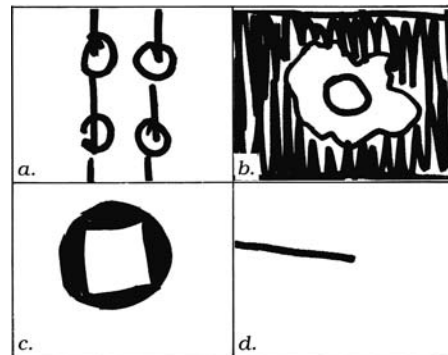
Exercise I.4

Look at the squares in the following image. These images represent:

- a) early bird getting the worm
- b) Custer's last stand
- c) a flamingo swallowing a barbell
- d) a man wearing a Mexican sombrero riding a bicycle



Following the style of this exercise, see if you can determine what the images below represent.



Answers to Exercise I.4:

- a) a bear climbing a telephone pole
- b) the view of the sun through a chuck hole
- c) a square peg in a round hole
- d) the end of the line

Exercise I.5

Using incomplete pictures as in Exercise I.4, depict the following things in the empty squares below.

- a) a porcupine's pillow
- b) Abraham Lincoln taking a bath
- c) a spider doing a handstand
- d) the other side of the argument

<i>a.</i>	<i>b.</i>
<i>c.</i>	<i>d.</i>

Exercise I.6

In the last empty squares make up your own visuals. (If you are tempted to skip this exercise, don't! Learning to think in visual patterns takes practice, and this is a fun, easy exercise. Just try it.)

- a) _____
- b) _____
- c) _____
- d) _____

<i>a.</i>	<i>b.</i>
<i>c.</i>	<i>d.</i>

Exercise I.7

We've all played the game of guessing what we see in puffy cloud formations in the sky. This next visual exercise is similar to that game. Instead of clouds, you will decide what you can "see" in the following squiggly lines and match each to the descriptions below. (Note: In some instances it isn't necessary that you see a distinct image in the line, you might just get a certain "feel" from the squiggles. There is no single correct answer. This is an intuitive exercise.)



- He had learned the amazing ability from his brother's dog.
- After laboring for weeks, she was ready for the unveiling.
- The weird Gopile stomped down Main Street consuming everything in its path.
- How long it had been there was impossible to determine.
- Maude had never been married; indeed, it was doubtful that she had even had a suitor in her 61 years.

Exercise I.8

Make up your own squiggles and sentences to describe what they represent. Remember, there is no single correct answer to this intuitive exercise.

CHAPTER 1

PERSPECTIVE

One of the greatest challenges for people to learn is to draw in correct perspective. Teachers have struggled for years to find methods to teach students to draw correct perspective rapidly and easily. I have found a method that works well and is easy to learn. It will work every time. Even if you have no artistic training, this method will enable you to create drawings with accurate perspective.

The Box Method

The box method involves a box or cube. If you can draw a two-dimensional square correctly, you then can easily draw a box. If you can draw a box in accurate perspective, you can draw anything accurately and in perspective.

It sounds simple, doesn't it? It is simple. It will take some practice. It will take time to understand what is happening. You will have to practice those things mentioned in this book. But, if you do practice the method, you will find it is really quite easy.

