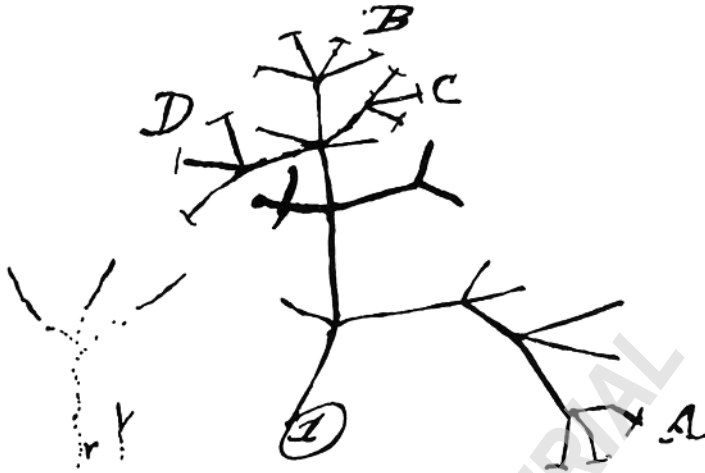




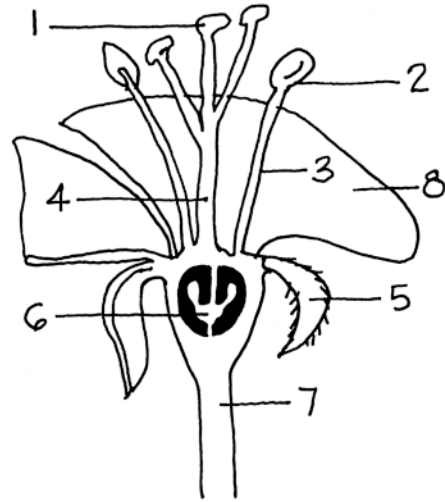
1-1 Charles Darwin's tree diagrams, representing traceable evolution in biological species.

Visual notes are simply the graphic equivalent of written notes. "Taking visual notes" refers to recording information which is primarily visual and, therefore, could not be recorded as effectively with words.

Keeping notes has always been an effective hedge against an imperfect memory. Moreover, the act of taking notes, selecting and sifting through them, is an important tool for creativity. Keeping a notebook of observations and experiences is a very old custom. Once visual notes were seen by architects to be nearly as important as verbal ones. Sketching was a common part of travel and education for the young architect.

Since the availability of easy, inexpensive photography, however, visual note-taking has declined. With this decline has come a decline in visual literacy in general. We have come to rely upon a camera to do all that notational sketches once did. Of course, a camera can do much of what sketching once did and it can perform certain tasks much faster and better. But a camera cannot record concepts, underlying structure, schematic organization, or anything else that the eye cannot see all at once. Although the camera *can* be used creatively, it does not *require* any more than a superficial level of interaction

between the observer and the view. It can become a comparatively neutral instrument which neither demands a high degree of selectivity nor promotes out of necessity a very high level of understanding. Le Corbusier said that cameras "get in the way of seeing." Because visual notes do not accompany verbal ones as frequently as they once did, we believe that something valuable has been lost. It is our purpose to encourage the development and use of visual skills, especially in the form of simple, rapid, effective visual notation. We contend that the stigma against the use of graphic skills by those other than artists is based upon a false assumption that one must be an artist, heavily endowed with artistic aptitudes, in order to draw. Although a certain kind of drawing is the province of artists, that should not discourage others from using drawings to communicate information any more than one might refuse to ever write anything down because one is not an accomplished journalist or author. Making visual notes can be useful and effective and it can also be a particularly enjoyable endeavor. Once one has gotten beyond the notion that one's drawings have to be works of art, the activity of drawing gains a momentum of its own and inevitably provides a certain satisfaction of its own.



1-2 Botanist's sketches.

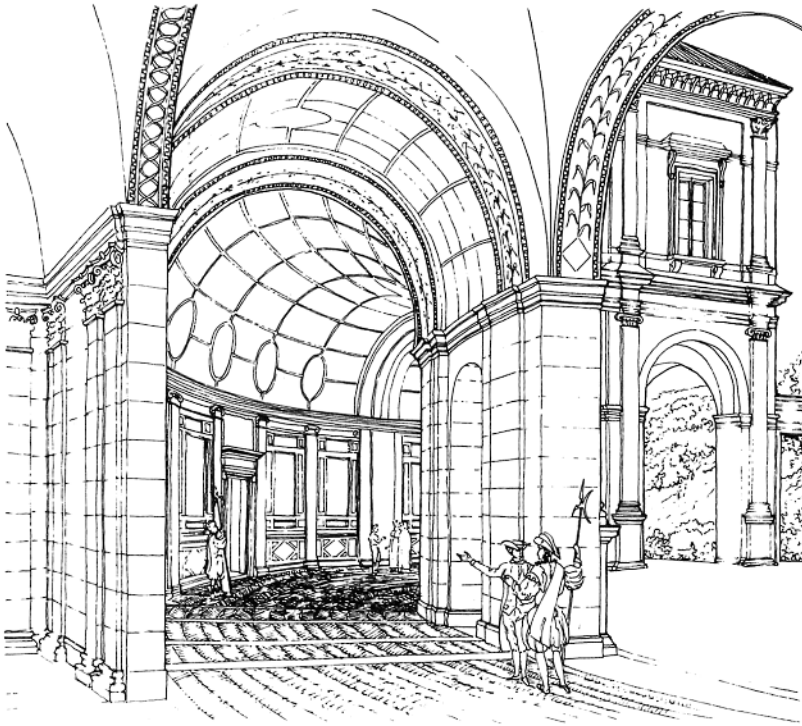
THE USES OF VISUAL NOTES

Who would have need for making visual notes? It might be: an engineer inspecting machinery, a scientist or laboratory technician recording a particular arrangement of apparatus, a landscape architect noting an exemplary design, an architect recording important details of a building which he intends to remodel or expand, a traveler wishing to record what lies beyond myriad impressions as he explores a new place, or a student simply taking notes during a slide lecture in biology, botany, anthropology, architectural or art history or other subject where visual form is a concern.

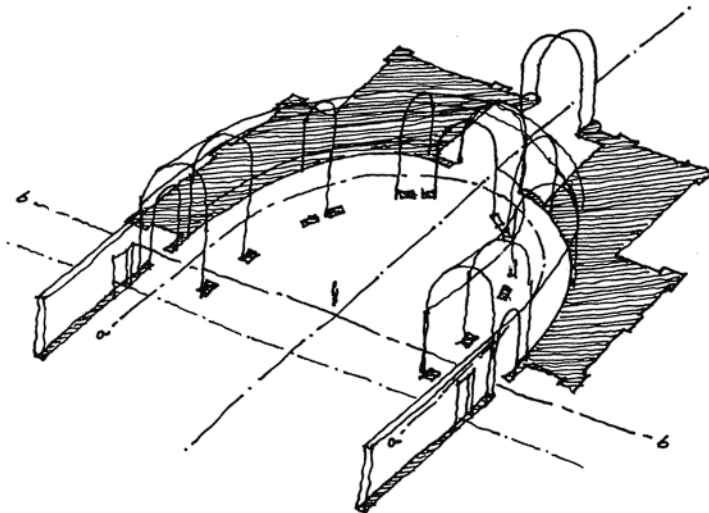
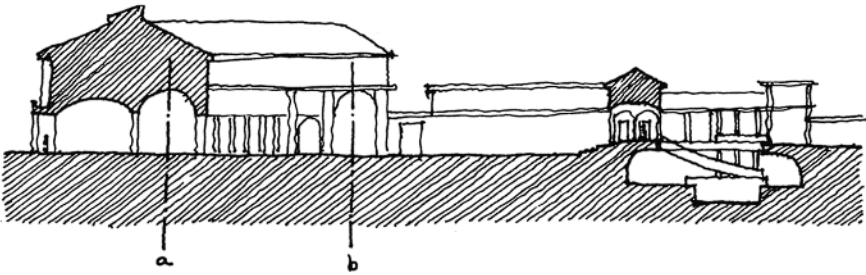
Visual notation has an additional important use. It records that which cannot be seen directly by the eye or by a camera. A laboratory technician draws a diagram of the assembly of various apparatus; it would not be useful for him to draw a picture of the laboratory. The architect's drawing demonstrates how the building he is studying is organized, a plan of how the circulation system works, or how and where the structural elements relate to the other parts of the building. A botanist draws an exploded view of a portion of a plant, showing how sustenance is carried through the veining to distant parts of the plant and how the flower's reproductive parts fit together. Visual notes record information which has been selected to be stored, studied, and communicated. Such drawings are often analytical; they take apart and describe rather than simply represent as in a picture. Compared to an

artist's drawings, like a sketch of a scene, visual notes require a lot of thought and comparably less skill because they are intended to disclose selective information, while the sketch of a scene requires little forethought but considerable skill to become an accurate depiction.

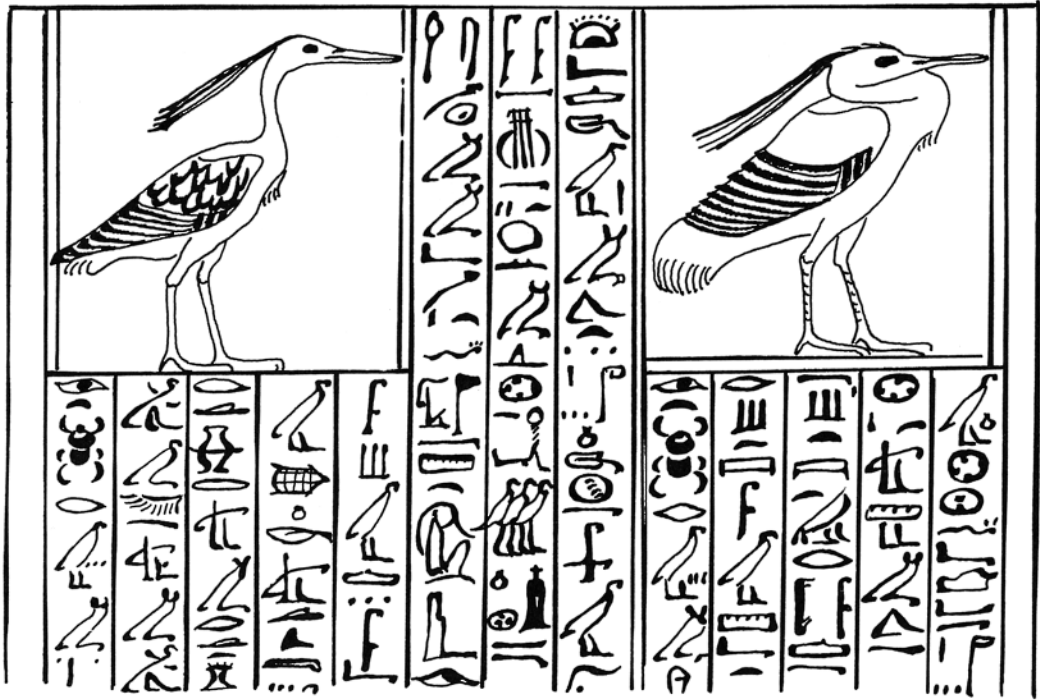
There is, however, still another important dimension to visual notation. We may be left with the impression that this form of graphic communication is only of concern to technologists and other professionals who require it for the conduct of their work, and that it is simply a useful, marketable skill. The effect, however, runs deeper. Consider an analogous situation: the effect of written language upon thoughts and actions. Not only does written language, with its commonly accepted vocabulary and grammar, communicate ideas, but it actually conditions the way we think. Moreover, it communicates our own thoughts, concepts, and ideas back to us. We use it to organize our thoughts as one does when one assembles what he has learned about a particular topic, records his thoughts and, finally, "gets it all down" in writing. It is in the act of "getting it all down" that new associations and understanding emerge as a result of giving order to what would otherwise be merely random thoughts and inert, factual circumstances. It is not surprising, therefore, that societies which had not developed a written language are not comparable with literate societies in terms of the quality of their accomplishments.



1-3 Arcade of the Villa Giulia in Rome, based on a drawing by Letarouilly.



1-4 Visual notes of the same building, conveying a different kind of information than the pictorial drawing above.



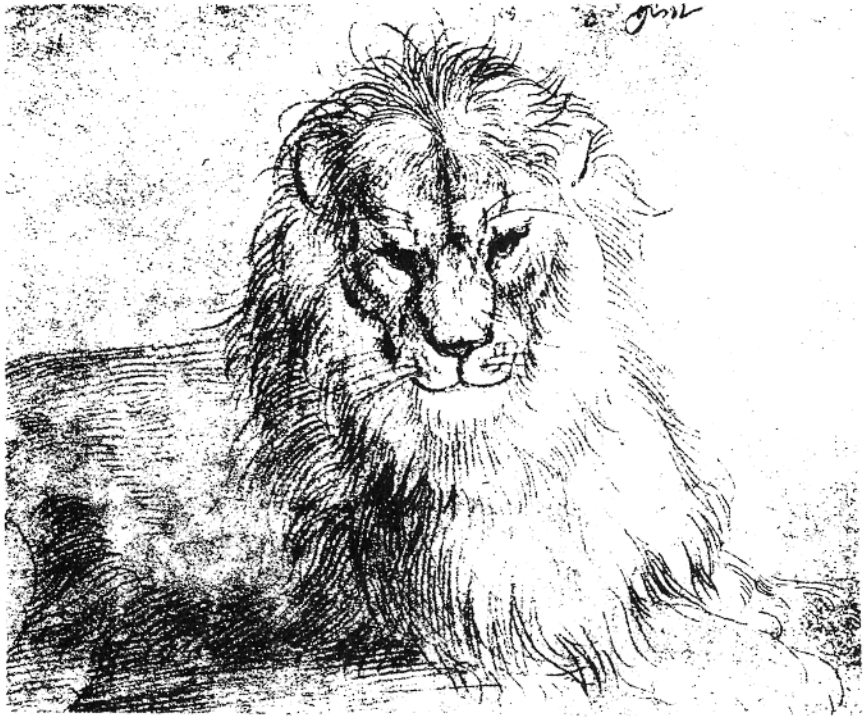
1-5 Egyptian hieroglyphics: Words were formed by picture-symbols. Although a clumsy form of writing, the verbal and visual world were integrated in many early forms of writing.

Written language does have its limitations. Visual information is not as easily conveyed by the written word. Skillful writers have given us a special literary richness by describing something they wish us to see and feel, such as Balzac's description of the interior of an apartment on the Place des Vosges, or the Roman naturalist and writer Pliny's description of his villas in Italy in letters to his friends. But literature cannot convey all that seeing can provide. As in literature, the two drawings on the right represent a fanciful transformation from factual reality into a fantasy at the level of good fiction writing. The ritual mask was indeed inspired by a lion, but now it is a thing of the imagination. Perhaps the ancient artist first drew a lion from life to grasp the essential characteristics of "lion-ness," then transformed those same characteristics into something intentionally different though faithful nonetheless to the factual lion. Visual media in the form of drawing is capable of playing with the imagination in the same way as in literature.

It follows that just as verbal description is a source for a rich and profound level of understanding, visual literacy can provide its own

access to a level of richness and understanding which would otherwise be unreachable. In our earlier description of the engineer, technician, scientist, and others making visual notes in order to facilitate their work, the impression might be that such notation is simply a means for the transfer of information. Certainly notes might serve only as information transfer and they might only be perceived as such. Although basic factual information is inert and without an intrinsic value, the very act of gathering the material, selecting, sorting, and "getting it down" can disclose new associations and promote a deeper understanding than any superficial observation could provide.

Communication, whether it is through literature, mathematics, music, or graphics, is at the very heart of creativity which thrives upon relationships drawn between symbols and ideas. The extent of one's creativity is related to the depth of one's experience of the world in which one lives. Imagination is built upon the richness of perceptions gleaned from an active and conscious participation in that world of thoughts and substance.



1-6 A lion drawn from life by Albrecht Durer.



1-7 Tribal ritual Lion Mask. It is intended that the mask be recognizable as a lion, but this lion is of the spirit world, not an ordinary beast but a powerful, mystical, extraordinary one. A transformation has taken place through the media of art and imagination.



1-8

VISUAL LITERACY

Verbal literacy is considered an essential skill in an industrialized, technologically-based society. Most of us have learned how to take verbal or written notes. We learn to understand others and express ourselves in a written language usually by the completion of high school. But understanding and expressing visual messages is a skill that remains poorly developed.

Visual literacy includes two skills: visual acuity and visual expression. Visual acuity is an intense ability to see information or multiple messages in one's environment with clarity and accuracy.

When most people look at a house, they see a roof, windows, doors, or the colors of the walls. An artist also sees the lightness or darkness of the colors, the way the sun casts shadows, and the reflections in the windows. The architect also sees the types of materials used, the details of a window frame or eaves, and the accessories such as gutters, downspouts, and lights. The sociologist may see which windows have curtains drawn, what symbols are presented in the style of the house, or how well the house is maintained. Visual expression is the ability to initiate visual messages. It is most strongly



1-9 Varied perceptions of a house.

exhibited by people such as artists, designers, choreographers, photographers, or architects; but it is important to everyone. While visual acuity is concerned with the visual messages we receive, visual expression is concerned with the visual messages we send. Just as listening and speaking are related but distinct skills, seeing and expressing are interdependent but separate. Seeing is a necessary prelude to visual expression. But to achieve visual literacy both must be consciously developed. Since most readers will not start with these skills, they represent both a goal and a benefit of visual note-taking.

In *A Primer of Visual Literacy* D. A. Dondis has identified three levels of visual messages.¹ They are representation, abstraction, and symbolism. Representation seeks to accurately record what we can actually see or experience. Representative sketches function much as do photographs, but they are, of necessity, more selective. The photograph accurately duplicates all that can be seen from a specific vantage point; the representative sketch describes those parts of a view which are of special interest to the person sketching. While a photograph is a reproduction of what is visible, the sketch is a record of how one sees that

which is visible. Producing sketches and “reading” other people’s sketches provide both a view of the subject and an education about a variety of ways of seeing.

In visual communication, *abstraction* can be seen as a “simplification toward a more intense and distilled meaning.”² We are literally bombarded with visual information at any given moment; in order to function in the world we must create some order and meaning out of what we see. This is basically the process of abstraction called *perception*. If we visit someone’s house, the whole facade may be visible but we notice the front walk and front door because they are important to our intention to enter the house. While perception usually operates on a subconscious, reflex level, abstraction can be brought to a conscious, purposeful level when incorporated in a visual message. Abstractions may place emphasis on certain parts of a representational sketch such as the pattern of windows in a house; or they may be illustrations of that which cannot be seen such as the probable structural system of the house.

Symbolism is also a form of simplification of visual messages but it employs a surrogate or substitute image for what can actually be seen. In place of a representational drawing of a specific house we can use a symbol which most people accept as standing for the general concept “house.” The advantage of using such a symbol is that it can be quickly drawn and miniaturized so that many symbols can be shown in the same space it takes to draw one house. These symbols can be arranged in an abstract “environment” in which the sequence, position, or grouping of the symbols conveys additional information.

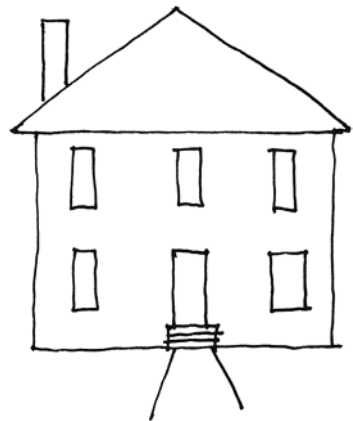
A variety of examples of representational, abstract, and symbolic drawings can be found in other books. A partial list of sources is included in the Bibliography for this book; and specific examples of drawing techniques are included in the Appendix.



1-10A Representative sketches.



1-11A Abstract sketches.



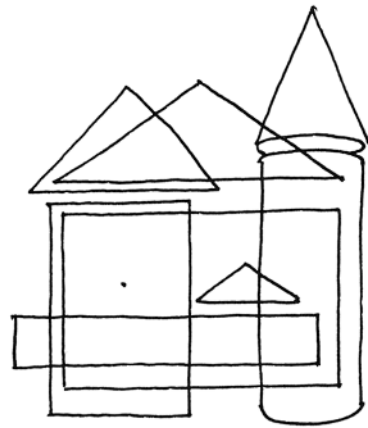
1-12A Symbolic sketches.



1-10B
1-10C



1-11B



1-11C



1-12B



1-12C



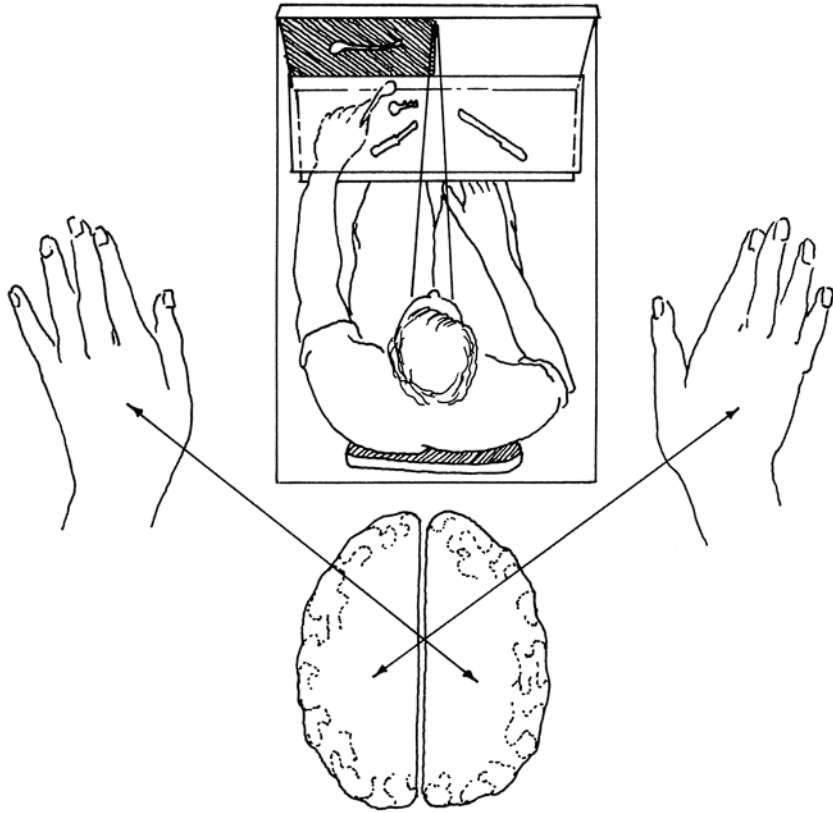
1-13 Child's drawing.

THE NOTEBOOK

In keeping a notebook we use combinations of representational, abstract, and symbolic messages. This requires our understanding of the basic approach to creating each type of drawing and the ways in which they can be combined. When children draw a person, they draw symbols for all the parts they know must be there to make a human figure. The head is a circle and the body a larger circle below the head. Eyes are represented by two dots; nose, mouth, and hair by appropriately placed lines; arms and legs by single lines emanating from the body circle. Likewise, a house is depicted as a rectangle with a triangle on top of it and a symbolic window with a single crossed division on it resides on the facade. Our training in school in mathematics and written language reinforces our tendency toward symbolic drawings.

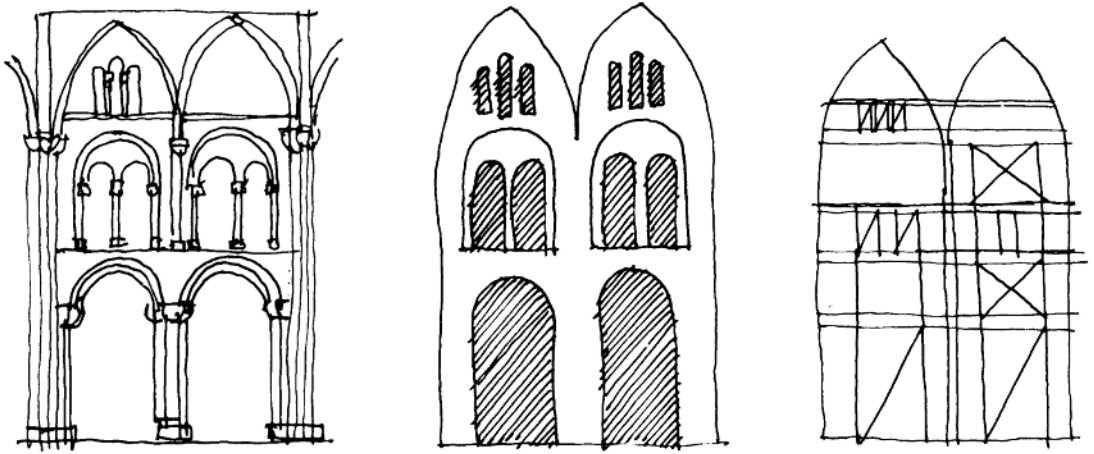
In her book, *Drawing on the Right Side of the Brain*, Dr. Edwards describes the transition from symbolic drawings to producing nonsymbolic drawings as a process of limiting the involvement of the portion of our brain which deals primarily with verbal information.³ Then that portion of our brain which processes visual information can take over. Rather than the drawing being comprised of symbolic elements, it becomes a composition of shapes which represent the visual likeness of that which we are recording.

If one wishes to produce a true likeness, like an accurate photograph of something, it is important to draw the shape accurately, just as it is seen, and not to permit preconceived form or symbolic gestures to intercede. Dr. Edwards describes this as "locking out the left side of the brain" and she proposes exercises



1-14 Based on a drawing by Betty Edwards. Research reveals that the two sides of the brain function in relative independence, with different functional "assignments" which, on occasion, can conflict with one another.

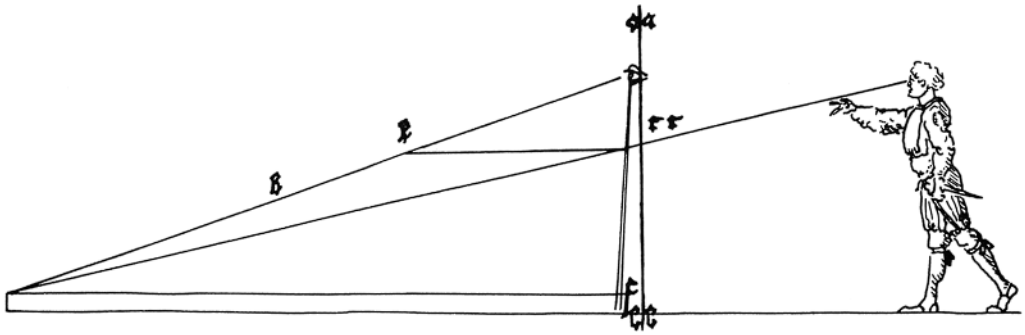
intended to facilitate this locking-out process. Later in this book, we describe her technique in greater detail and we propose some exercises in response to some of the discoveries her book discusses. Among the exercises she proposes is one whereby you reproduce a drawing upside down. The drawing which you are to reproduce is, preferably, one which is unintelligible to you until it is finally righted; you are therefore forced to draw the form as it is seen, without regard to what is actually depicted in the original drawing. The lines, proportions, and tones are seen and copied simply as lines, proportions, and tones and nothing more. This keeps the verbal part of our brain from dominating these processes and short-circuiting them with symbolic elements and memories of simplified versions of the subject being drawn.



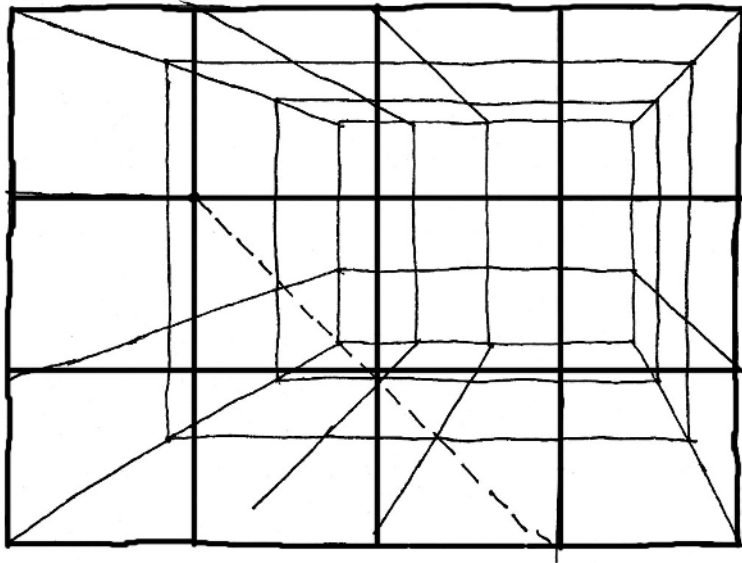
1-15 Analytical studies of Durham Cathedral.

Visual notation is not always the same as the realistic drawing mode described above, but it shares certain characteristics with lifelike drawing skills such as those Dr. Edwards' techniques seek to teach. As you will see in the ensuing examples, an accurate representation of shape and proportion is frequently important, even though reproduction of optical accuracy is not always the goal in visual notation. In optically accurate drawings, lines are drawn onto a flat piece of paper as an abstraction of the depicted object or scene. Seen in light of a child's propensity to draw symbolic objects rather than the actual subject being depicted we assert the importance of recognizing optical qualities of perspective and visual recognition of form, shape, and proportion. Visual notation will not necessarily depict objects as seen, but rather they might be shown from above or below, with portions removed or rotated to show what cannot be seen

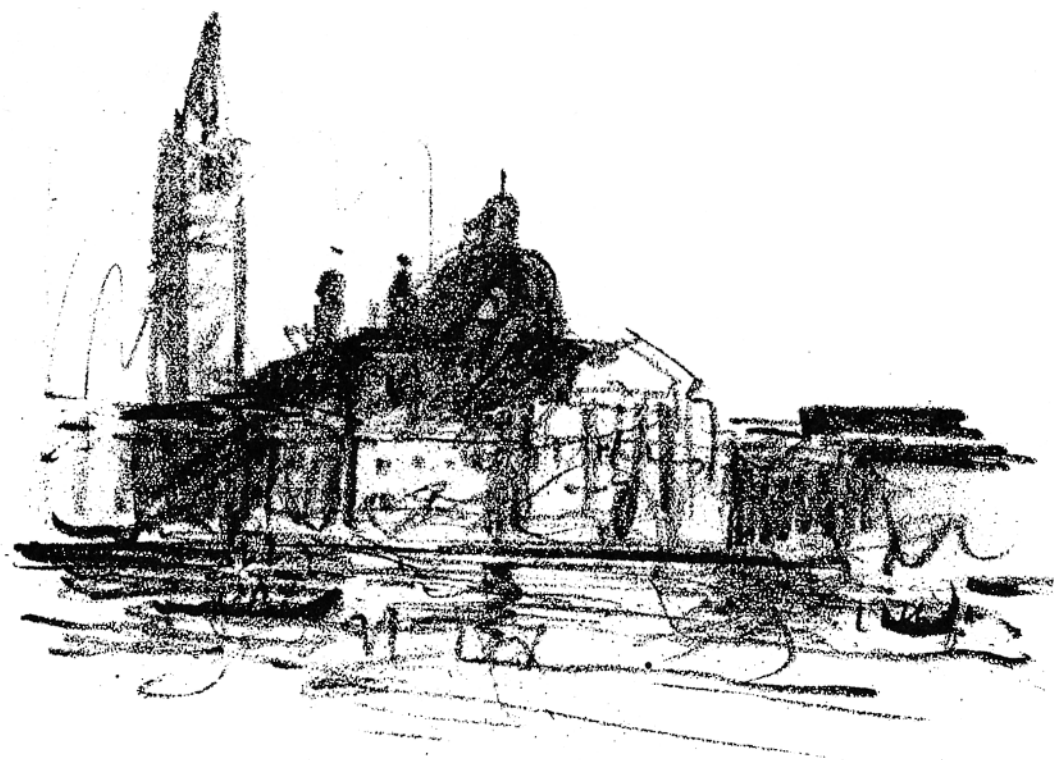
in a single view. The shape and proportions of the object must still be reasonably accurate with respect to the unrealistic view; therefore some basic drawing skills are a prerequisite to making visual notes. Basic drawing skills arise out of the note-taking process. The sketchy and often skeletal or abstract character of visual note-taking, as depicted above, is usually a consequence of intentionally drawing quickly, while still capturing shape and proportions accurately. However, if after several attempts at visual note-taking, you cannot grasp the means for recording shape and proportion with reasonable accuracy, we suggest that you refer to the Appendix or you might spend some time with Dr. Edwards' book. Then you may return to your visual notebook, having gained more confidence in your ability to make your pen or pencil record shape and proportion with acceptable accuracy.



1-16 Based on an illustration by Albrecht Durer explaining the mechanics of optical perspective.



1-17 Representation of three-dimensional space, following the optics of the human eye. The figure in the above drawing sees lines, like those shown in this drawing, as though they were projected onto the screen before him.



1-18 A scene in Venice by the architect, Louis I. Kahn, recorded in his notebook when he was a young man.

USING THIS BOOK

This book consists largely of examples of the use of visual notes. They have been arranged in order of relative complexity and present issues which tend to build upon one another. However, these examples need not be studied in the order in which they are presented. This book can be seen as a reference source, permitting the reader to thumb through to find an example which parallels a problem at hand. The examples demonstrate techniques for recording visual information, varying from one another in style, graphic skill, complexity, or simplicity of technique. We have provided a potpourri of examples so that there will be something for many needs, interests, and levels of skill. Furthermore, certain examples which might convey very little

to the reader at first, might be seen in a different light as needs, skills, and interests develop.

Chapter 2 describes the basic processes of note-taking. Then Chapter 3 provides an idea of the effect of accumulated visual notes in the form of a journal. In Chapter 4 we have collected examples of visual notes from several people representing a wide range of skills, style, and subjects; we hope by this means to stretch your recognition of the potential of visual notation. Finally, the Appendix presents several practical suggestions for keeping a visual notebook.

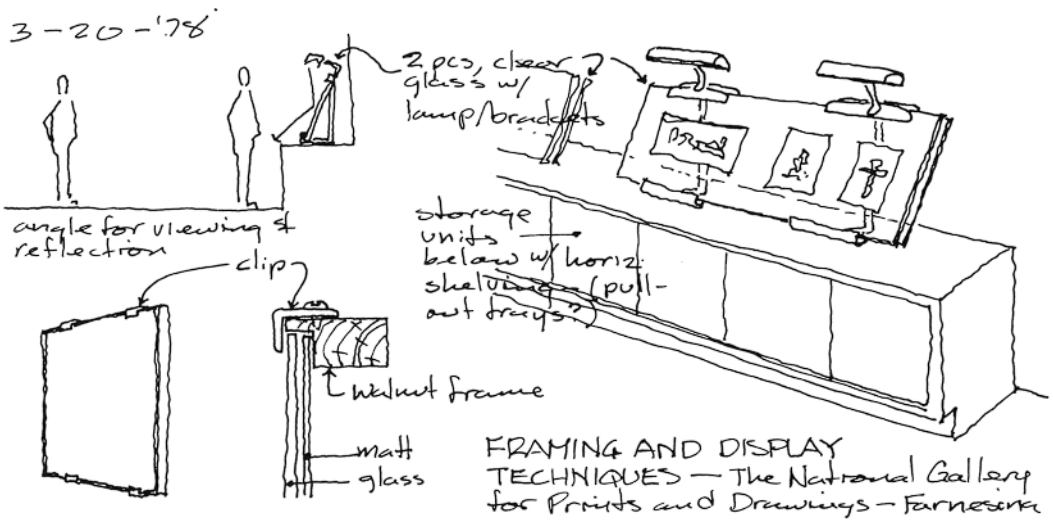
GETTING STARTED

Children are typically uninhibited about drawings. They are unconcerned as to whether their drawings look professional or not, or whether someone else understands them. Their drawings are spontaneous expressions of a less inhibited spirit. Children will often throw a completed drawing aside or give it away to make room for beginning another. Their drawings are not seen by them as precious objects; it is the act of making them to which they are attracted rather than the production of objects for later contemplation, use, or enjoyment.

A child's frame of mind concerning drawing is enviable because he proceeds without hesitation. Sometimes artists and drawing teachers encourage their students to return to that childhood innocence in order to get them over that initial reluctance to "mess up a clean sheet of

paper." We, too, would encourage the reader to jump into the process of drawing, setting aside any expectation of artful graphics.

Finally, to get going find a sketch pad or notebook that you can keep with you most of the time and start using it. If you are not yet skillful enough to work at the level of complexity you wish, we suggest that you combine photocopies and traced sheets with drawn information in your notebook. A photocopy can be traced with various colored pencils or it can be overlaid with a transparent sheet to produce a composite image. It is important to get started by whatever means or motivation is available to you. As in writing, one becomes more skilled at visual note-taking as one uses this approach to gathering information and you will become more aware of its potential usefulness as skill and familiarity increase.



1-19 Design study sketches.

