# COMPOSITION: THE SYNTACTICAL GUIDELINES FOR VISUAL LITERACY

The process of composition is the most crucial step in visual problem solving. The results of the compositional decisions set the purpose and meaning of the visual statement and carry strong implications for what the viewer receives. It is at this vital stage in the creative process that the visual communicator has the strongest control of the work and the greatest opportunity to express the total mood the work is intended to convey. But the visual mode offers no proscribed structural systems that are absolute. How can we gain control of our complex visual means with some certainty of shared meaning in the final results? In language syntax means the orderly arrangement of words in their appropriate form and order. The rules are defined: all one has to do is learn them and use them intelligently. But syntax in the context of visual literacy can only mean the orderly arrangement of parts, leaving us with the problem of how we can approach the process of composition with intelligence and knowledge of how compositional decisions will affect the final result. There are no absolute rules, but there is a great deal of understanding of what will occur in terms of meaning if we make certain arrangements of the parts toward organizing and orchestrating the visual means. Many of the guidelines for understanding the meaning in visual form, the syntactical potential of structure in visual literacy, stem from the investigation of the process of human perception.

# PERCEPTION AND VISUAL COMMUNICATION

Meaning in visual message-making lies not only in the cumulative effects of the arrangement of the basic elements but also in the perceptual mechanism that is universally shared by the human organism. More simply put: we create a design out of many colors and shapes and textures and tones and relative proportions; we relate these elements interactively; we intend meaning. The result is the composition, the artist's or photographer's or designer's intention. It is his input. Seeing is another and separate step in visual communication. It is the process of absorbing information into the nervous system through the eyes, the sense of sight. This process and capacity is shared by all people on a more or less common basis, finding its significance in terms of shared meaning. The two separate steps, seeing and designing and/ or making are interdependent for both meaning in a general sense and message in the case of attempting to respond to a specific communication. Between the general meaning, mood, or ambience of visual infor-

mation and a specific, defined message lies yet another area of visual meaning, functionality, in the objects that are designed, made, and manufactured to serve a purpose. While it would seem that the message of such works is secondary to their viability, the facts prove otherwise. Clothes, houses, public buildings, even the whittling and scrimshaw of amateur craftsmen tell us an enormous amount about the people who designed and chose them. And our understanding of a culture depends on our study of the world they built and the tools and artifacts and art they created.

Primarily, the act of seeing involves a response to light. In other words, the most important and necessary element in the visual experience is tonal. All of the other visual elements are revealed to us through light, but they are secondary to the element of tone, which is, in fact, light or the absence of light. What light reveals and offers us is the substance by which man fashions and devises what he recognizes and identifies in the environment, namely all the other visual elements: line, color, shape, direction, texture, scale, dimension, motion. Which elements dominate which visual statements is determined by the nature of what is being designed or, in the case of nature, what exists. But when we define painting elementally as tonal, filled with shape reference and consequently direction, having texture and tonecolor, possibly scale reference and no dimension and motion except by implication, it does not even begin to define the visual potential of painting. The possible variations of a visual statement that fits neatly within that description is literally infinite. Those variations depend on the artist's subjective expression through emphasis of certain elements over others and the manipulation of those elements through the strategic choice of techniques. In these choices, the artist finds his meaning.

The final result is the artist's true statement. But meaning also depends on the response of the viewer, who also modifies and interprets through the net of subjective judgment. One factor alone is common currency between artist and audience, in fact, among all people-the physical system of their visual perceptions, the psychophysiological components of the nervous system, the mechanical workings, the sensory apparatus through which they see.

Gestalt psychology has contributed valuable research and experimentation in the area of perception, collecting data and searching the significance of visual patterns, as well as finding how the human organAbstract as the psychophysiological elements of visual syntax may be, they can be defined as to their general character. The meaning inherent in abstract expression is intense; it short-circuits the intellect, making contact directly with the emotions and feelings, encapsulating the essential meaning, cutting through the conscious to the unconscious.

Visual information may also have definable form either through attached meaning in symbols or through shared experience in the environment, in life. Up, down, blue sky, vertical trees, scratchy sand, red-orange-yellow fire, are but a few of the denotative, point-at-able qualities we all share visually. And so, whether consciously or not, we respond with some conformity to their meaning.

#### BALANCE

The most important psychological as well as physical influence on human perception is man's need for balance, to have his two feet planted firmly on the ground and to know if he is to remain upright in any circumstance, in any attitude, with some reasonable certainty. Equilibrium, then, is man's firmest and strongest visual reference, both his conscious and unconscious basis for making visual judgments. The extraordinary fact is that while all visual patterns have a center of gravity which can be technically computed, no method of calculation is as fast, as accurate, as automatic as the intuitive sense of balance inherent in man's perceptions.

So the horizontal-vertical construct is the basic relationship of man to his environment. But beyond the simple, static balance shown in Figure 2.1 is the process of adjustment to each variation of weight through a response of counterpoise (2.2 and 2.3). This internalized awareness of steady uprightness in relationship to a stable base is ex-







FIGURE 2.1

FIGURE 2.2

FIGURE 2.3

pressed externally through the visual establishment of Figure 2.4 and a horizontal-vertical relationship of what is being viewed (2.5) and its relative weight in relationship to a balanced state (2.6). Balance is as fundamental in nature as it is in man. It is the state opposite to collapse. You can measure the effect of disequilibrium by observing the look of alarm on the face of a victim who has suddenly and without warning been pushed off balance.

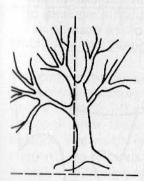






FIGURE 2.5

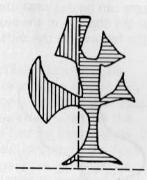


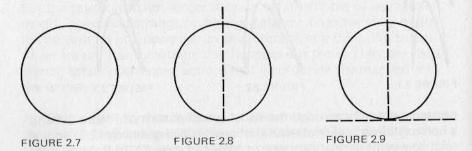
FIGURE 2.6

In visual expression or interpretation, this process of stabilization imposes on all things seen and planned a <u>vertical</u> "axis" with a <u>horizontal</u> secondary referrent which together establish the structural factors that measure balance. This visual axis is also called a <u>felt axis</u> which better expresses the unseen but dominating presence of the axis in the act of seeing. It is an unconscious constant.

#### STRESS

Many things in the environment appear to have no stability. A circle is a good example. It seems the same however we look at it (2.7), but

in the act of seeing, we supply it with stability by imposing on it the vertical axis that analyzes and determines its balance as a form (2.8) and then (2.9) adding the horizontal base as a reference that completes the sense of stability. Projecting the hidden (or felt) structural



factors onto regular forms, such as a circle, or square, or an equilateral triangle, is comparatively simple and easy to understand, but when a form is irregular, the analysis and establishment of balance is more involved and intricate (see Figure 2.10). This stabilization process can be demonstrated with greater clarity through a sequence of slight changes in the examples and the responses of the position of the felt axis to the shifting state of balance in Figure 2.11.

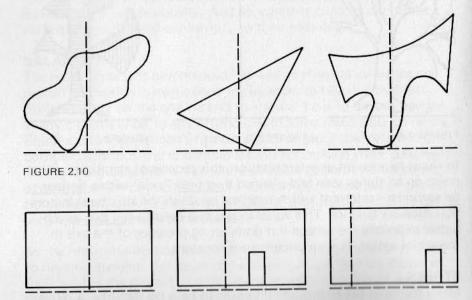


FIGURE 2.11

This process of ordering, of intuitively recognizing regularity or the lack of it, is an unconscious one, requiring no explanation or verbalization. For both the sender and the receiver of visual information the lack of balance and regularity is a disorienting factor. In other words, it is the most effective of all visual means in creating an effect in response to message purpose, an effect that has a direct and economic potential for conveying visual information. The visual options are polarities, either regularity and simplicity (2.12) on the one hand, or complex and unexpected variation (2.13) on the other. Choice between these options governs relative response from the viewer with either repose and relaxation or stress.

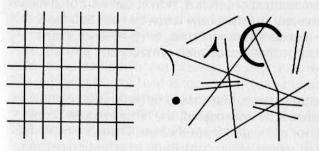


FIGURE 2.12, REPOSE

FIGURE 2.13, STRESS

The connection between relative stress and relative balance can be demonstrated simply in any regular form. For example, a tipped radius in a circle (2.14) exerts greater visual stress because the radius does not confrom to the unseen "visual axis" and therefore unsettles the balance. The visible element, the radius, is modified by the invisible element, the felt axis (2.15), as well as by its relationship to the horizontal, stabilizing base (2.16). In terms of design, plan, purpose: of two circles side by side, it is the one with the tipped or nonconforming radius (2.18 rather than 2.17) which attracts the attention of the viewer most.

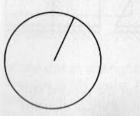


FIGURE 2.14

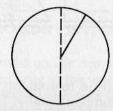


FIGURE 2.15

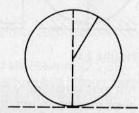


FIGURE 2.16

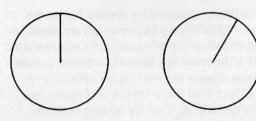
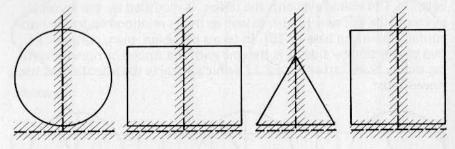


FIGURE 2.17

FIGURE 2.18

There is no judgment to attach to this phenomenon of stress. It is neither good or bad. Its value in the theory of perception lies in how it is used in visual communication, that is, how it can reinforce meaning, purpose, intention and, further, how it can be used as a basis for interpretation and understanding. Stress, or its absence, is the first compositional factor that can be used syntactically in the pursuit of visual literacy.

There are many aspects of stress that should be expanded on, but, first, consider that stress (the unexpected, the most irregular, complex, unstable) does not alone dominate the eye. There are other factors in the sequence of seeing which contribute to attention-getting and compositional dominance. The process of establishing the vertical axis and horizontal base draws the eye with much more intensity to both visual areas, automatically giving them relative importance compositionally. As already demonstrated, it is easy to locate these areas in regular shapes, shown in Figure 2.19. In more complex shapes, the



**FIGURE 2.19** 

felt axis is naturally more difficult to establish, yet the process still gives maximum importance compositionally. Thus a visual element placed in the felt axis locus of the examples in Figure 2.20 is automatically emphasized. These are simple examples of what still holds true,

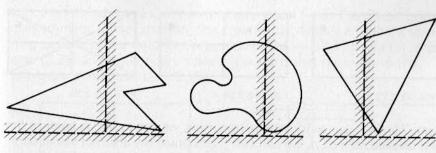


FIGURE 2.20

not only in complex shapes but also in complicated compositions. Yet no matter how involved the elements, the eye seeks out the felt axis in any visual event in an unending process of establishing the relative balance. In a triptych, the visual information set in the central panel takes compositional precedence over that in the lateral panels. The axis area of any field is looked at first; it is where you expect to see something. The same holds true for visual information in the lower half of any field, the eye being drawn to that locus in the secondary step of establishing balance through the horizontal reference.

# LEVELING AND SHARPENING

But the power of the predictable pales before the power of surprise. Harmony and stability are polarities of the visually unexpected and stressful in composition. In psychology, these opposites are called <u>leveling</u> and <u>sharpening</u>. In a rectangular visual field, a simple demonstration of leveling would be to place a dot in the field in the dead center of a structural map (2.21). The placement of the dot as shown in Figure 2.22 offers no visual surprise; it is totally harmonious. Placement

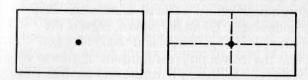


FIGURE 2.21

FIGURE 2.22

of the dot in the right-hand corner demonstrates sharpening (2.23). The dot is off center not only in the vertical structure but also in the horizontal structure as shown in Figure 2.24. It does not even conform to the diagonal components of the structural map (2.25). In either case, compositional leveling or sharpening, there is clarity of de-



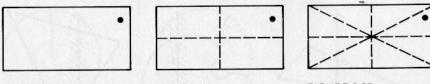
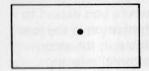


FIGURE 2.23

FIGURE 2.24

FIGURE 2.25

sign. Through our automatic perceptions, we can establish balance or the marked lack of it, we can easily recognize the abstract visual conditions. But there is a third state of a visual composition which is neither leveled nor sharpened, where the eye must struggle to analyze the components as to their balance. This is called ambiguity and although the connotation is the same as in language, the form may be slightly differently described visually. The dot in Figure 2.26 is not clearly on center, nor is it far off-center as shown in Figure 2.27. Vi-



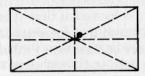


FIGURE 2.26

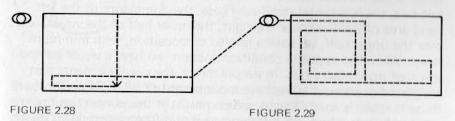
FIGURE 2.27

sually, its placement is unclear and would confound the viewer unconsciously hoping to stabilize its position in terms of relative balance. Visual ambiguity, like verbal ambiguity, obscures not only compositional intent, but also meaning. The natural balancing process would be slowed down, confused, and, most important, unresolved by the meaningless spatial phraseology of Figure 2.26. The Gestalt law of perceptual simplicity is greatly frustrated by such an unclear state of difference in all visual composition. In terms of sound visual syntax, ambiguity is totally undesirable. Of all our senses, sight is the one that wastes the least energy. It experiences and recognizes balance, obvious or subtle, and the interacting relationships of diverse visual data. It would be counterproductive to frustrate and confuse this unique function. Ideally, visual forms should not be purposefully unclear; they should harmonize or contrast, attract or repel, relate or clash.

# PREFERENCE FOR LOWER LEFT

In addition to being influenced by elemental relationships to the structural map, visual stress is maximized two other ways: the eye fa-

vors the left-hand and lower area of any visual field. Translated into a diagrammatic demonstration, this means that there is a primary scanning pattern of the field that responds to the vertical-horizontal referents (2.28) and a secondary scanning pattern that responds to the left-lower perceptual pull (2.29).



The explanations for these secondary perceptual preferences are many, and they are not as easy to explain conclusively as primary preferences. The favoring of the left part of the visual field could be influenced by the Western print formation and the fact that there is strong conditioning in the way we learn to read from left to right. There is little research and a great deal to be learned about why we are predominantly right-handed organisms and specialize our left-to-right reading and writing competencies to the left hemisphere of the brain. Oddly, right-handedness extends to cultures that have written from top to bottom and presently write from right to left. We also favor the left field of vision. If we do not know for sure why, it may be sufficient to know that the fact does prove out in practice. Watch the eyes of an audience scan a stage on which there is no action when the curtain goes up in a theater.

## SOME EXAMPLES

Conjecture though it may be, the fact of top-bottom, left-right weight differences has great value in compositional decisions. It can give a refined knowledge of our understanding of stress as illustrated by Figure 2.30, which shows a linear division of a rectangle in a leveled composition; Figure 2.31 demonstrates sharpening but with minimized

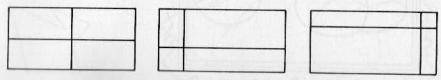


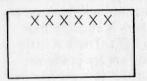
FIGURE 2.30

FIGURE 2.31

FIGURE 2.32

stress, while Figure 2.32 shows maximum stress. Of course, these facts may be modified for left-handed people or those who read their language any way other than left to right.

When visual material conforms to our expectations in terms of the felt axis, the horizontal stabilizing base, the dominance of the left-hand area of the field over the right, the lower half of the visual field over the upper half, we have a leveled composition, with minimum stress. When the opposite conditions obtain, we have a visual composition of maximum stress. In simple terms, the visual elements that are placed in areas of stress have more weight (2.33, 2.34, 2.35) than those that are leveled. Weight, which means in this context ability to attract the eye, of course, has enormous significance here in terms of compositional balance.



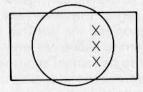




FIGURE 2,33

FIGURE 2.34

FIGURE 2.35

A practical demonstration of the theory demonstrated in Figure 2.36 shows that in a still life, one apple on the right balances two apples on the left. The compositional dominance is intensified by moving the right-hand apple higher than the two left-hand apples as shown in Figure 2.37.

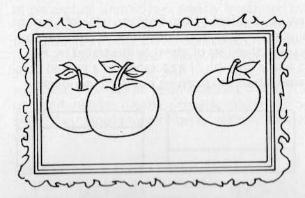


FIGURE 2,36

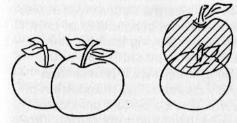
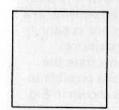


FIGURE 2.37

Shapes have more weight or dominance visually in direct relationship to their relative regularity. Complexity, instability, irregularity increase visual stress and consequently attract the eye as shown in the regular shapes (2.38, 2.39, 2.40) and the irregular shapes (2.41, 2.42, 2.43). The two groups represent the choice between two major categories in composition: the balanced, rational, harmonious, as opposed to the exaggerated, distorted, and emotional.

In Gestalt theory of perception, the law of Prägnanz defines psychological organization as being as "good" (regular, symmetrical, simple) as prevailing conditions allow. "Good," in this case, is not a desirable or even very descriptive word, considering the intended meaning; a more accurate definition would be emotionally least provoking, sim-





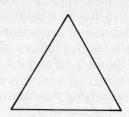


FIGURE 2.39

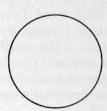


FIGURE 2.40



FIGURE 2.41

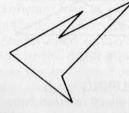
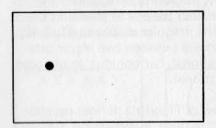


FIGURE 2.42



FIGURE 2.43

plest, least complicated, all of which describe the state arrived at visually through bilateral symmetry. Axial balance designs are not only easy to understand, they are easy to do, employing the least complicated formulation of counterpoise. If a dot is placed firmly to the left of the vertical or felt axis, a state of imbalance is provoked as shown in Figure 2.44 and immediately countered by the addition of another dot on balance in Figure 2.45. This is a perfect demonstration of counterpoise, which, when used in a visual composition, produces the most ordered and organized effect possible. The classic Greek temple is a tour de force in symmetry and, as would be expected, a most serene visual form.



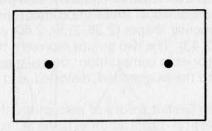
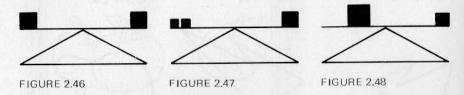


FIGURE 2.44

FIGURE 2.45

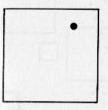
It is exceptional to find much in nature or the work of man that can reach an idealized state of balance. It could be argued that it is compositionally more dynamic to arrive at a balance of the elements in a visual work through the technique of asymmetry. It is not as easy. Variations of the visual means involve factors of compositional weight, size, and position. Figures 2.46 and 2.47 demonstrate the axial distribution of weight based on size. It is also quite possible to balance dissimilar weights by shifting their position as shown in Figure 2.48.

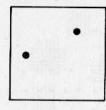


## ATTRACTION AND GROUPING

The power of attraction in visual relationships represents another Gestalt principle with great compositional value, the law of grouping. It has two levels of significance to the visual language. It is a visual

condition that creates a circumstance of give and take of relative interaction. A dot alone in a field relates to the whole as shown in Figure 2.49, but it stands alone, and the relationship is a mild state of intermodification between it and the square. In Figure 2.50, the two dots fight for attention in their interaction, creating comparatively individual statements because of their distance from one another and. consequently, appearing to repel each other. In Figure 2.51, there is an immediate and more intense interaction; the dots harmonize and, therefore, attract each other. The closer they are, the stronger their attraction. In the spontaneous act of seeing, individual visual units





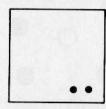


FIGURE 2 49

FIGURE 2.50

FIGURE 2.51

create other and distinct shapes. The closer the marks the more complicated the forms they can describe. In simple diagrams like 2.52 and 2.53 the eye supplies the missing connective links. Man, through his perceptions, has a need to make wholes of units, in this case, to connect the dots by responding to their attraction. This is the visual phe-

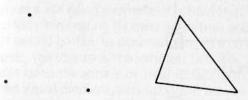
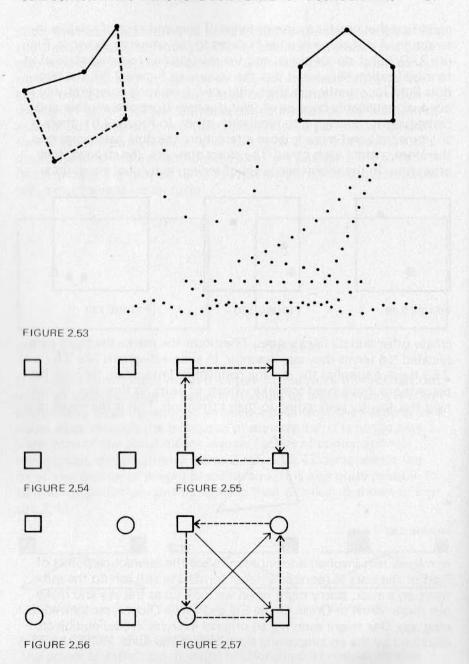


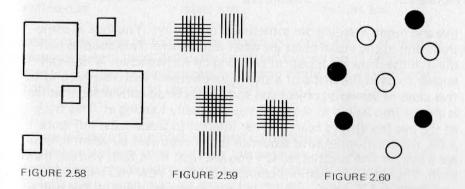
FIGURE 2.52

nomenon that inspired ancient man to see the interacting points of light of the stars as representational forms. We still can do the same thing on a clear, starry night when we look up at the sky and make out those forms of Orion or the Big and Little Dipper, recognized so long ago. One might even try an original exercise in finding objects described by the encompassing light dots of the stars.

The second level of importance to visual literacy of the law of grouping is how it is affected by similarity. In visual language, opposites re-

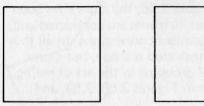


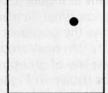
pel, but similars attract. So the eye fills in the missing connections but automatically relates the like units more strongly. The perceptual process is demonstrated by the visual clues of Figure 2.54, which create a square (2.55). But in Figure 2.56, the clues have been changed and their shape influences what elements are connected and in what order; Figure 2.57 shows the possible connections. In all four figures (2.54-2.57) the similarity demonstrated is shape, but many other visual affinities govern the law of grouping in the act of seeing. such as size, texture, or tone, as shown in Figures 2.58, 2.59, and 2.60.



## POSITIVE AND NEGATIVE

All that we see has the grammatical quality of being the major statement or the modifier-in verbal terminology, the noun or the adjective. This structural relationship in the visual message has a strong connection to the sequence of seeing and absorbing information. A square is a good example of a field that is a positive visual statement clearly expressing its own definition and character and quality (2.61). It would be fair to observe that, as in the case of most of these examples, the square is the simplest possible field. The introduction of a dot onto the square or field (2.62), although it, too, is an uncomplicated visual element, sets up visual tension, stress, and absorbs the visual attention of the viewer away from the square in some part. It sets up a sequence of seeing which is called positive and negative seeing. The significance of positive and negative in this context means merely that there are separate yet unified elements in all visual events. Figures 2.62 and 2.63 demonstrate that positive and negative are in no way meant to describe darkness or lightness or mirror image as they do in the description of film and prints in photography. Whether it is a dark dot on a light field as in Figure 2.62 or a white dot on a dark ground as in 2.63, the dot is the positive form, the active stress, and the square the negative form. In other words, what dominates the eye in visual experience would be considered the positive elements while those more passively displayed would be considered the negative. Posi-







**FIGURE 2.61** 

**FIGURE 2.62** 

FIGURE 2.63

tive and negative seeing can sometimes fool the eye. You look at something and in the visual clues see what is not there. Two couples huddling in the distance appear to be a dog on its haunches. A face can appear to us in the shape of a stone. Involvement with relative and active clues of seeing an object can sometimes be so convincing that it is almost impossible to see what you are really looking at. This trick of the eye has always been of great interest to Gestaltists. In Figure 2.64, the positive-negative sequence is demonstrated by whether you see a vase or two profiles, which you see first, if, in fact, you see them both. The same observations could be made of how you see the juxtaposed 2 and 3 in Figure 2.65. In both examples there is little dominance of one element over the other, which reinforces the ambiguity of the visual statement. The eye seeks one simple solution to what it is seeing, and, although the process of assimilating the information may be long and complicated, simplicity is the end sought. The Chinese symbol of vin-yang, shown in Figure 2.66, is a perfect example of simultaneous contrast and complementary design. Like the "arch which never sleeps," the yin-yang is dynamic in both its simplicity and complexity, constantly moving; its negative-positive visual state is never resolved. It is as close a balance of individual elements brought together into a cohesive whole as one can find.

There are other examples of psychophysical facts of seeing that can be utilized in the understanding of visual language. What is larger ap-

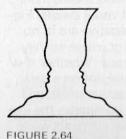
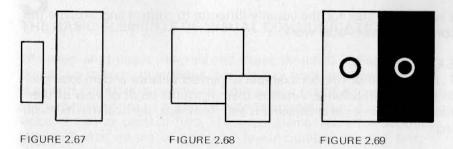






FIGURE 2.65

FIGURE 2.66



pears to be closer in the field, as shown in Figure 2.67. Yet, relative distance is even more distinctly legislated by overlap (2.68). Light elements on a dark ground appear to expand while dark elements on a light ground appear to contract (2.69).

There is a Berlitz approach to visual communication. You don't have to decline verbs or spell words or learn syntax. You learn by doing. In the visual mode you pick up a pencil or crayon and you draw; you doodle out a rough plan for a new living room; you paint a sign announcing a public event. You can negotiate the visual means to make a message or a plan or an interpretation, but how does the effort fit in terms of visual literacy? The major differences between the direct. intuitive approach and visual literacy is the level of dependability and accuracy between the message encoded and the message received. In verbal communication what is spoken is heard only once. Knowing how to write affords a greater chance for control of effect and narrows the area of interpretation. So, also, with a visual message, but not quite. The complexity of the visual mode does not allow the narrow range of interpretation of language. But in-depth knowledge of the perceptual processes that govern response to visual stimuli increases the control of meaning.

The examples in this chapter are only part of the possible visual information that can be utilized in developing a visual language anyone can articulate and understand. Knowing these facts of perception educates our compositional plan and affords syntactical guidelines to those seeking a beginning toward achieving visual literacy. The standards of literacy do not require that every verbal message-maker be a poet; therefore, it seems only fair that every designer or maker of visual material need not be a great and talented artist. This is a beginning toward releasing the ability of a generation immersed in a highly visual media environment; here are the ground rules that can serve as

a strategic syntax for the visually illiterate to control and legislate the content of their visual work.

#### **EXERCISES**

- 1. Photograph or find an example of perfect balance and an example of complete imbalance. Analyze them from the point of view of the basic compositional arrangement and its effects, particularly its meaning.
- 2. Do a collage using two different shapes as the means for identifying and associating two separate groups (such as old/young, rich/poor, happy/sad).
- 3. Find an example of a bad visual design in graphics, which, although it was intended to deliver a message, is difficult to read and understand. Analyze how much ambiguity has contributed to the failure of the visual statement. Roughly resketch the design (1) to <u>level</u> the effect and (2) to sharpen the effect.

# THE BASIC ELEMENTS OF VISUAL COMMUNICATION

Whenever anything is designed and made, sketched and painted, drawn, scratched, constructed, sculpted, or gestured, the visual substance of the work is composed from a basic list of elements. Visual elements are not to be confused with the materials or a medium, the wood or clay or paint or film. The visual elements are the basic substance of what we see, and they are few in number: the dot, line, shape, direction, tone, color, texture, dimension, scale, movement. Few though they may be, they comprise the raw material of all visual information in selective choices and combinations. The structure of the visual work is the force that determines which visual elements are present and with what emphasis.

Much of what we know about the interaction and effect of human perception on visual meaning is drawn from the research and experimentation in Gestalt psychology, but Gestalt thinking has more to offer than just the relationship between psychophysiological phenomena and visual expression. Its theoretical base is the belief that an approach to understanding and analyzing all systems requires recognizing that the system (or object or event, et cetera) as a whole is made up of interacting parts, which can be isolated and viewed as completely independent and then reassembled into the whole. No one unit of the system can be changed without modifying the whole. Any visual event or work is an incomparable example of this thesis since it was originally devised to exist as a well-balanced and inextricably involved totality. You can analyze any visual work from many points of view; one of the most revealing is to break it down into its constituent elements to better understand the whole. This process can provide deep insights into the nature of any visual medium as well as that of the individual work and the previsualization and making of a visual statement as well as the interpretation and response to it.

Using the basic visual components as a means for knowledge and understanding of either complete categories of visual media or individual works is an excellent method for exploration of their potential and realized success in expression. Dimension, for instance, exists as a visual element in architecture and sculpture and in both these media is dominant in relation to other visual elements. The whole science and art of perspective was developed during the Renaissance to suggest the presence of dimension in two-dimensional visual work such as painting and drawing. Even with the trompe d'oeil aid of perspec-

cent theories of McLuhan concerning visual involvement and participation in the act of seeing as a part of the meaning. But no one probed the possibilities as completely as Seurat, who, in his efforts, seems to have anticipated four-color halftone process by which almost all full-color continuous-tone photographs and drawings are now reproduced in mass printing.

The unique ability of a series of dots to lead the eye is intensified the closer the dots are to one another (3.8).

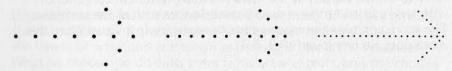


FIGURE 3.8

#### THE LINE

When the dots are so close to one another that they cannot be individually recognized, the sensation of direction is increased, and the chain of dots becomes another distinctive visual element, a line (3.9). A line could also be defined as a dot in motion, or the history of a dot's movement, since, when we make a continuous mark or a line, we make it by placing a marker point on a surface and moving it along, leaving the formed marks as a record (3.10).

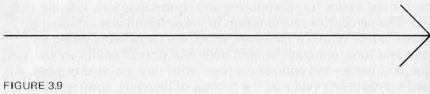
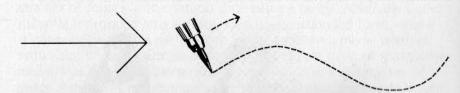


FIGURE 3.9



**FIGURE 3.10** 

In the visual arts, line, because of its nature, has enormous energy. It is never static; it is the restless, probing, visual element of the sketch. Line, wherever it is employed, is the essential tool of previsualization, the means for presenting in palpable form that which does not exist yet, except in the imagination. In this way, it is tremendously useful to the visual process. Its fluid linear quality contributes to the freedom of experimentation. Yet for all its looseness and freedom, line is not vague: it is decisive; it has direction and purpose, it is going somewhere, it is doing something definitive. Thus, line can also be tight and technical, serving as the prime element in diagrammatic plans for mechanical construction and architecture and many other highly measured or scaled visual representations. Whether it is used loosely and experimentally (3.11) or tightly and measured (3.12), line is the indispensable means for making visible what cannot be seen, what does not exist except in the imagination.



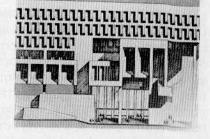


FIGURE 3.11

FIGURE 3.12

Line is also a tool for notation systems, writing, for example. Writing, map-making, electric symbols, and music are all examples of symbol systems in which line is the most important element. But in art, line is the essential element of the drawing, which is a notation system that does not stand for something else, symbolically, but does capsulize visual information, boiling it down to a state of reduction where all superfluous visual information has been stripped away and only the essential remains. This spareness has a highly dramatic effect in drawings or drypoints, woodcuts, etchings, and lithographs.

Line can take many different forms to express many different moods. It can be very loose and undisciplined, as in the sketches illustrated, to take advantage of its spontaneity of expression. It can be very deli-

cate and undulating or bold and coarse, even in the hands of the same artist. It can be hesitant, indecisive, questioning, when it is merely a visual probe toward a design. It can also be as personal as handwriting in the form of nervous doodles, which are a hallmark of the unconscious activity under the pressure of thinking or as amusement in boredom. Even in the bloodless, mechanical format of maps, plans for a house, cogs in a machine, line expresses the intention of the maker and artist, and, further, his most personal feelings and emotions, and most important, his vision.

Line rarely exists in nature. But line does appear in the environment: the crack in a sidewalk, telephone wires against the sky, bare branches in winter, a cable bridge. The visual element of line is used mostly to express the juxtaposition of two tones. Line is utilized most often to describe that juxtaposition, and in this, it is an artificial device.

#### SHAPE

Line describes shape. In the parlance of the visual arts, line articulates the complexity of shape. There are three basic shapes, the square, circle, and equilateral triangle. Each of the basic shapes (3.13) has its own unique character and characteristics and to each is attached a great deal of meaning, some through association, some through arbitrary attached meaning, and some through our own psychological and physiological perceptions. The square has associated to it dullness, honesty, straightness, and workmanlike meaning; the triangle, action, conflict, tension; the circle, endlessness, warmth, protection.



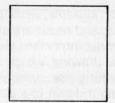




FIGURE 3.13

All the basic shapes are fundamental, simple planal figures, which can be easily described and constructed either visually or verbally. A square is a four-sided figure with exactly equal right angles at each corner and sides of exactly the same length (3.14). A circle is a continuously curved figure whose outline is at all points equidistant from

its center point (3.15). An equilateral triangle is a three-sided figure whose angles and sides are all equal (3.16). From these basic shapes in endless combinations and variations, we derive all physical forms in nature and in the imagination of man (3.17).

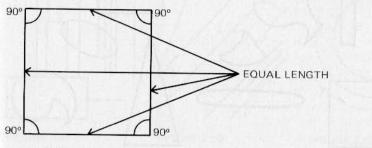


FIGURE 3.14

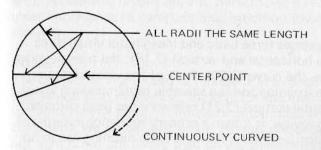


FIGURE 3.15

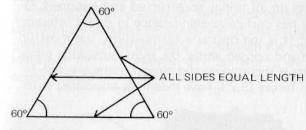


FIGURE 3.16

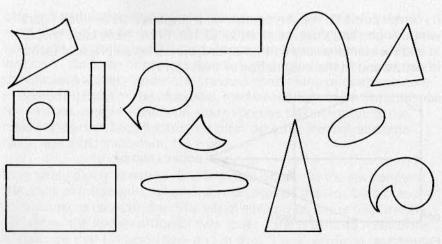
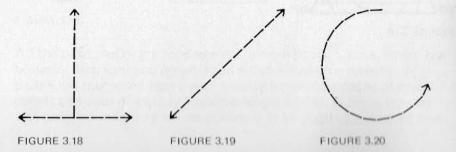
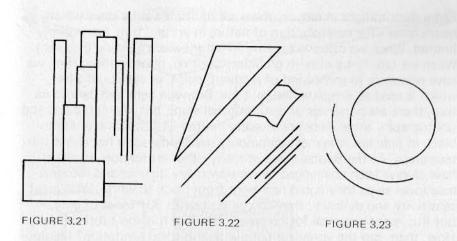


FIGURE 3.17

#### DIRECTION

Every basic shape expresses three basic and meaningful visual directions: the square, the horizontal and vertical (3.18): the triangle, diagonal (3.19); the circle, the curve (3.20). Each of the visual directions has strong associative meaning and is a valuable tool in making visual messages. The horizontal-vertical (3.21) reference has been commented on already, but to review, it is man's primary reference in terms of his well-being and maneuverability. Its most basic meaning has to do not only with the human organism's relationship to the environment, but also to stability in all visual matters. Not only does man have more ease in balance; so do all things constructed and designed. Diagonal direction (3.22) has particular significance in direct reference to the idea of stability. It is the opposite formulation, the most unstable directional force and consequently the most provoking visual formulation. Its meaning is threatening and almost literally upsetting. Curved directional forces (3.23) have meanings associated with





encompassment, repetition, and warmth. All directional forces have great importance to compositional intention toward final effect and meaning.

#### TONE

The edges that line is used to represent in a rough sketch or a detailed, mechanical plan in the environment, for the most part, appear as the juxtaposition of tone, the intensity of darkness or lightness of anything seen. We see because of the relative presence or absence of light, but light is not uniformly shed on the environment either by the sun or moon or by artificial light. If it were, we would be as much in the dark as we are in complete absence of light. Light goes around things, is reflected by shiny surfaces, falls on objects which themselves have relative lightness and darkness. Variations in light or tone are the means by which we optically distinguish the complicated visual information in the environment. In other words, we see what is dark because it abuts or overlaps what is light, and vice-versa (3.24, 3.25).



FIGURE 3.24

FIGURE 3.25

From dark to light in nature, there are multiple subtle steps which, in man's means for reproduction of nature in art and film, are severely limited. When we observe tonality in nature, we are seeing true light. When we talk of tonality in graphics, painting, photography, film, we have reference to some kind of pigment, paint, or nitrate of silver. which is used to simulate natural tone. Between light and dark in nature, there are hundreds of distinct tonal steps, but in graphic arts and photography these steps are severely limited (3.26). From white to black in pigment, the most commonly used tonal scale has about thirteen steps. At the Bauhaus and at many other art schools, students have always been challenged to see how many distinct and recognizable tonal steps they could represent from black to white. With great sensitivity and delicacy, they can be pushed to 30+ tones of gray, but this is not practical for common use since it is too subtle visually. How, then, can the visualizer cope with this tonal limitation? Manipulation of tone through juxtaposition greatly lessens the tonal limitations inherent in the problem of emulating the tonal largess of nature. One tone of gray can change dramatically when it is placed on a tonal scale (3.27). The possibility for highly expanded tonal representation can be achieved through utilization of these means.

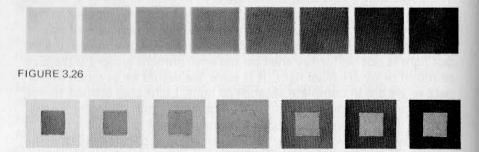


FIGURE 3.27

The world we live in is dimensional, and tone is one of the visualizer's best tools for indicating and expressing that dimension. Perspective is the method for plotting many of the special visual effects in our natural surroundings, to represent the three-dimensional way we see in two-dimensional graphic form. It uses many devices to plot distance, bulk, point of view, the vanishing point, the horizon line, eye level, et cetera (3.28). But even with the aid of perspective, line alone will not create the illusion of reality effectively without the aid of tone (3.29). The addition of tonal background detail reinforces the appearance of reality through the sensation of reflected light and cast sha-

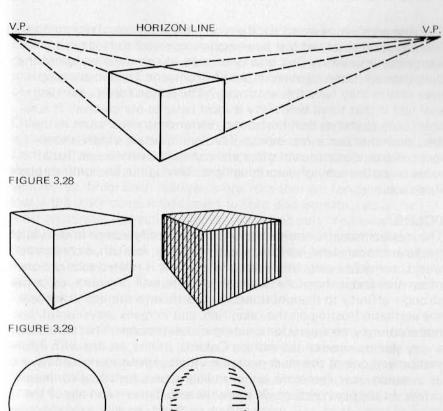


FIGURE 3.30

dows. This effect is even more dramatic in simple, basic shapes such as the circle, which could not appear as dimensional without tonal information (3.30).

Lightness and darkness are so intensely important to the perception of our environment that we accept a monochromatic representation of reality in the visual arts and we do it without hesitation. In fact, the varying tones of gray in photographs, film, television, etching, mezzotints, tonal sketches, are monochromatic surrogates and represent a world that does not exist, a visual world we accept only because of the dominance of tonal values in our perceptions (Plate 3.1).\*

<sup>\*</sup>Plates 3.1-3.6 are on pages 53 and 54.