ORGANIZING PRINCIPLES OF DESIGN

The visual elements examined in Chapter 2 are manipulated by artists to form compositions that have a certain coherence, or unity. If these elements work well, they contribute to a whole that is greater than the sum of the parts. In trying to determine what holds an effective work together, theorists have distinguished a number of principles that seem to be involved. They include repetition, variety or contrast, rhythm, balance, compositional unity, emphasis, economy, and proportion. Another principle that artists use, but that theorists generally overlook, is the relationship of a work to its environment.

Not all of these principles are emphasized in a single work. And certain artists use them more intuitively than intellectually, using nonlinear thinking while sketching, planning, and manipulating design elements—until everything feels right. Nevertheless, the principles give us a basis for understanding the form of certain

compositions. Often these formal considerations help to express the content of the work and can best be understood when the content as well as the form is taken into account.

REPETITION

One of the basic ways that artists have unified their designs is to repeat a single design element, be it a kind of line, shape, form, texture, value, or color. As the viewer’s eye travels from one part to another, it sees the similarities and the brain, preferring order to chaos, readily groups them as like objects. Nathalie du Pasquier of the Milan-based Memphis design group presents imaginary animals as cut-out shapes tumbling across her fabric design [3.1]. The turning of the same amusing shape to many different positions makes the design lively and interesting, while its repetition holds the design together in the viewer’s perception.

In three-dimensional work, repetition of a single design element can have a powerful effect. Backs [3.2], by Polish fiber artist Magdalena Abakanowicz, has a disturbing emotional impact on viewers, not only because of the headless, limbless quality of the hunched-over, hollowed-out torsos, but also because there are so many of them. The artist explained: “I needed 80 to make my statement. At first I made six, but then I saw I must have 80 of them—to show a crowd, a tribe, or a herd, like animals.” She leaves their interpretation to viewers, preferring universal to specific references, but they clearly reflect human oppression, as experienced by one who grew up in a war-ravaged, enemy-occupied country.

3.2 Magdalena Abakanowicz, Backs, 1978–81. Eighty sculptures of burlap and resin molded from plaster casts, over life size.


3.4 (right) Repeated figures in Zapataistas.

The repeated figures in Abakanowicz’s Backs and du Pasquier’s fabric seem to stand alone, despite their similarity. By contrast, in José Clemente Orozco’s Zapataistas [3.3], the similar figures in the peasant army merge into a unified whole. As shown in the diagram [3.4], our eye picks out the diagonals of the standing figures and their hats as beats in a single flowing movement to the left, with bayonets as counterbeats pointing to the drum-like repeated beats of the large hats above. We can see that even if one revolutionary falls, the mass of the others still moves inexorably forward.
Many paintings use repetitions of some design quality to unify complex compositions. In Mont Sainte-Victoire (2.20), for example, Cézanne uses the repetition of similar brush-strokes to help tie the work together. If you page through the illustrations in this book, you will find many more examples—some obvious, some quite subtle.

In purely decorative works, such as fabric and wallpaper designs, repetition of design elements is often used to build up an all-over pattern, a series of images that is repeated in an orderly way. When a whole wall is papered in Henry Wilson’s wallpaper (3.5), one sees a pattern of interlocking stylized trees with flowers both separating and unifying them.

**VARIETY**

The companion of repetition is variety: change rather than sameness through space and time. Variety often takes the form of subtle variations on the same theme: Du Pasquier’s animals (3.1) vary in position and each of Abakanowicz’s backs is slightly different (3.2). Antonio Gaudi’s uncompleted church of the Sagrada Familia in Barcelona (3.6) is a fantastic conglomeration of many architectural styles. Yet it is
held together visually by its spires, which vary in form but resemble each other in their tapering upward reach.

Another way in which variety is expressed is through transitions, or gradual changes from one state to another. For example, one color may gradually blend into another, a line may change in character, or a form may dissolve into unfilled space. Helen Frankenthaler’s woodcut *Essence Mulberry* [3.7] presents a beautiful transition from mulberry to a gray that echoes the gray of the ground. She also works with variety in the form of contrast—an abrupt change. Here the gradual vertical color change of the upper portion is played against the sudden horizontal of gold on the bottom. Frankenthaler is also working with contrasts in scale and shape, between the hard-edged geometry of the large golden rectangle and the soft-edged amorphous shapes above.

Contrast is often used to enhance our appreciation of both things being compared. The gold and the mulberry hues are so different that each brings out the other’s richness by contrast. In a Balega mask [3.8] the rough, random fibers of the beard accentuate the smooth, fast lines of the head. The Church of Taiwallahi, excavated as an underground space within living rock in Helsinki [3.9], calls us to appreciate both the organic roughness of the stone and the elegant refinement of the organ pipes, the earliness of the walls and the light of the sky brought in beneath the great copper dome. Through a continuing series of contrasts, the stone church wakes up our perceptions and sharpens our awareness of each visual sensation.

Although it might seem logical that highly contrasting passages in a work would disorganize it, detracting from its unity, often the opposite is true. The roughness of the Balega mask beard keeps referring us to the smoothness of the face, tying the two together visually like an egg in a nest. In any work that makes us look from one passage to another and back, it is that act of comparing on the part of the viewer that is the unifying factor. Even if parts seem diametrically opposed to each other, they can be unified in the viewer’s mind as two ends of the same continuum. Opposites have a certain unity, complementing each other like black and white, night and day, masculine and feminine.

Artists may also use contrast to create a certain visual tension that adds excitement to a work. There
is a fine point where things fight with or pull away from each other as far as they possibly can without destroying the unity of the composition. Tintoretto seems to have found this point in his Leda and the Swan (3.10). As diagrammed in Figure 3.11, Leda and the observer form strong arcs actively pulling away from each other and twisting through space, accentuating Leda’s movement toward her lover Zeus, who has appeared in the form of a swan. Tintoretto worked out his compositions by posing small wax figures in boxes, as if on a stage. He then translated the three-dimensional scene to two dimensions by drawing the figures on a grid placed across the stage and then enlarging them from this grid to the scale of the painting. Not only has he depicted the figures as pulling away from each other, each of the bodies is also twisted in a flowing serpentine movement called serpentinato in Italian, an exaggeration of the figure-posing used in High Renaissance art. First developed by classical Greek sculptors, the technique involves twisting areas of the body in counterpoised opposition to each other. The twisting movement adds to the dramatic effect. Tintoretto was one of the so-called Mannerist painters, who exaggerated gestures for their theatrical impact.
RHYTHM

A third organizing principle found in many works is rhythm. Repetition and variety in design elements create patterns that are analogous to rhythms in music, from the predictable drumbeats of a marching band to the swirling rhythms of romantic symphonies to the offbeat intricacies of jazz timing. The same element—such as a line, form, or color—may be repeated visually through space, or groupings may be repeated so that the eye picks out recurring patterns, such as small, large-medium, small—large-medium. Such patterns, which may be easily perceived or complex and subtle, create repeated visual accents with spaces between them, like

upbeats and downbeats, or waves and troughs. The apsara, or divine water nymph, shown in Figure 3.12 in fact appears to be part of the flowing rhythm of the ocean, and of the song being played on the instrument. There is a continued repetition of upswept lines, and within these arcs secondary melodies repeat the theme with variations. These melodies within melodies are particularly visible on the right side of the piece, where wavy lines dance within the upward arcs. The nymph’s body, too, is turning rhythmically in space, with face frontal, hips turned sideways, and feet so turned that we see the soles. Even the fingers are treated rhythmically, like notes in counted measures.

Rhythm in a work satisfies the desire for order, for it brings a familiar sense of the pulsing of life. In the apsara, the pulsing is playful and free, but ordered nonetheless. In the Last Supper altarpiece by the medieval artist Ugozzo di Neri (3.13), the rhythm formed by the repetition of the circles of the haloc heads of the disciples is as regular as drumbeats. This easily-perceived regularity is broken by the wider space separating Christ from the others, the grieving position of John the beloved, and the absence of a halo around the head of Judas. These dramatic elements are like crossbeats to the rhythms of the rest of the painting, another being produced by the alternating placement of reds.

Rhythms may flow continuously through time, without the measured pauses seen in Ugozzo’s Last Supper. As we noted in examining the Tristan rocking chair (2.15), its lines flow rhythmically through long curves, never stopping fully except at the delicate ends of the “tendril.” For the most part, the only changes we “hear” in the visual music of the chair are shifts in volume and speed, with slight crescendos through the center of the curves and slowing decrescendos as the lines change direction.

In freely-stroked works, each line reflects the rhythm of the breath and movements of the artist. The Levha calligraphy by Sami Elendi (2.14) is created with single brush movements, precisely controlled for a free-flowing effect. The calligrapher cannot lift pen or brush before completing a stroke, for its subtly varying width depends on the movement and angle of the writing implement. Traditional Chinese and Japanese painters were trained to use the whole arm to create brush-strokes. They practiced brush movements for years to develop the control and flexibility needed to create free-flowing lines that were also even and continuous. The wrist was used only in drawing very delicate lines.

The rhythm of certain works is like orchestral music, a complex interweaving of voices into a coherent progression in time. Remedios Varo’s Toward the Tower (3.14) is full of dreamlike mysteries, but the artist holds these incongruous parts together visually like the music produced by an orchestra. The towers are like dull booming bass notes, with the smaller rounded forms such as the nuns’ heads and bicycle wheels as higher, faster counterparts. With more nuns coming out of the towers and the birds inexplicably flying in and out of the pedlar’s pack, the music seems to be continuous, like a rondeau. Looking at it, one can almost hear the timing of each of the parts and hear them fitting together into a symphony.
BALANCE

A fourth design principle is balance—the distribution of apparent visual weights so that they seem to offset one another. We subconsciously assign visual weight to parts of a work, and we tend to want them to be distributed through the work in such a way that they seem to balance each other. The sense of forms held in balance against the pull of gravity is psychologically pleasing; imbalances may give us an unsettled feeling, a reaction that is not usually the artist’s desired effect.

Reading horizontally across a piece, the balancing of visual weights is like a seesaw. As diagrammed in Figure 3.15, this kind of balancing of equal forces around a central point or axis is called symmetrical or formal balance. An example of absolutely symmetrical balance is the chest from the Haida culture of Queen Charlotte Island off the north-west North American coast (3.16). If an imaginary vertical axis were drawn right through the center of the piece, the two halves of the central figure and the geometric animal motifs extending to the sides would be exact mirror images balancing each other. If a horizontal line were drawn through the center of the piece from left to right, the upper and lower halves would also consist of symmetrically balanced, though not identical, visual components.

3.15 Symmetrical horizontal balance.

Symmetrical balance can occur even if images on each side of the vertical axis are not exactly the same. In William Blake’s dramatic painting of The Last Judgement (3.17), those who have erred are descending to the flames of hell on the right side, balanced by those blissfully ascending to the throne of God on the left side. The fact that the right side of the painting is darker than the left adds to the visionary drama. Although the value difference would imbalance the work otherwise, it is balanced by the symmetrical circular motion of the figures, as if radiating outward from the point between the two central beings blowing horns, and by the strong vertical axis created by the patterns of the figures rising through the center. The continuing movement of the figures reflects Blake’s view that our fortunes are ever-changing and that those who have sinned are not eternally damned.

Elements may also be symmetrically arranged around a central point in all directions, in which case the composition may be referred to as radial balance. In the Buddhist Wheel of Life (3.18), each circle represents a different aspect of existence, with the whole wheel surrounded by the monster of death and impermanence. Note that even his parts are symmetrically arrayed around the center.
When the weights of dissimilar areas counterbalance each other, the result is called **asymmetrical or informal balance.** Expressed as a simple diagram [3.19], a large light-colored area might be balanced by a small dark-colored area, with the fulcrum off-center. Dark colors generally seem heavier than light ones, busily detailed areas heavier than unfilled ones, bright colors heavier than dull ones, large shapes heavier than small shapes, and objects far from the center heavier than those near the center.

Consider Thomas Gainsborough's *Mr. and Mrs. Andrews* [3.20]. The painting is obviously asymmetrical, for both important figures are on the left side, with nothing but their lands to the right. The balancing point is established by the vertical thrust of the tree, well to the left of center. The pair carry considerable visual weight because they are visually interesting and detailed human figures, because they are looking at us and holding our attention, because they and the tree trunk are the largest and closest objects in the composition, and because their clothes are the brightest colors in the painting. The breadth of the fields to the right is not a wasted area in the composition; for Gainsborough needed a great expanse of less detailed space to balance his strong figures. Note that the fields recede into deep space. To a certain extent, Gainsborough is setting up a balance that extends into—as well as across—the picture plane. And those fields serve a purpose in the context as well as the form of the painting: They demonstrate the wealth of this couple, whose lands seem to stretch as far as the eye can see.

Sometimes artists violate the principle of balance intentionally to create tension in their works. Nancy Graves' *Trace* [3.21] is not visually "safe;" it appears to be extremely fragmented and precariously balanced, about to fall over in the direction that the three slender "legs" are bent. Its three-point anchor in a heavy base actually makes the piece quite stable, but visually it seems to be dynamic and fragile. Contemporary aesthetics and materials allow an artist to push balance to limits never seen before.