BY ELLEN WIXTED

Making the Parts a Whole

How the principles of composition can form—or transform—your design

Ask any graphic designer, artist, architect, or other professional involved in visual design about their work, and composition is bound to be at the heart of the discussion. But getting specific about what composition is and why it's important can be as tricky as using words to describe a magic trick. Composition is a lot like alchemy—it's an often invisible process that transforms the ordinary into something wonderful.

I think of composition as taking individual elements and creating visual relationships among them so that they create a coherent whole. Where's the magic in that? Simply put, in making the whole more than the sum of its parts. A work's composition—indeed, its overall visual form—conveys and reinforces mood, literal meaning, even metaphorical meaning, so you want to make choices that are appropriate for the ideas you're trying to express.

Whatever medium you're working in and whatever you're producing—whether you're creating an illustration, designing an ad layout, developing a Web page, or making a more personal statement—you have something you want to communicate. Composition is as central to making your message clear as it is to making work that's visually exciting. What follows is an overview of some of the basic principles of composition.

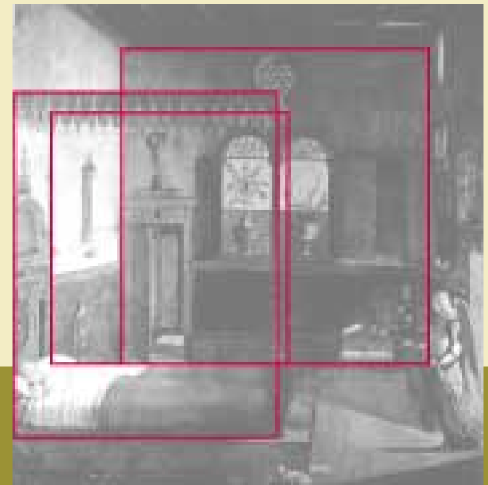
Scale and proportion

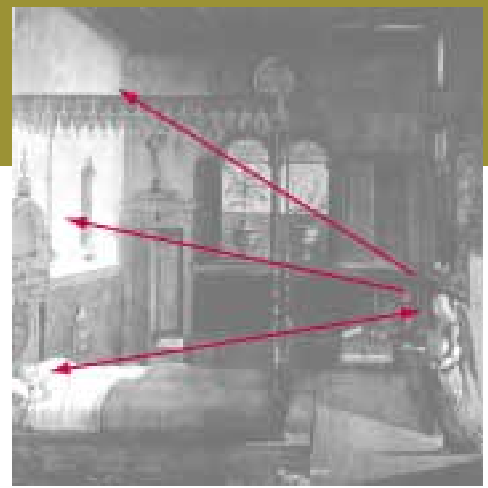
I see scale and proportion as key ingredients of compositional magic: how you manipulate them can make the difference between something mundane and something extraordinary.

Scale is the relative size of each element, and I think of it as being relative to the page, to the real size of the element, and to the scale of other elements in the composition. How you manipulate all three aspects can have a huge impact on what you're communicating. Imagine, for instance, a picture of a rabbit. The effect of making the rabbit small relative to the page implies a relationship between the rabbit and the space surrounding it, a relationship that could convey vulnerability or separateness, or might evoke images from classic children's stories. If you were to increase the size of the rabbit to more or less fill the space, the relationship shifts; if other elements in the composition remain at a smaller scale, the overly large rabbit could suddenly seem menacing, humorous, or both depending on the other visual clues you provide.

Proportion is closely related to scale. Traditionally, proportion refers to a ratio-based ordering system that defines a desirable relationship between a part and the whole. Scientists, artists, mathematicians, and architects throughout history have attempted to explain why some proportional relationships are more satisfying than others. The golden section (originally recognized by the Greeks, and perceived during the Renaissance as having divine origins) is by far the most well known—see page 52 for more information about the golden section—but systems based on harmonic and anthropomorphic proportions have also enjoyed periods of vogue. These days, the word *proportion* is used much more loosely to refer to a generally pleasing visual relationship. When you adjust the proportions of an element, you fine-tune both its scale and its horizontal or vertical dimensions relative to both the working space and other elements in the composition.

Vittore Carpaccio, *The Dream of Saint Ursula*, c. 1495





The strong lines of the bed define a harmonious space within a space, and the sense of visual order is reinforced by the alignment of the bedpost with the column dividing the window on the back wall. The major rectangles defined within the painting (the bed and the back wall are the most dominant) are defined in proportion to each other and the overall rectangle of the painting, and each has a strong element at its center—compositional strategies that counterbalance the painting's single-point perspective. Refining the visual relationships between the elements in a design can help to weave a whole from disparate parts, in this instance reinforcing Renaissance ideals of order and rationality.

Negative space

There's literally nothing to negative space—the space *between* objects—but it plays a critical role in composition. I remember the day the instructor of my first drawing class introduced negative space; it immediately transformed my view of the world. Instead of seeing just the objects I was drawing, I was suddenly conscious of the shapes made by the spaces between them.

You can use negative space to affirm or deny relationships in a composition, as well as manipulate overall density. Giving as much care and attention to the negative spaces as to the positive forms in a composition almost invariably results in compositions that are tight and visually powerful. A classic example of the power of negative space is the old faces/vase trick (two silhouettes of heads facing each other to form, in the negative space, an image of a vase), but there are countless other ways to use negative space for striking effect and to reinforce your ideas.

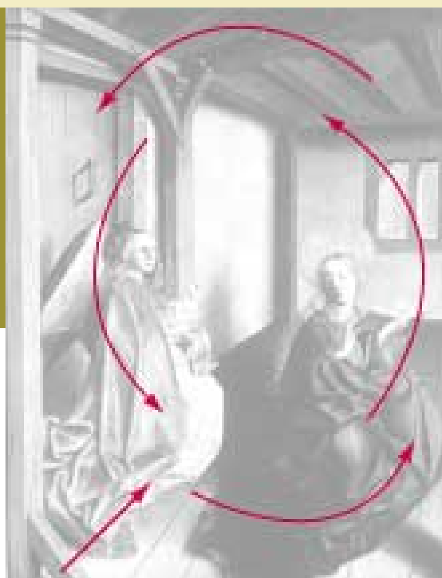
Movement and direction

Read any art-history textbook about the Italian Renaissance, and you'll come across descriptions of how an artist has contrived to move the viewer's eye around a painting by manipulating the elements to imply movement. The folks who design print ads do much the same thing, but often with vastly different intentions.

How do they do it? Our eyes want to make connections among objects, and the way abstract shapes are positioned in a two-dimensional space can help or hinder the eye's movement. Whether you're dealing with positive or negative spaces, a viewer's eye will follow the curves, horizontals, verticals, and diagonals that move through the two-dimensional space. How you arrange those elements can make a viewer's eye move from left to right, from top to bottom, in a circular direction, or some combination thereof—it all depends on the visual connections you make. You can also arrange the elements in a composition to create a visual rhythm. How you manipulate the positive and negative spaces can also convey a rhythm, and you can control whether it's a stately march or a frenetic staccato.

Before you can start using the idea of movement to good effect, though, you need a goal. Do you want the

In the Carpaccio painting (left), the figures of Saint Ursula and the angel are quite small relative to the space depicted, and the light (implying the divine) is almost palpable. Compare this to the almost claustrophobic Annunciation *(below right), where figures that seem too large for the room dominate the image. These two paintings illustrate well how manipulating scale can help set a mood of calm and order, as in the Carpaccio painting, or of intimacy, as in Witz's work.*



Konrad Witz, *Annunciation,* c. 1440–1443

Light streaming in from the right side of the Carpaccio painting (previous page) creates a subtle visual movement between the dreaming saint and the angel, very much in keeping with the painting's ethereal mood. Annunciation *(above), in contrast, provides a swirl of lines in the drapery of the figures and a crazy, tilted perspective with powerful diagonals that keep the eye moving in a tight, circuitous path, which reinforces an emotive, dynamic, and intimate feeling. In both cases, the artists manipulate the direction and the speed of our gaze by the way they've composed the elements in the paintings.*

viewer's gaze to move quickly or to linger? Do you want to create a harmonious visual rhythm or halt the viewer in his or her tracks? If you're designing a billboard, you probably want to encourage a quick read from left to right and from top to bottom—but don't want to generate any traffic accidents. If you're working on a magazine layout, you may want to make the viewer's eyes move more slowly, perhaps by forcing them to look at the pictures first, the headline second, and then the article's text and related sidebars.

Hierarchy and focus

Figuring out what's most important and where to focus the viewer's attention are critical goals I set when I start any project, and the approach I take will vary dramatically depending on what I'm creating. When I'm designing a poster, I need to determine what information is most and least important and whether the visual focus needs to mirror that hierarchy. When I'm drawing a figure, I have to decide whether I want the focus to be on the figure or on the space the figure inhabits—these two approaches can convey very different meanings.

The tried-and-true approach to making any hierarchy explicit is to place the visual emphasis on the most important element, usually by making it big and positioning it prominently. For a poster advertising an event, that might mean putting the event's name in large type, front and center. For a figure drawing, it would probably mean centering the figure in the middle of the page. This strategy certainly makes the hierarchy clear, but it's only one possible solution—and a pretty boring one at that. To be a little more coy, you might instead make the viewer seek out the most important information. Either way, you can't start making decisions about how you want to present the hierarchy visually until you've figured out what it is.

Mood

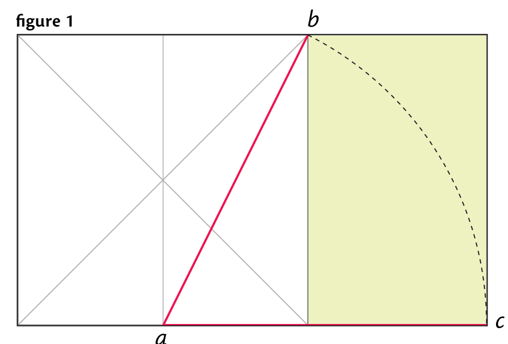
What kind of emotional tone do you want to set? In the same way that you can use color to create a mood—reds and oranges are usually associated with anger and energy, whereas blues and greens are generally perceived as peaceful and calming—you can arrange the elements in a space to have an emotional impact.

How-to

Sandro Botticelli, *Primavera,* c. 1482

The golden section is a special ratio that defines the relationship between two elements such that the relationship of the smaller element to the larger element equals the relationship of the larger element to the whole. Mathematically, the golden section can be expressed as two ratios: a/b = b/(a+b). Or, in more banal terms, it's the ratio of 1:1.618. • Confused yet? The numbers may not be very intuitive, but creating an object that uses these proportions isn't hard. Figure 1 shows how to create a golden rectangle based on the golden section ratios. You begin with a square (the white box), draw diagonals between opposite corners to find the center, and then draw a line neatly through its middle. Then take the distance from the middle of one side (point *a*) to an opposite corner (point *b*), and add that length—shown here as a red line—outward from point *a* to point *c*. Once you draw a rectangle that encompasses these lines, you have two golden rectangles—the entire object (outlined in black) and the light green rectangle that's been "added" to the original square. • When a perfect square is added to a golden rectangle, the result is always another golden rectangle. In figure 2, for instance, the entire object is a golden rectangle, as is the space defined by the dotted line, as is the light green area, and so on. • In addition to its use in architecture and design, the golden section can be used to describe the growth patterns of shells (as in the spiral shown in figure 2) and other natural organisms. It also parallels the progression of whole numbers described by the Fibonacci series. (In the Fibonacci series, each number is the sum of the two preceding numbers.) I've never intentionally used the golden section as the basis for any design decisions—but I love the idea of basing proportions on a system that's in harmony with the cosmos.

figure 1



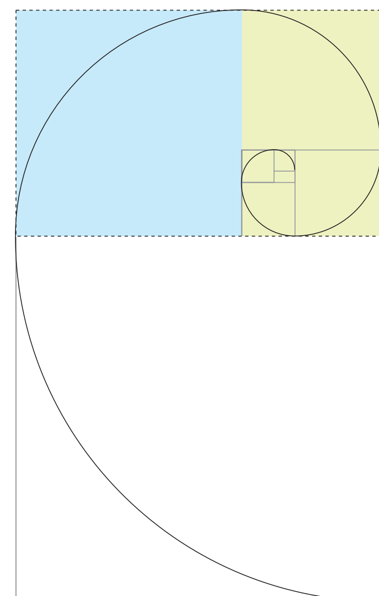


figure 2

Almost everything in Botticelli's Primavera *reinforces a powerful visual rhythm. The figures inhabit a shallow space, and their arrangement into groups of three (evocative of the Christian trinity and, by extension, life, death, and rebirth) punctuated by single figures has a graceful cadence. The negative spaces between the figures' legs echo the rhythms of the trees above and add to the sense of a carefully choreographed dance.*

Negative space is used to masterful effect in Botticelli's Primavera. *Notice how a dark field separates the central figure of Venus from the others, as well as how the trunks of the trees create a halo-like arch above her head. Both serve to draw attention to her, and her position of visual privilege adds gravity to her benediction-like gesture.*

Do you want to create a serene, friendly mood? If so, you probably want the elements to be harmoniously balanced, to feel comfortable with one another. You might arrange elements symmetrically or radially, and you probably wouldn't want to have any startling jumps in scale. On the other hand, you may be after a more dynamic effect, one that pulsates with energy. In that case, you can create instant tension among the elements by making them appear off-balance, by designing in shifts that may feel visually awkward but that create a visual analogue to the emotional effect you're after. If you're working on something that needs to project a crisply formal image, you might establish a highly structured grid and be rigorous in your arrangement of elements within its framework. Densely populated compositions tend to feel more claustrophobic than open, airier ones. For a more casual effect, let the content determine how elements are placed together. Knowing what kind of emotional effect you're after can help you begin to narrow down the options.

Bringing it all together

Before I even start thinking about how I might put the elements of a composition together, I find it's helpful to identify any constraints I have, and to consider how I can best work within such limitations. What's the size and shape of the space—is it fixed or flexible? What elements must populate the composition—is there a choice, and can they be manipulated? Starting with well-defined constraints can make composing easier, since there are usually fewer options to consider—and constraints often inspire truly creative thinking.

Once you have a clear sense of what you have to work with and what kinds of things you want the final piece to communicate, the next step is choosing an initial direction for the composition. For any given project, there are usually some solutions that make sense visually and others that don't. Successful compositions work on many different levels and suggest a complexity that's appropriate for the piece. Scale, proportion, negative space, movement, direction, hierarchy, focus, and mood—all of which we've touched on here—are issues you should consider before you delve into a project.

As you refine a composition, some relationships among the elements might emerge as more important, or you may see ways that you can direct the viewer through a piece by tweaking this or that to set up a line of movement. The possibilities for refinement are limitless, though not every project may warrant an exhaustive exploration of potential solutions. There aren't any absolute rights or wrongs, and almost any visual idea—executed with enough conviction—can be made to work like magic. ◆

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