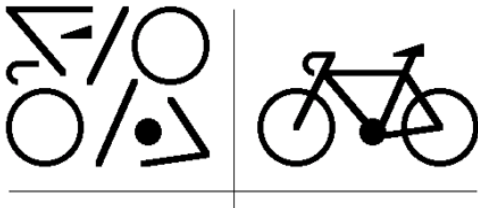# Gestalt Theory

An easy way to understand Gestalt Theory is by imagining that we are baking a cake. The ingredients for the cake are arranged on a counter, but individual ingredients cannot begin to describe the cake. For example, an egg might be a cake ingredient. If we examine the egg, it tells us about the egg, but not how it will be used to create a cake. It is only when assembled that the ingredients form the completed product. The whole cannot be seen by looking only at the individual elements. Gestalt Theory is a set of rules for describing how the various ingredients of visual art come together to form the whole. Gestalt is the German word for "*form, shape, pattern, or configuration.*" "Good gestalt" is when elements work together to create a unified aesthetic. Gestalt Theory helps explain many of the abstract principles used in the visual arts.

The unified whole is different from the sum of the parts.

☑ http://www.atpm.com/9.10/design.shtml

http://psychclassics.yorku.ca/Koffka/Perception/intro.htm

1. The *Gestalt* movement initially grew out of a problem that bedeviled 19th century perception theory. If all perception is composed of "bundles" of sensory elements, as many prominent psychologists of the time thought, what are the elements that go into the perception of space and the perception of time? The Austrian physicist and philosopher Ernst Mach (1838-1916) had argued that "space-forms" and "time-forms" are separate elements unto themselves. Thus, if I see the geometrical form of a circle, in addition to sensing each individual element, I sense a circular "space-form" as well; if I hear a melody, I sense an over-all "time-form" in addition to the tone sensations of the tune. Another Austrian philosopher, Christian von Ehrenfels (1859-1932), extended this line of reasoning, claiming that in addition to the sensory elements of a perceived object, there is an extra element which, though in some sense derived from the organization of the standard sensory elements, is an element unto itself. He called this extra element *Gestalt-qualität* or "form-quality." For instance, when one hears a melody, one hears the notes *plus* something in addition to them which binds them together into a tune -- the *Gestalt-qualität*. It is the presence of this *Gestalt-qualität* which, according to Von Ehrenfels, allows a tune to be transposed to a new key, using completely different notes, but still retain its identity
2. For the *Gestalt* psychologists, the true nature of relations between parts and wholes had been inverted by earlier psychologists such as Mach and Von Ehrenfels. Max Wertheimer (1880-1943), founder of the *Gestalt* school, turned their theories around, saying "what is given me by the melody does not arise ... as a *secondary* process from the sum of the pieces as such. Instead, what takes place in each single part already depends upon what the whole is," (1925/1938). In other words, one hears the melody first and only then may perceptually divide it up into notes. Similarly in vision, one sees the form of the circle first -- it is given "im-mediately" (*i.e.* its ap-

prehension is *not mediated* by a process of part-summation). Only after this primary apprehension might one notice that it is made up of lines or dots or stars.

3. Some of their primary evidence for this view came from the examination of "reversible" figures such as the Rubin vase, a figure that can be seen either as a white vase on a black background, or black profiles of two human faces on a white background. If one were to make a list of all the individual sensations involved when one sees this figure when seen in its vase aspect, it would be identical to a list of all the sensations when it is seen in its profiles aspect. Nevertheless, the two perceptions are very different. Therefore something central must have been lost in the process of decomposing the two main percepts into their presumed elements. It was with this radical change in orientation that *Gestalt* psychology distinguished itself from the varieties of experimental phenomenology which had gone before.
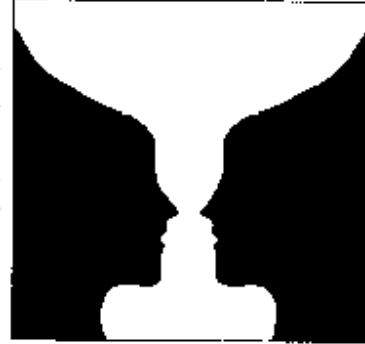
4. *Gestalt-Theorie* was officially initiated in 1912 in an article by Wertheimer on the phi-phenomenon; a perceptual illusion in which two stationary but alternately flashing lights appear to be a single light moving from one location to another. Contrary to popular opinion, his primary target was *not* behaviorism, as it was not yet a force in psychology; his paper came one year *prior* to J. B. Watson's (1878-1958) "Psychology as the Behaviorist Views It" (1913). The aim of his criticism was, rather, the atomistic psychologies of Hermann von Helmholtz (1821-1894),Wilhelm Wundt (1832-1920), and other European psychologists of the time.
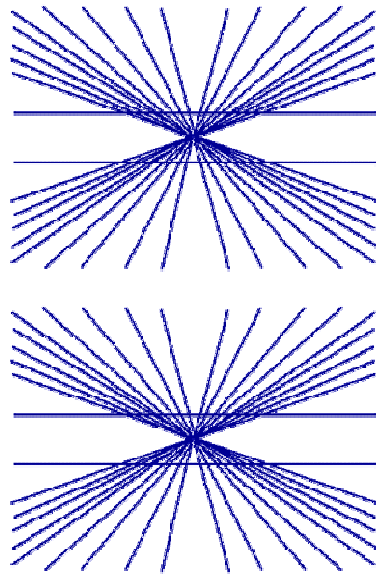
[An internet resource developed by Christopher D. Green York University, Toronto, Ontario]

☑ http://www.rci.rutgers.edu/~cfs/305_html/Gestalt/gestalt.html
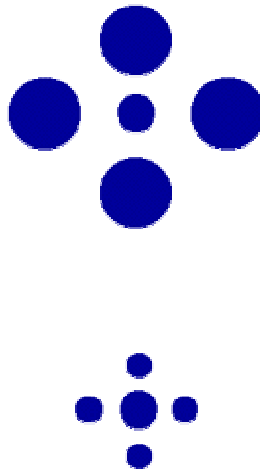
Müller-Lyer Illusion
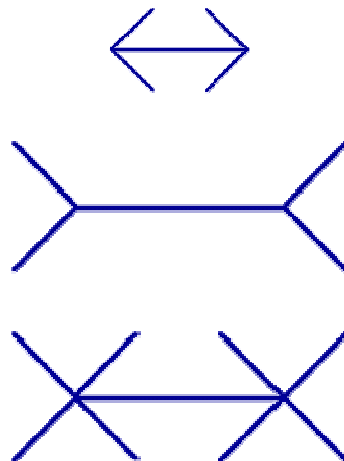
Hering-Helmholtz Illusion

In the top figure you probably perceive the middle lines as bowing in slightly and in the next figure as bowing out slightly. The parallel lines below show the lines that actually appear in each figure.

Ebbinghaus Illusion

You probably perceive the middle circle as smaller in the figure on the let than the circle in the center of the second figure. They are actually the same size.

Young Woman or Old Woman ?

In this famous ambiguous figure it is possible to see either a young woman or an old woman. It is a drawing and if you examine it in detail it will probably be rather hard to decide what all of the different components represent in each of the interpretations. Nose, hat, feather, ear, etc. are identifiable...but you're mind seems to be imposing these interpretations on the drawing rather than being compelled by the "perceptual evidence."
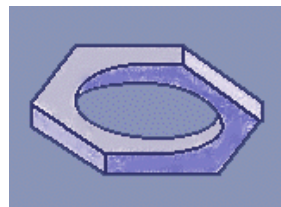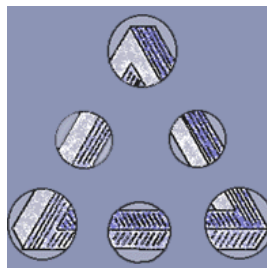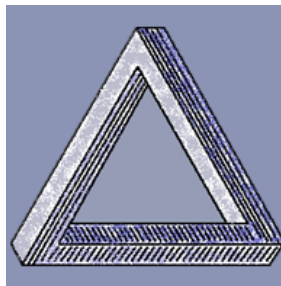
There are some pictures that you can give **no** <u>consistent</u> interpretation. But your mind has a hard time determining exactly why. Many of the constraints hold "locally" but there is not a consistent global interpretation. These types of figures are often referred to as **impossible** figures...because they are. The impossible triangle that was used earlier is shown again below on the left. It is also shown on the right but with circles used to impose "local" views of the figure. If you look at each of these views, you will see that each is perfectly fine. It is when the constraints get "passed" to the next view that we recognize the impossibility of the figure.

☑ http://http.cs.berkeley.edu/~sequin/SCULPTS/sequin.html
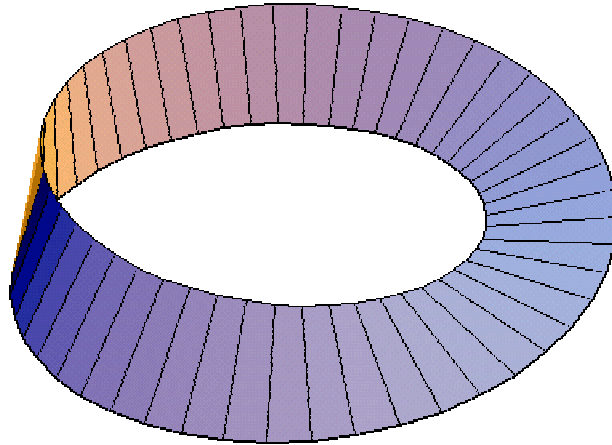
Sculptures à partir de la bande de Moebius
☑ http://www.anamorphosis.com/

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