

GESTALT THEORY in art

Gestalt theory, a theory about perception, holds that the whole is more than the sum of its parts

It describes our ability to: Recognize patterns and make associations;
group objects that are close together into a larger unit; relate and group objects of similar shape

The study of **gestalt** (German: meaning shape, figure, form) originated in Germany in the 1920s. It is a branch of psychology that is interested in higher order cognitive processes relative to behaviorism.

The aspects of **gestalt theory** that interests designers are related to **the theory's** postulations of visual perception—principally the relationship between the parts and the whole of visual experience.

The visual world is so complex that the mind has developed strategies for coping with the confusion. The mind tries to find the simplest solution to a problem. One of the ways it does this is to form groups of items that have certain characteristics in common.

Most of what you will study about **gestalt** is concerned with how these groups are formed and what effect they have on perception. The stronger the grouping, the stronger the gestalt. It is this grouping that contributes to the unity in a design. **Gestalt** is one of the most powerful tools available to a designer for creating unity.

The same concepts that form groups can be reversed to ungroup items—to make them look unique and stand alone. That is the basis for creating variety. Variety is what adds interest to an image.

The trick is to strike a balance between unity and variety (emphasis). Too much unity and the design can look boring and repetitive; too much variety and it can look chaotic and disconnected. Understanding concepts of **gestalt theory** can help a designer control unity and variety.

Summary:

Gestalt theory allows communicators to predict how viewers will respond to design elements. Based on theories of perception, the gestalt principles explain how whole images are often perceived as more than the sum of their parts. Knowing and using gestalt theory in technical communication can help ensure that our visual messages will be understood and that our designs will be dynamic.

We have all heard the expression that a picture is worth a thousand words. However, considering gestalt theory, some pictures say more than others. If we know how to construct our pictures and how our audiences will respond to them, our visual communications will better complement our written ones.

The following pages provide examples of the principles included in this theory of perception and what they mean.

Cna yup raed tihs? Olny 55 plepoe out of 100 can.

i cdnuolt blveiee taht I cluod aulaclty uesdnatnrd waht
I was rdanieg. The phaonmneal pweor of the hmuam
mnid, aoccdmrig to a rscheearch at Cmabrigde Ui-
nervtisy, it dseno't mtaetr in waht oerdr the lttres in a
wrod are, the olny iproamtnt tihng is taht the frsit and
lsat ltteer be in the rghit plcae. The rset can be a taotl
mse and you can sitll raed it whotuit a pboerlm. Tihs is
bcuseae the huamn mnid deos not raed ervey lteter by
istlef, but the wrod as a wlohe. Azanmig huh? yaeh and
I awlyas tghuhot slpeling was ipmorantt!

Can you read this? Only 55 people out of 100 can.

I couldn't believe that I could actually understand what I
was reading. The phenomenal power of the human mind,
according to a researcher at Cambridge University, it
doesn't matter in what order the letters in a word are, the
only important thing is that the first and last letter be in
the right place. The rest can be a total mess and you can
still read it without a problem. This is because the human
mind does not read every letter by itself, but the word as a
whole. Amazing huh? Yeah and I always thought spelling
was important!

Properties

The key principles of Gestalt systems are emergence, reification, multistability, invariance and prägnanz.

Emergence



This is demonstrated by the perception of the Dog Picture, which depicts a Dalmatian dog sniffing the ground in the shade of overhanging trees. The dog is not recognized by first identifying its parts (feet, ears, nose, tail, etc.) and then inferring that it is a the dog from those component parts. Instead, the dog is perceived as a whole, all at once. However, this is a description of what occurs in vision and not an explanation. Gestalt theory does not explain how the percept of a dog emerges.

Reification

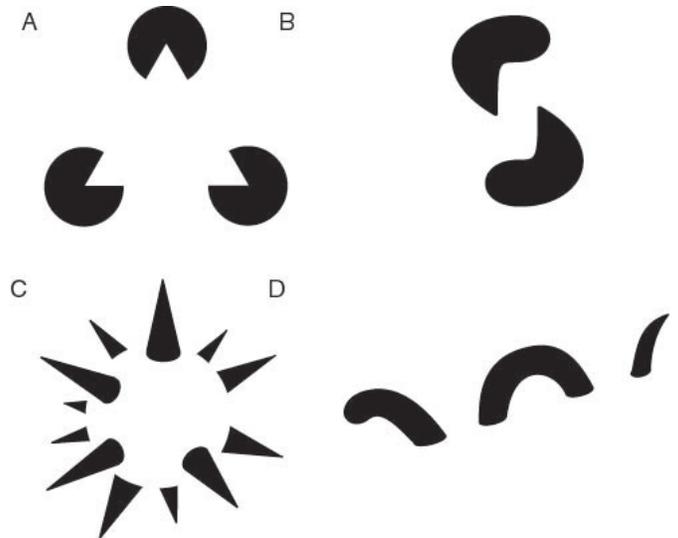
This is the constructive or generative aspect of perception, by which the experienced percept contains more explicit spatial information than the sensory stimulus on which it is based.

For instance, a triangle will be perceived in picture A, although no triangle has actually been drawn.

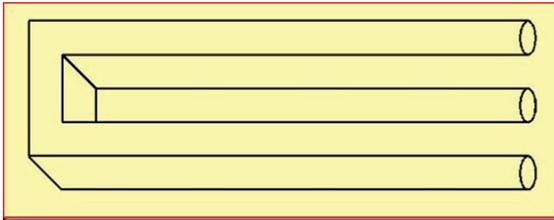
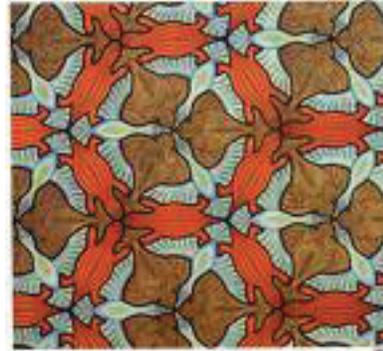
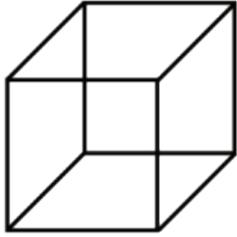
In pictures B and D, the eye will recognize disparate shapes as “belonging” to a single shape.

In C, a complete three-dimensional shape is seen, where in actuality no such thing is drawn.

Reification can be explained by progress in the study of illusory contours, which are treated by the visual system as “real” contours.



Multistability



Multistable perception is the tendency of ambiguous perceptual experiences to pop back and forth unstably between two or more alternative interpretations. This is seen for example in the Necker cube, and in Rubin's Figure / Vase illusion, center.

Other examples include the three-pronged widget and artist M. C. Escher's artwork and the appearance of flashing marquee lights moving first one direction and then suddenly the other. Again, Gestalt does not explain how images appear multistable, only that they do.



Young woman or old woman?

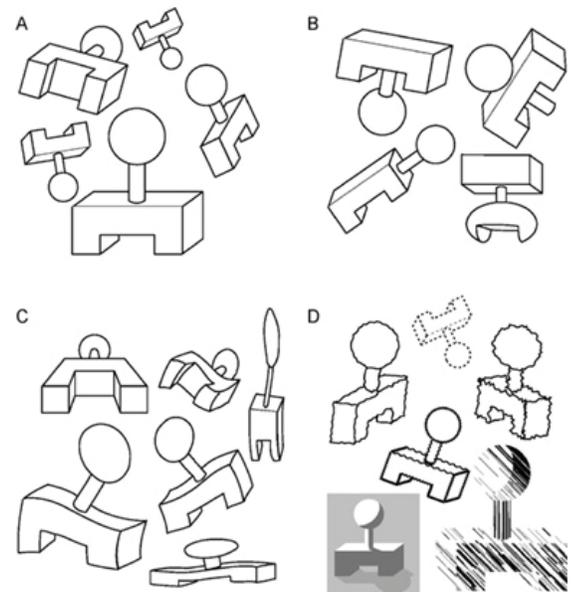
Invariance

The property of perception whereby simple geometrical objects are recognized independent of rotation, translation and scale; as well as several other variations such as elastic deformations, different lighting, and different component features.

For example, the objects in A in the figure are all immediately recognized as the same basic shape, which are immediately distinguishable from the forms in B.

They are even recognized despite perspective and elastic deformations as in C, and when depicted using different graphic elements as in D.

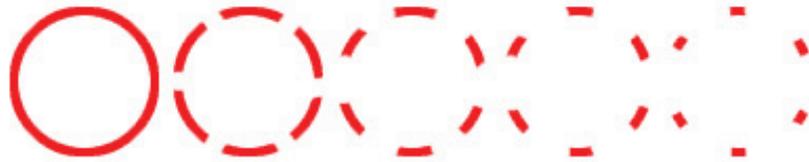
Computational theories of vision, such as those by David Marr, have had more success in explaining how objects are classified.



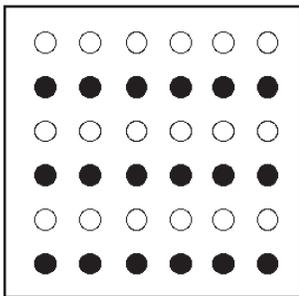
Prägnanz - We like to create simplicity and order in what we see

The fundamental core of gestalt perception is the law of **prägnanz** (German for pithiness) which says that we tend to order our experience in a manner that is regular, orderly, symmetric and simple. In attempts to discover refinements of the law of prägnanz, Gestalt psychologists have defined a few laws which hypothetically allow us to predict the interpretation of sensation. These include:

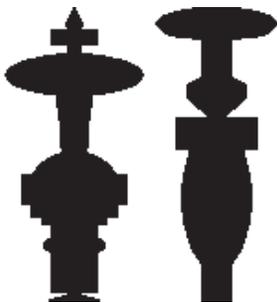
Law of Closure — The mind may experience elements it does not perceive through sensation in order to complete a regular figure (that is, to increase regularity).



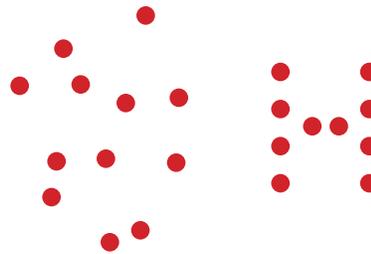
Law of Similarity — The mind groups similar elements into collective entities or totalities. This similarity might depend on relationships of form, color, size, or brightness.



Law of Symmetry — Symmetrical images are perceived collectively even in spite of distance. The eye prefers explanations with greater symmetry.

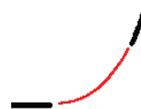


Law of Proximity — Spatial or temporal proximity of elements may induce the mind to perceive a collective or totality.



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Law of Continuity — The mind continues visual, auditory and kinetic patterns. Even if a line stops, the viewer is able to follow it.



Law of Common Fate — Elements with the same moving direction are perceived as a collective or unit.

