

Symmetry and Asymmetry

Both symmetry and asymmetry can be used throughout a composition, independent of, yet while contributing to, the final balance. You can have symmetrical forms in an asymmetrically balanced composition and vice versa.

Symmetry is usually seen as beautiful and harmonized; however, it can also be seen as static and dull. Asymmetry tends to be more interesting and dynamic, despite not being regarded as intrinsically beautiful.

Credit: <http://www.smashingmagazine.com/2015/06/design-principles-compositional-balance-symmetry-asymmetry/>

Reflection Symmetry

Reflection symmetry (or bilateral symmetry) occurs when everything is mirrored around a central axis. It's probably the first thing you think of when you hear the word "symmetry." The axis can be in any direction or orientation, although it's often vertical or horizontal. Everything on one side of the axis is mirrored on the other side. Natural forms that grow or move across earth's surface develop reflection symmetry. A human face and a butterfly are examples. When the reflection is a perfect mirror image, the symmetry is said to be pure. Much of the time it won't be perfect and each side will have slight variations. This is near symmetry, and it's more common than pure symmetry.

The symmetry can even occur over multiple axes at the same time. For example, the left and right half of a composition could mirror each other, while the top and bottom also mirror each other. Snowflakes show reflection symmetry over more than two axes.

Rotational Symmetry

Rotational symmetry (or radial symmetry) occurs when everything rotates around a common center. It can occur at any angle or frequency, as long as there's a common center. Natural forms that grow or move perpendicular to the earth's surface develop rotational symmetry. The petals of a sunflower are an example. Rotation without reflection can be used to show motion, speed or dynamic action. Think of the spinning wheels of a moving car.

Translational Symmetry

Translational symmetry (or crystallographic symmetry) occurs when elements are repeated over different locations in space. Repeating fence posts are an example. The repetition creates translation symmetry. It can occur in any direction or at any distance, as long as the basic orientation is the same. Natural forms develop translational symmetry through reproduction. You can create rhythm, motion, speed and dynamic action through translation symmetry.

Asymmetry

Asymmetrical forms lack the balance of symmetrical forms, although you can asymmetrically balance an entire composition. Asymmetry is rather common in natural forms: you're probably right- or left-handed; fiddler crabs have different sized claws; trees branches grow in different directions; clouds have random shapes.

Asymmetry creates more complex relationships between elements, and so it tends to be more interesting than symmetry. Because it's more interesting, asymmetry can be used to draw attention.

Space around asymmetrical forms is more active. Unpredictable patterns are created, and overall you have more freedom of expression with asymmetry than with symmetry. The tradeoff is that it's harder to achieve.

Much in the same way that similarity and contrast work together, you can combine symmetry and asymmetry to good effect. Balance symmetrical forms in an asymmetrical way, or balance asymmetrical forms symmetrically. Break up symmetrical forms with a random mark to add interest. Contrast symmetry and asymmetry in your composition to make elements get more attention.

Gestalt Principles

Throughout this series I've tried to point out how many design principles arise from gestalt principles. I also hope that as you've followed along you've seen how different design principles build on each other.

One of the Gestalt principles specifically addresses symmetry and order and certainly applies to compositional balance. It's hardly the only principle that applies, though.

The simplicity of symmetrical forms is predicted by the Law of Prägnanz. Gestalt principles such as focal points and similarity contribute to visual weight. Principles such as continuation, common fate and parallelism impart visual direction. I also mentioned that symmetrical forms are more likely to be seen as figure rather than ground.

Visual Examples



The butterfly is an example of reflection symmetry, the fence posts show translation symmetry, and the sunflower is an example of radial symmetry. (View large version)