

SCULPTURE: DEFINITION & TECHNIQUES

MODELING

Modeling is the process of manipulating soft materials that can be shaped by the sculptor's hands to create a three-dimensional form. Because the artist adds materials to build the sculpture, modeling is an **additive**

process. Media for modeling include clay, plaster, papier-maché, and wax.



Figure 1, Viola Frey, *Man Kicking World*, 2002

CARVING

Dating from pre-historic times, carving is a process in which the artist subtracts or cuts away from a solid material to reach the desired form. Because the artist subtracts to reveal the sculpture, carving is a **subtractive process**. It can be a very painstaking and time consuming method because of its unforgiving nature – once a piece is carved off the solid form, it cannot be put back! Artists make carvings from a variety of materials, from traditional media such as stone, wood, and clay, to non-traditional media such as soap and chocolate



Figure 2 Balinese Stone Carving

CASTING

Casting is the method of making a mold and casting it in a durable material such as bronze. The two most commonly used methods of casting are sand casting and the "lost wax" process. **Sand casting** refers to the process of making a mold in sand by digging a pattern into it and then pouring molten material (such as metal or wax) into the mold, waiting for the molten material to harden, and then removing the cast from the sand.



Figure 3 Andrew Kudless. *P_Wall* (detail), 2006 -2009. Plaster

CONSTRUCTION & ASSEMBLAGE

Emerging in the twentieth-century, the techniques of **assemblage** and **construction** consist of combining and joining various materials to form a three-dimensional object. These methods originated from the technique **collage**, which was popularized by the Cubists during the early part of the twentieth century, in which artists cut and pasted pre-existing materials (such as newspaper clippings) to create their art. Assemblage often includes combining **pre-existing** or **found objects** to create the sculpture.



Figure 4 Louise Nevelson. *Rain Garden II*, 1977. Painted wood

ELEMENTS & PRINCIPLES OF SCULPTURE

LINE & SILHOUETTE

Line is the path of a moving point. In sculpture, the most important kind of line is **contour line**, or the outline that forms the edges of the sculpture to create its **silhouette**. If the sculpture is composed of one solid form, the silhouette will be solid; if the sculpture is composed of multiple forms or has empty space within it, the silhouette will be more complex, with more contour lines creating it. The characteristics of a sculpture's contour lines determine the shape and feeling of its silhouette.

Characteristics of contour lines include:

- **Width**- thick, thin, tapering, uneven
- **Length** - long, short, continuous, interrupted
- **Direction**- horizontal, vertical, diagonal, perpendicular, parallel, radial
- **Focus**- sharp, blurry, fuzzy, choppy
- **Feeling**- sharp, jagged, graceful, smooth, curved, zigzag



David Annesley, *Godroon*, 1966, Acrylic and metal

SPACE refers to the area between, around, above, below, or within elements in a work of art.

FORM & SPACE

A **form** is three-dimensional – it has height, width and thickness. Because sculptures are by nature space-occupying and three-dimensional, they are forms. While less knowledgeable viewers may refer to sculptures as having *shape*, in reality, they have *form*. Shapes are flat, or two-dimensional; forms are three-dimensional. There are three types of forms: geometric or organic or irregular.



Louise Bourgeois. *Arch of Hysteria*, 1993. Polished bronze

Positive space is the part of the work that is filled with subject matter – the actual physical forms making up the sculpture.

Negative space is the empty space around and/or above, below, or within the sculpture. All sculptures have negative space surrounding them; only sculptures with hollows and voids within them have negative space intermixed with positive space within the form of the sculpture.

SCALE

The **scale** of a sculpture refers to its size relative to the size of its surrounding environment. Because viewers automatically relate the scale of sculpture to their own human size, the emotional impact of a colossal figure and a small figurine are quite different. Artists are aware of this difference and may intentionally manipulate scale to better communicate their ideas. For example, they may intentionally distort the scale of the forms in their sculptures, such as by turning normally small objects into massive sculptures, or by shrinking normally large objects to fit a small sculptural environment.



Claes Oldenburg, *Saw*, 1996, Steel, resin, plastic



Proportion refers to how big each part of the sculpture is relative to the other parts. Use of proportion differs considerably among century sculptors. Some sculptors use mathematical systems of proportion; for example, classical Greek sculptures were very preoccupied with the refinement and idealization of natural human proportions. In contrast, African and other tribal sculptors base the proportions of their figures on the subjective importance of the parts of the body (e.g. the head of an African figurative sculpture is proportionally larger than the rest of the body)

Dogon Tribe, *Mali Figure*, 18th-20th Century, wood

BALANCE & ORIENTATION

The balance of a sculpture has two aspects. First, the sculpture must have **actual physical stability**. This can be achieved by natural balance—that is, by making the sculpture stable enough in itself to stand firmly. Certain sculptural forms have natural balance (e.g. four-legged animals, bottom-heavy forms), while others (single-legged, or long and thin, form) must be secured to a base or suspended from supports.

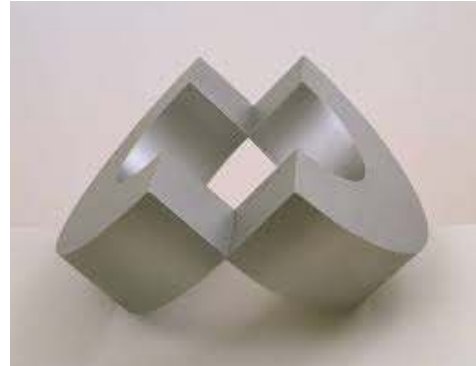


Olafur Eliasson, *Multiple Grotto*, Cylinder, cones and pyramids, 2. Organic forms, 2004

The second aspect of balance is **compositional**, that is, having to do with aesthetics (i.e., whether it looks good or not). This type of compositional balance refers to the way the elements of a piece of art are arranged to be **visually appealing** and to create a **static** feeling (lack of movement) or a **dynamic** feeling (movement).

Forms in a sculpture take on **visual weight** or radial balance **dominance** in the piece. The more weight or dominance a particular part of the sculpture, the more attention the viewer pays to that part of the sculpture. There are 3 main types of balance:

- (a) **symmetric balance**, in which the sculpture can be divided evenly in half by one axis balance
- (b) **asymmetric balance**, in which the two sides of the sculpture are different spherical arrangement (e.g. a starburst)
- (c) **radial balance**, in which the sculpture is in a spherical arrangement.



Justin Knowles' *Broken Circle*, 1998.

Orientation is the arrangement of the sculpture in space. This includes the direction of the sculpture relative to the ground and its placement in its environment, such as which part of the sculpture will be the top and which will be the bottom.

TEXTURE is the way something feels when you touch it. In art, there are two kinds of texture: **(1) real texture** and **(2) implied TEXTURE**

Real texture is the *actual surface quality* of the work of art, or how the actual sculpture would feel like if you touched it. The materials the artist used to construct the sculpture determine the real texture of the piece (e.g. metal creates a smooth, hard real texture; fabric creates a soft real texture). Implied texture is the *illusion of texture* that an artist creates to simulate the texture of objects in real life (e.g., realistic hair, brick, or leaves *in paintings and way light hits and/or passes through the piece*). Because sculptures are made of physical objects, real texture is far more common than implied.



Left, Laura Ford, *Mouse*, 1998 mixed media

Right, Jeff Koons, *Rabbit*, 1994-2000, high chromium stainless steel with transparent colour coating

LIGHT, VALUE & COLOR

Colour

In sculpture, artists must consider not only the values and colours they choose to put *within* the form of the sculpture itself, but also how the value and colour of the sculpture relate to its *environment*. **Without enough value and/or colour contrast between the sculpture and its environment, viewers will not notice the artwork!**

Value is the lightness or darkness of a colour. Artists create the different values of a colour by mixing its **shades** and **tints**. Value makes objects or spaces in artworks look 3-dimensional, thereby creating the illusion of space (a.k.a. perspective). **Value contrast** is the difference between the shades (dark values) and tints (light values) in a piece of art; with enough value contrast, the piece is eye-catching (passes the squint test) and appears three-dimensional)



Tara Donovan, *Untitled*, Styrofoam, 2003

MOVEMENT & EMPHASIS

Movement in art has two definitions: (a) the **arrangement** of visual elements to cause the viewer's eyes to move over the artwork in a specific direction, sequence, or pattern; (b) the **illusion of motion** in a piece of art. A sculpture with a strong use of movement will guide the viewer's eyes throughout the entire piece. Meanwhile, a sculpture with the illusion of motion will give the viewer a sense that the form in the sculpture is **dynamic** (moving), as opposed to **static** (still).

Emphasis refers to the creation of **focal points**, which are the part(s) of the sculpture that take on the most visual weight or dominance (relating to *balance*), demanding the most visual attention. Focal points pull the viewer's eye to important parts of the work; therefore, they determine the way the viewer's eyes move around the piece (relating to *movement*). The **primary focal point** is the first element the viewer notices in the piece, and is the part of the piece that demands the most attention; **secondary focal points** are what the viewer notices *after* noticing the primary focal point, and are the second-most emphasized parts of the work.



Tom Friedmann, *Untitled*, 1995, 30,000 toothpicks

Artists create focal points by using the following elements and principles: isolation, scale, colour and/or value contrast, location in the piece, direction of lines or forms, etc.

PATTERN AND RHYTHM

Pattern is the **repetition** of elements within a piece of art (forms or colours, for example). The principle of pattern is closely related to several other principles of design: *movement*, *unity*, *emphasis*, *rhythm*, and *balance*. Thus, when analyzing the principle of pattern, one must also consider how pattern relates to the other principles of design.

Rhythm is a **visual tempo or beat**.

Artists create rhythm by carefully placing repeated elements, which make the viewer's eyes jump rapidly or glide smoothly from one repeated element to the next. Because rhythm relies on repeated elements, it is closely related to *pattern*. Further, rhythm impacts how the viewer's eyes travel around the piece and is closely related to *movement* and *balance*.



Juan Munoz. *Conversation Piece*, 1996. Bronze.



Figure 5 Louise Bourgeois. *The Nest*, 1994. Steel

CONTRAST

Contrast refers to the **juxtaposition** of forms, objects, textures, values, or colours to stress the differences between them. **Value contrast** is the noticeable difference between the *shades* (dark values) and the *tints* (light values) within a single form or within a piece of art as a whole. **Colour contrast** is the difference between warm and cool colours. Artists also use textures and objects to create powerful side-by-side

comparisons. Contrast makes art **eye-catching**, reinforces the illusions of dimension and space, and directs attention to focal points.



Janine Antoni Lick and Lather, 1993. Chocolate and soap