

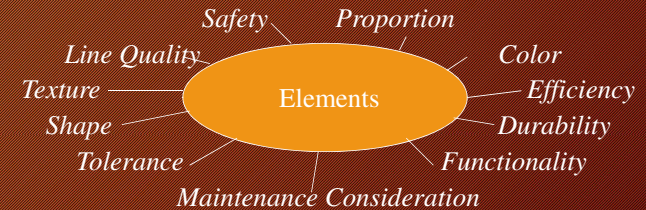
Principles of Product design

Product design
Lecture 3

Presentation uses material from other authors

Drawing

- A means for communication
 - Design is used to relay a visual concept



What are The Principles of Design?

The Principles of Design are the ways that artists *use* the Elements of Art to create good Compositions (artwork)

There are 11 Principles of Design

Balance
Emphasis
Unity/Harmony
Rhythm
Pattern

Contrast
Variety
Proportion
Movement
Repetition

Balance:

This principle of design refers to the visual equalization of the elements in a work of art.

There are three major forms of balance

The three major forms of balance:

- **Asymmetrical balance:** where equilibrium is achieved by the balance differences in the art elements within a composition.
- **Symmetrical balance:** where the art elements in a composition are balanced in a mirror-like fashion (it does not have to be exact but close).
- **Radial balance:** a kind of balance where the elements branch or radiate out from a central point.

Symmetry

- Also called Formal Balance
- Occurs when equal or very similar, elements are placed on opposite sides of a central axis.



Examples of Symmetry or Formal Balance



Examples of Symmetrical or Formal Balance in Jewelry

Asymmetry

- Also called Informal Balance.
- Occurs when there is a balance of unlike objects.



**Examples of
Informal Balance
or Asymmetry**

***Baby at Play*
by Thomas Eakins**

***The Great Wave off
Kanagawa*
by
Katsushika Hokusai**



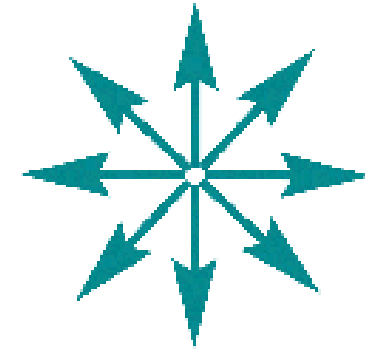
Examples of Asymmetrical or Informal Balance in Jewelry

Radial Balance

- Type of Balance in which forces or elements of a design come out or radiate from a central point.



**Examples of
Radial Balance**



Radial Balance in Jewelry

Three Types of Balance



SYMMETRICAL
equal
balanced
proportioned



RADIAL
center
core
hub



ASYMMETRICAL
irregular
uneven
lopsided

What impact has balance on product perception?

Contrast

A design principle that emphasizes differences between the art elements.

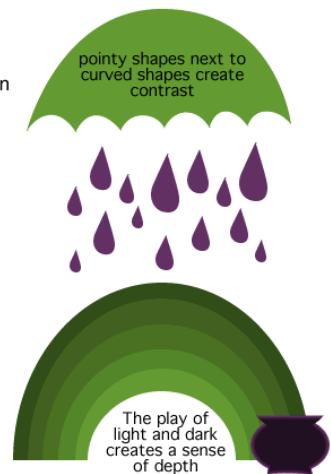
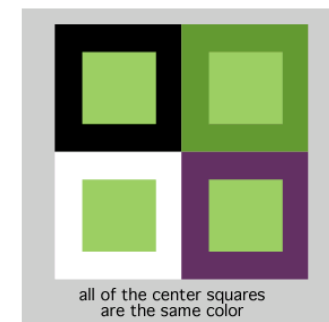
For example, a painting may have bright colors that contrast with dull colors or angular shapes that contrast with rounded shapes.

Sharp contrast draws attention and can direct a viewer to a focal point within a work of art.

Contrast

- Contrast suggests opposition or variety in a design such as light and dark, rough and smooth, etc. Using contrast can add richness, forcefulness, strength, interest, and relief from monotony.
- No contrast = boring

Contrast Examples



What impact has contrast on product perception?



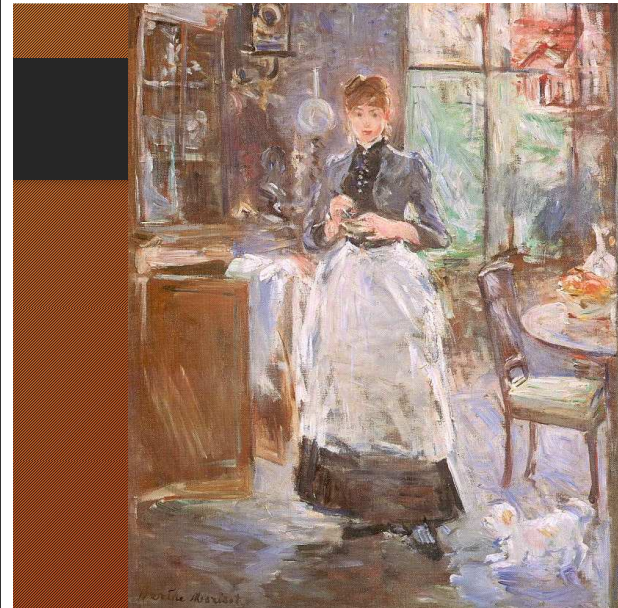
Contrast In Jewelry

Emphasis

The principle of design that makes one part of a work dominant over the other parts.

That dominant part is called the “Focal Point”.

The Focal Point is the first part of the work to attract the viewers attention.



Emphasis by Location

In the Dining Room
by Berthe Morisot

The young woman appears to be in the center of this painting. A lot of times, we naturally look in the center of the picture first like we would with a photo or camera.



Emphasis by Contrast

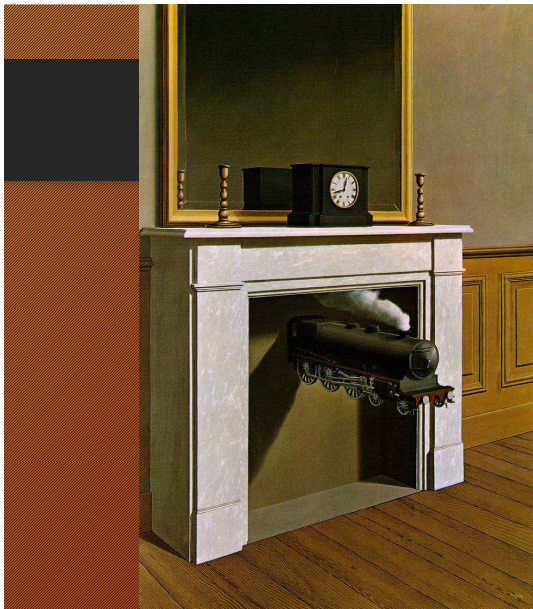
Rembrandt. *Self-Portrait*. c. 1629. Oil on canvas.

Rembrandt uses value contrast to create a focal point in this work. Only the head and the area immediately around it are painted in light values. The background sinks into darkness.



***Baptism in Kansas*
by
John Steuart Curry**

In this painting all the people are staring at the preacher and the girl. The viewer becomes one of the crowd and stares too.



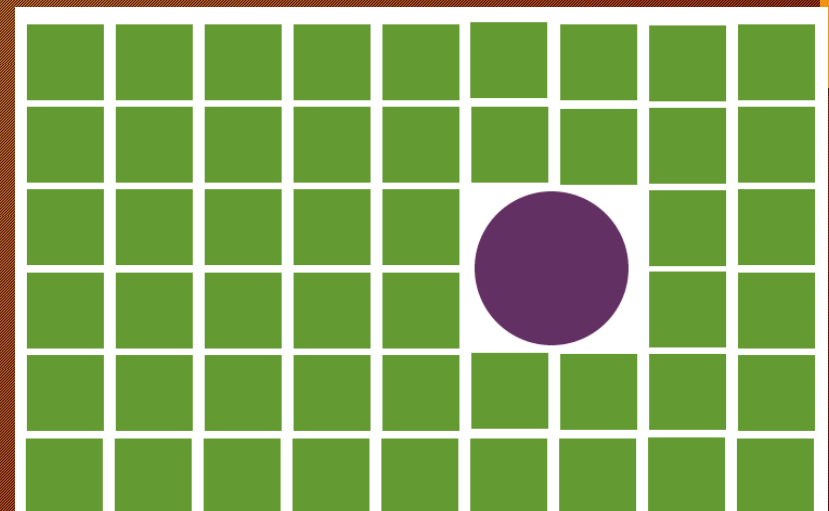
Emphasizing with the Unusual

***Time Transfixed*, 1939**

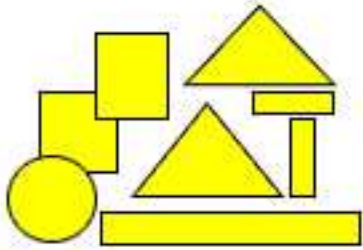
**Artist: Rene Magritte
(1898-1967)
Surrealist**

By placing very unusual objects or impossible activities in a work, an artist can also create a focal point.

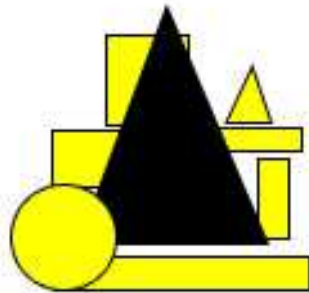
Emphasis...



Without emphasis

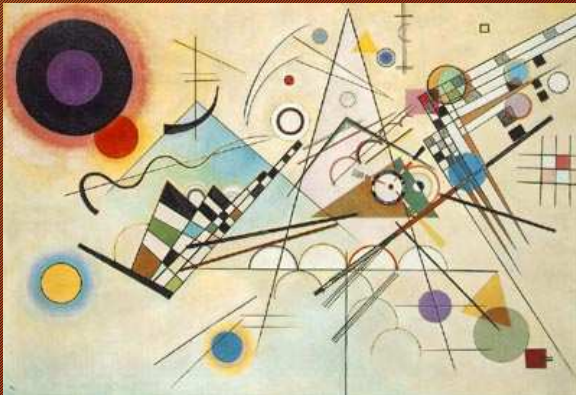


With emphasis



Emphasis in Jewelry – Focal Point

Where is the **focal point** in Wassily Kandinsky's, *Composition VII* ?



Unity/Harmony

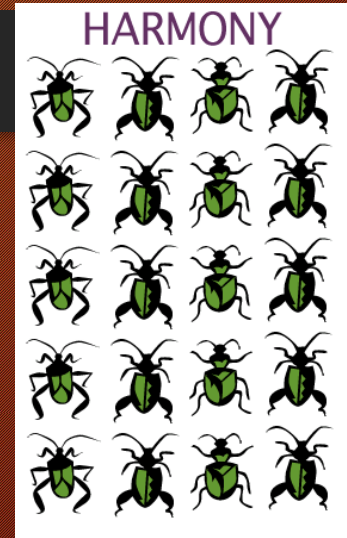
This principle refers to the visual quality of wholeness or oneness that is achieved through effective use of the elements of art and principles of design

Harmony

- All parts of the visual image relate to and complement each other. Harmony pulls the pieces of a visual image together.

Harmony

can be achieved through repetition and rhythm. Patterns or shapes can help achieve harmony. By repeating patterns in an interesting arrangement, the overall visual image comes together.

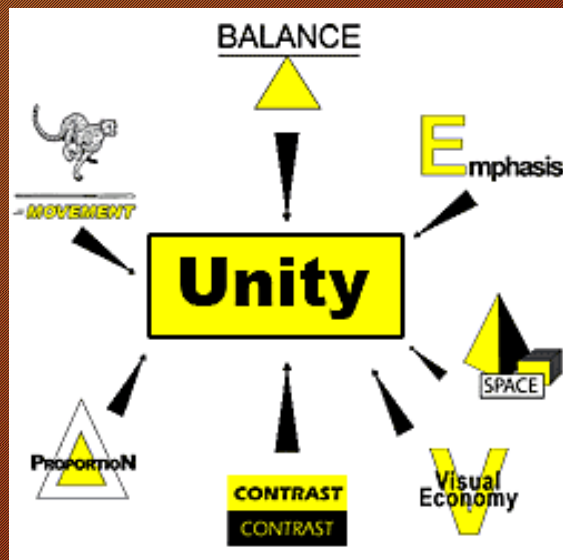


Harmony expressed in Jewelry

Unity - In a unified work of art, all the parts come together to form a whole.

One part of the composition feels like it belongs with the rest.

Achieve Unity through repetition of color, shape, or texture, or by grouping objects close together.



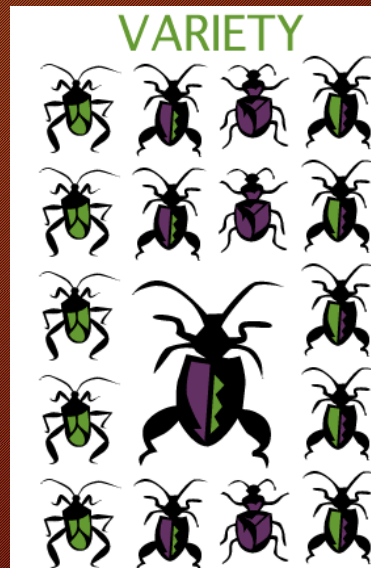
Unity expressed in Jewelry

Variety:

You create variety when elements are changed.

Repeating a similar shape but changing the size can give variety.

Keeping the same size, but changing the color can also give variety to a work of art.



Variety in Jewelry

Proportion

- Deals with the size relationship of one part to another.
- If you have ever tried to draw a human figure and realized that the head was too big or small compared to the rest of the body, you were already using the principle of proportion.

How is this artist, John Zacchea, showing correct **proportion** in *Wine Bottle and Cheese*?



When comparing the size of the objects in the composition, you see that the objects are not too large or too small for each other. They are of a realistic size.

Sometimes artists chose to distort or exaggerate the **proportions** of the subjects involved.



In this case the artist chose to use these "puffed up forms" to exaggerate the size of the people. By showing the figures larger than life size, he is attempting to celebrate the life within, and perhaps to mock their role in the world.

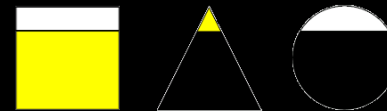
Fernando Botero, *A Family*

Bad Proportion versus Good Proportion

Bad Proportion



Equal division creates monotony.

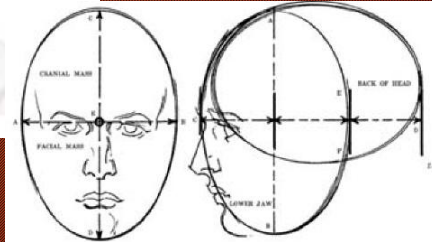
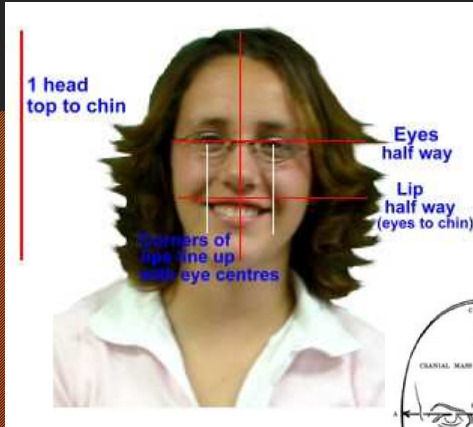


Division into unequal creates a lack of harmony.

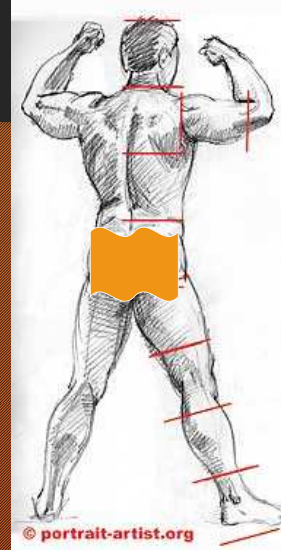
Good Proportion



Facial Proportions



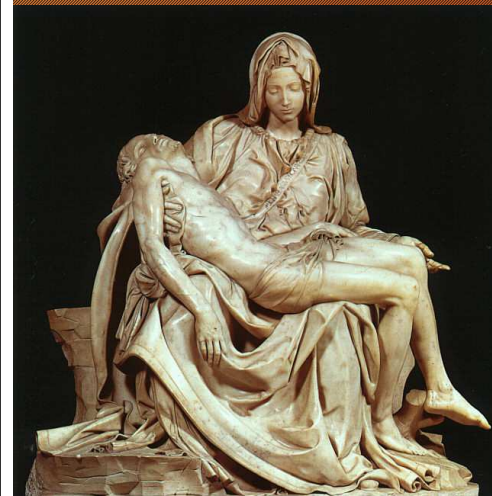
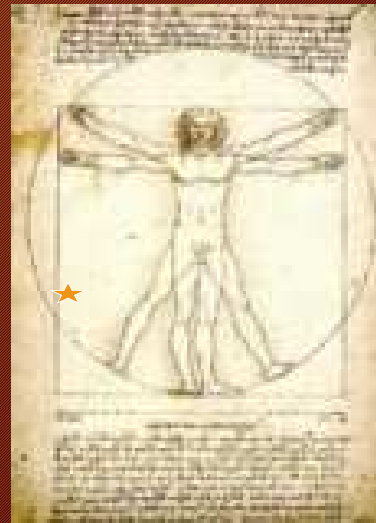
Body Proportion



- The basic rule of thumb is that the body is $7\frac{1}{2}$ or 8 times the size of the head.

Leonardo da Vinci (Italian, 1452-1519), *Study of proportions*, from Vitruvius's *De Architectura*, **pen** and **ink**

Leonardo, **inspired** by the mathematician Vitruvius (Roman, 1st century BCE), drew this famous picture of Vitruvian Man -- a sort of **ideal figure** -- whose arm span is equal to his **height** -- a **ratio** of one, or 1:1.



The Pieta by Michelangelo

Artists can change the actual proportion at any time. In this work by Michelangelo, he made Mary much larger than the body of Jesus. If Mary could stand up, she would be about nine feet tall! He did this so that she wouldn't look crushed by the weight of the body.

Examples of Contemporary Artists who distort proportion.



Proportion in Jewelry

Pattern

- A Two-dimensional, visual repetition.
- Repetition of an element of art (i.e., shapes, lines, or colors) to achieve decoration or ornamentation.
- Examples of Pattern are fabric, wallpaper, bed spreads.

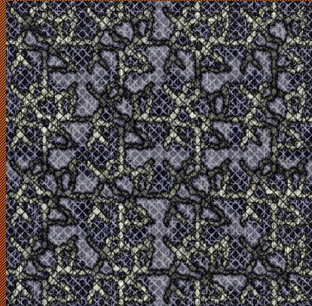
What elements has the artist used in this mask to create pattern?



This decorative wall plaque is a great example of how an artist uses lines and shapes to create **patterns**.

Artist Unknown, Indonesian, Wall Plaque,

Pattern



Work by Henri Matisse that uses a lot of pattern

How has the artists use of **pattern** enhanced this piece?



Would this piece be as interesting if the artist had used a solid background rather than this patterned one?

Riffs by Florene

Rhythm

Principle of Design that indicates movement by the repetition of elements.

Rhythm refers to a way of utilizing the art elements to produce the look and feel of rhythmic movement with a visual tempo or beat



Pattern in Jewelry

Rhythm

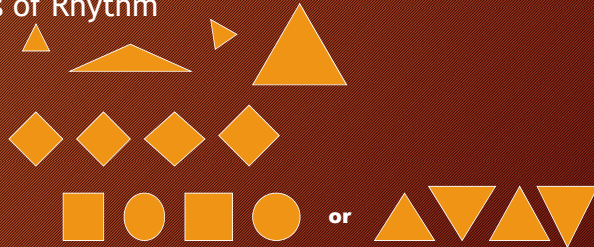
- There are four types of Rhythm

- Random

- Regular

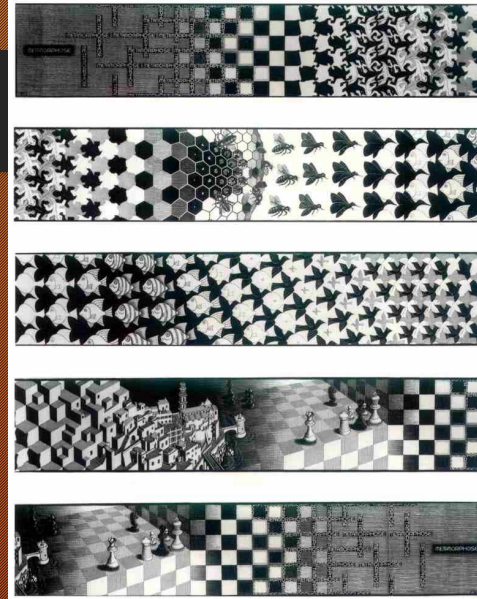
- Alternating

- Progressive



Progressive Rhythm

Transformations
by
M C Escher



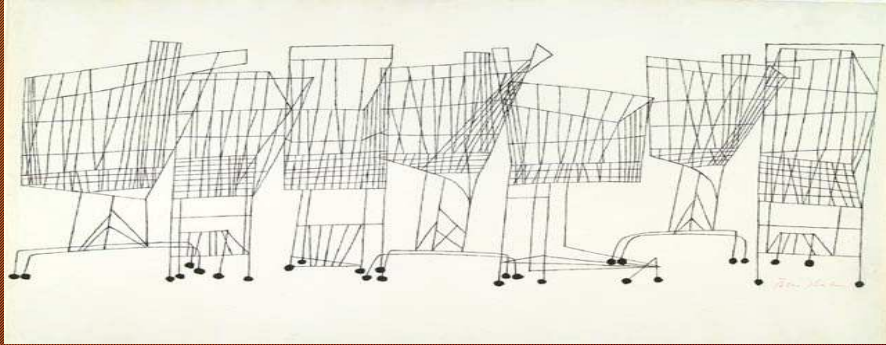
Repetition

- Technique for creating rhythm and unity in which a single element appears again and again.
- Repetition is very similar to Rhythm and they are usually used together. Sometimes you can have Rhythm without Repetition (example, Progressive Rhythm)



Rhythm in Jewelry

Ben Shahn has shown **repetition** in his work, *Supermarket* by repeating the same subject over and over to create an interesting composition. He used the same type and thickness of line and the same shapes



This beautiful *Scorpion Mola*, by an unknown artist, from the Panama Canal Kuna Indians shows **repetition** of what elements of art?



Shapes, colors, lines, and forms are repeated.

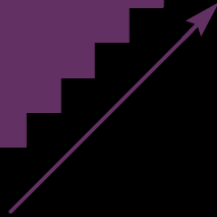


Movement

- Movement in a composition guides a viewer's eye through the work, usually to a focal point.
- An artist arranges parts of an image to create a sense of motion by using lines, shapes, forms, and textures, or by combining elements of art to produce the look of action.

Movement

The diagonal line in the staircase moves the eye upwards.



Movement



Dynamism of a Dog on a Leash
by
Giacomo Balla
1912
Oil on Canvas

The many repetitions of the legs, feet, tail, and chain in this work give it the appearance of actual movement.



Nude Descending a Staircase
by **Marcel Duchamp**

Captures the feeling of movement that occurs when someone is walking down the stairs.



Mobile from
National Gallery
of Art

Most art does not really move
but here are some examples of mobiles by Alexander Calder that do move.





Movement in Jewelry - Literally

Movement

Movement is the design principle that uses some of the elements of art to produce the look of action or to cause the viewer's eye to sweep over the art work in a certain manner.

In *Starry Night*, famed artist Vincent Van Gogh creates **movement** in his sky. How does he show us this?



The swirling motion of the colors in the sky showing the artist's interpretation of wind. The repetition of the brushstrokes and paint dabs. The stars are all yellow and round, vary in size and placement, and have "halos" of light encircling them.

Look at the painting and concentrate on how your eyes bounce from one star to another. This is an example of how an artist can create **movement** in a work of art.





Perceived Movement in Jewelry