Visual Factors in Design

Session Speaker

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Session Objectives

At the end of this session the delegate would have understood

1. Importance of visual factors in design
2. Difference between Harmony and Contrast
3. Implications of the gestalt rules for product styling
4. Elements of design through the study of Line, shape, form, space, texture, value and color.
5. Importance of Balance & proportion of the parts of any whole.
6. Golden Section and its importance
7. Colors and effects of colors in products
8. Colors and emotions
Session Topics

1. Visual Factors in Design
2. Harmony
3. Contrast
4. Product Styling – Rules
5. Elements of Design
6. Unity and Variety
7. Balance & Proportion
8. Golden Section
Visual factors in Design

• We analyze our environment in mind by the information collected through sensory perception. Majority of this happens through visual information.

• But in this process we have become too analytical in mind at the cost of developing the senses. Hence most intellectually literate men are often visually illiterate.

• The nature follows its own laws to bring a balance in the universe, the laws to mathematics and physics as perceived by human being.

• It does not change, but man has an ability to change to arrange – rearrange and bring an order in his own random environment.
Visual factors in Design

• Thus with a mix of understanding the nature through scientific means and ability to bring an order in his environment very often through intuition a designer can differentiate form, so far as visual world is concerned.

• Gestalt view:

Here form has to be considered as a perceived figure. For perception of form to our requirement in its various stages of differentiation we impart contrast or harmony. This is visual logic.

• Gestalt means pattern (German word)
Harmony

Ground / figure and figure / figure

• Ground / figure harmony is progressive differentiation between ground and figure

• An image is most distinct when it contrasts in value with its background. When image and background are similar in value, the image is harder to see.

• Harmony is achieved by minimum differentiation.

• Contrast is achieved by maximum differentiation.
Harmony

Spatial effects of color and value.

- Colors that contrast in value with the ground advance in relation to those that are closer in value to the ground.
- Dark colors come forward on a light ground; light colors come forward on a dark ground.
Harmony

• Figure / Figure harmony is achieved by progressive repetition of change of formal elements from the point of view of light, value, color, size, shapes or orientation.

• All of the butterflies have the same configuration, but changing the placement of values with each other one makes them look different.
Harmony

- The strength of an image depends on value contrast.
- The strongest images contrast sharply in value with the ground.
- Images are weaker, when image and ground are similar in value.
Contrast

- Figure / figure contrast is achieved by abrupt repetition or change of formal elements from point of view of light value, colors, size, shape, orientation.

- **Line and Mass:** Blocks or masses of color that contrast in value with the background define forms and space. Although line occupies very little area, it also defines forms and space by creating a contrast of value.
Contrast

- Harmony is employed to group information and also to neutralize or cancel unnecessary visual information.
- Harmony and contrast may be applied simultaneously and we perceive them interacting and evolve a complex situation.
- It is the concept of contrast that plays a dominant role in perception of our visual world.
Visual Factors in Design

• A form has always to be perceived in environment i.e., ground. A figure has no existence without ground.

• For perceiving a form essentiality is that there should be adequate differentiation from ground. This could be employed by applying various attitudes

• Evolution of form as analyzed by mind.

• A hard of soft edge devised by a figure on to a ground defines a form, which could be evolved either by maximum differentiation or minimum differentiation from ground. Degree of differentiation gives clarity or ambiguity.
Visual Factors in Design

- Necessary element to evolve a form
- Series of points define a ‘contour’
- Line or chains of lines make close or open form,
- Homogenous plane generally with hard edge.
- Surface structuring element such as texture
- These requirements make either a 2-D or 3-D form

- Visual perception
- According to Gestalt psychology our vision follows simple laws of perception.
Visual Factors in Design

- Eyes try to see in a situation preferably a simplest form. The interpretation in a complex situation also happens to turn out to a greater extent towards simplicity by method of elimination of elements breaking the continuity, simplicity, group formation, proximity, similarity or close forms. This is enhanced also by previous experiences.

- Eyes also like to see in totality a group of form put together as a whole as many of them as possibly integrated into one.

- We must understand the visual grammar of the user as he is going to guy the product now WE.
Visual Factors in Design
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• Inspite of there being no set rules for visual validity of form and it being a part of culture, time and place psychologists have revealed that preferential behaviors for aesthetics are tied up with total environment.

• Industrial designers generally look for balance, integrity and honesty of purpose with economy in the form.
Product styling – Rules

• The implications of the gestalt rules for product styling are profound and range from the specific to the sweeping.

• Gestalt pattern rules (Gestalt in German means pattern)

• Human vision is somehow predisposed to see certain types of patterns. When we first see an image our brain is ‘programmed’ to extract certain types of visual patterns and these are then constructed into a meaningful image.
Product styling – Rules

- Visual organization theory
- Designers communicate ideas by manipulating symbols.

Elements of design

- Line, shape, form, space, texture, value and color.
Elements of Design

• Line Generated by a point moving through space. “A line is a dot out for a walk”. Line is a means of communication rather than a natural phenomenon. It is an element we use to express our thoughts & feelings.

• Vertical line Strong, dignified, aggressive, noble and in balance, growth
• Horizontal line Passive, calm and rest.
• Angular line Show motion (movement), sense of falling
• Curved line Express beauty in its grace & elegance, smoothness.
• Curved line arcing outward Sense a fullness & charm
• Zigzag and other articulated Line Feeling of agitation
• Curved line arcing inward Feeling of poverty & emptiness
Elements of Design

3.14a Expressive quality of line
3.14b Tightly controlled line
3.14c Freely gestured line
3.14d Line that shows anger
3.14e Line that shows chaos
3.14f Horizontal line
3.14g Wide lines
3.14h Gentle curves
3.14i Staccato lines
Elements of Design

Implied lines: a square "seen" in the center.

Implied lines: a circle "seen" in the center.
Elements of Design

Josef Albers. Sanctuary. 1942. Lithograph, 19 × 23¾" (48.2 × 60.2 cm). Collection of the Josef and Anni Albers Foundation.
Shape

• Squares & rectangles are associated with stability.
• Circles and curved shapes suggest movement and continuity.
• Triangles can lead the eye to an upward movement; but inverted triangles tend to give a sensation of imbalance and tension.
• These attributes apply to sculpture, craft, graphic design, furniture, architecture, photography, film, & television.
Tone

Tone is the variation of lightness and darkness between the extremes of black & white. When used in a creative way, it can evoke different responses from the spectator.

- Create pictorial structure with balanced light & dark
- Convey harmony, or alternatively disunity
- Indicate dramatic contrast
- Give the illusion of solidity
- Suggest qualities of light
- Evoke a sense of space & distance
- Compose rhythms across a picture or construction
- Pattern areas with positive and negative shapes
Texture

• Texture is the surface quality of an object, its roughness & smoothness.
• Pattern is the repetition of similar elements in either regular or irregular manner.
• Our response to texture is either optical or tactile.
• On animal skin a series of shapes & colors constitute a pattern to attract or disguise but the skin, scale, or feathers with which it is composed constitute the texture.
• Some textures alter with time & touch. For example: snow, frost, foam, mud, bubble, & ash.
Texture

Two vases, showing how highlights on the surface on the left make the whole surface appear glossy.
Texture

• Image, Pattern and Texture
• The size of an image and distance from which it is seen determine whether something is understood as an image, a pattern or a texture.
Texture

- Orderly pleasing relationship between parts of the whole.
- Rhythm

- It is the flow or movement of the viewing eye as controlled by the repetition of either similar or varying elements and is closely related to unity and variety.
Balance & Proportion

• Proportion, as a principle deals with the relationship of the size of one part to the whole & is directly related to the concept of balance.

• Balance is the quality of equilibrium achieved & sustained through the proper proportioning of the parts of any whole.

• Ratios of approximately 1:3 or 2:3 are generally considered visually good.

• “FIT TOGETHER TO MAKE A COHERENT WHOLE “
Semiotics

• Semiotics is the study of SIGNS.
• A sign is something that stands for something else.
• Also known as Science of Design.

• **Symbols**--signs that bear an ARBITRARY RELATIONSHIP to that which they stand for (e.g., the word "apple" by convention stands for the fruit we identify with the word)

• **Icons**--signs RESEMBLING that which they stand for (e.g., a painting of an apple looks like the fruit it represents)

• **Indexes**--signs that are INDICATORS of a fact or condition (e.g., a chest pain can indicate heartburn; smoke usually indicates fire)
Semantics

• Deals with Meanings of Signs and Sign systems

• Meanings of words, sentences, gestures, paintings, mathematical symbols, shapes, forms etc.

• Study of meanings in language. Syntax describes the rules by which words can be combined into sentences, while semantics describe what they mean.

• Attempts to specify the cultural definitions
Syntactic

• Deals with the STRUCTURE of signs and sign systems

• Structure of a sentence, novel, film, **product**, figure, fugue, or ceremony

• Linguistic syntactic - phonology, morphology, and syntax. Grammatical arrangement of words in a sentence.

• Deals with the **arrangement of parts** in a product and their relationship.
Pragmatics

• Deals with INFERENTIAL MEANING--not merely logical inference.

• Solving problems in a way, which suits the present conditions, rather than obeying fixed theories, ideas, or rules.

• A good Designer is someone who is pragmatic rather than ideological and can respond quickly to changing situations.
Summary

• Importance of Visual Factors in Design has been discussed.
• Getting the special effects of color and value by achieving Harmony and Contrast have been discussed.
• Elements of design and basic color schemes have been covered.
• This session would help the delegates to create better styling for the products.