



SYMMETRY: THE ART OF EQUILIBRIUM

Subhasis Kotoky

ABSTRACT

Balance in fashion design is a key principle of fashion design that refers to the visual distribution of elements within design or fabric. It creates visually appealing and integrated forms by creating a sense of equality and stability between different elements. When the design elements are balanced, a pleasant adjustment satisfies the eye. The balance in the fabric refers to the visible distribution of weight from the central region (Dineva, 2014). Symmetry has long been an integral part of fashion design. Symmetry refers to identical elements reflected over an axis and central point. It creates reflections, repetitions and alignments that are predictable yet captivating. Symmetry can be found across many design elements like prints, seam lines, pleats and cutouts. This paper presents the design of women's dresses with the use of wide variety of symmetries.

KEYWORDS: Balance, Radial Symmetry, Rotational Symmetry, Bilateral Symmetry, Translation Symmetry

INTRODUCTION

Symmetry in everyday life refers to a sense of harmony and beautiful proportion and balance. In mathematics, the term has a more precise definition and is commonly used to refer to unchanging objects under certain transformations, such as translation, reflection, rotation or scaling. Although these two meanings of the word can sometimes be stated separately, there are complex relationships between them. A geometric shape or object is symmetrical if it can be divided into two or more identical pieces that are arranged in an organized manner. That is an object symmetric if there is a transition moving individual pieces of the object, but does not change the overall shape. The type of symmetry is determined by the way the pieces are organized or by the type of conversion (Escher, 1986).

Symmetry refers to the visual equilibrium designed by the elements to reflect each other or to follow a pattern. In design it often means creating compositions in which the elements on one side of the axis are reflected or repeated on the other side resulting in a sense of coordination and order.

One of the principles of design composition is balance. The balance can be symmetric or inequitable. The symmetry is based on four main types of symmetry which are reflection or bilateral; rotation or radial; translated and helical or spiral; or a combination between types. A wide variety of symmetries of nature's forms can be used as concepts in fashion design. It is

generally assumed that a symmetric composition in clothing is this which is formed on the basis of reflection or bilateral symmetry, because there is this kind of symmetry in the human body. But every other kind of symmetry can be used in fashion designs, especially in the form of special descriptions or elements (Dineva et al., 2010). Radial, translation and helical symmetry can be used in both forms if equilibrium in the structure of clothing (based on the bilateral structure of the human body) or inequality (different right and left parts of textiles).

DISCUSSION

There are three types of balance in fashion design –

- Symmetrical Balance
- Asymmetrical Balance
- Radial Balance

Symmetrical Balance in Fashion Design:

Formal balance in fashion design, also called symmetric equilibrium, is characterized by an equal distribution of its elements, leading to a sense of balance and centrality. It means that both sides of the design are the same, just like the bilateral symmetry seen in a human body with two hands and two legs. Exactly the same details should be kept on both sides of a fabric that follows the symmetrical design at the respective locations (Kazlacheva, 2013).

Symmetric balance is widely used in fashion design because of its straight forward and rational methods of achieving stability. Even if

Assistant Professor,
Department of
Mathematics

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there are slight verifications or small deviations as long as the overall elements are almost symmetrical, the design retains its symmetrical nature. To ensure that symmetric design remains attractive, it requires fabric selection, rhythmic patterns and efficient implementation of local relations. There are three main types of symmetrical design –

(i) Bilateral Symmetry:

Bilateral symmetry or mirror symmetry reflects images along a central axis. The images that appear on one side of the axis are reflections of the image that appears on the other side of the axis. An axis can extend horizontally, vertically or diagonally.

(ii) Rotational Symmetry:

Rotational symmetry also known as radical symmetry; rotational symmetry rotates images around a center with equal spaces between them.

(iii) Translation Symmetry:

Translation symmetry moves a particular object from its position to another place and sets patterns in the design by keeping its orientation the same. Images or symbols appear over and over again, but maintain the same size and distance from each other, and appear in the same direction.

Asymmetrical Balance in Fashion Design:

Asymmetrical balance is used to describe a kind of balance that is not the same on either side of the central line i.e. the symmetry against the symmetry. Asymmetric balance occurs when several small visual elements on one side are balanced by a large visual element on the other side or scene elements smaller than large visual elements are placed far away from the center of the scene.

Asymmetrical balance can be used when one wants to gain a more sudden or less planed form and feel. An asymmetrical composition can create a sense of excitement as if the page or screen may be pressed or things may be splashed from the side. The asymmetric balance is more dynamic than symmetric balance and generally keeps the audience's attention focused on visual messages (Washburn *et al.*, 1988).

Radial Balance in Fashion Design:

The radial balance involves organizing the elements around central point's such as wheel spokes. This type of balance is less commonly used in fashion design but can be seen in some fabrics with round or spiral motifs, such as skirts or circular rafales or pleated dresses. Radial balance creates a focal point and creates a sense of strength and speed (Kazlacheva, 2007).

Principles of Fashion Design:

There are five basic principles in fashion designs –

- (i) Proportion
- (ii) Balance
- (iii) Unity (Harmony)
- (iv) Rhythm
- (v) Emphasis

(i) Proportion:

Proportion is the pleasing inter relationship between parts of a design. The various elements in the design should be scaled in size to fit its overall proportion. The principles of ratio refer to the ratio of one element to another in one design. It helps designers choose the shapes and shapes of many elements related to each other to create a pleasurable overall impact. The feeling of being together arises when different parts (quality, size or number) are related to each other (Dineva *et al.*, 2010).

(ii) Balance:

Balance is the visible weight in the design based on the central dividing line. The balance makes the right and left side of the fabric seem to be equal. A fabric has to be balanced to be visually good. Designers use this principle when creating necklace, hemlines, seams and more (Dineva *et al.*, 2010).

(iii) Unity (Harmony):

When the fashion designer weaves all the elements in such a way that they come together to create a unified design language, they are using the principle of unity. It is also called co-ordination when it is effectively executed, a fabric looks good overall (Dineva *et al.*, 2010).

(iv) Rhythm:

Creating a sense of organized motion by repeatedly using one or more components of the design creates rhythm. Rhythm evokes emotions like music or dance. Diversity is very important to keep rhythm exciting and active (Dineva *et al.*, 2010).

(v) Emphasis:

Emphasis is one of the key principles of fashion design that helps draw attention to a particular piece of fabric. The emphasis is often on brightening the most important aspect of design that grabs attention. This work can be made possible by colour, texture, pattern, shape or any combination of these elements (Dineva *et al.*, 2010).

Benefits of Using Symmetry in Design:

- Symmetry brings a sense of order and coordination (balance) to a design, which makes it easier for users to navigate and understand content. This helps guide user's eyes and creates a normal flow, which contributes to the intuitive experience of the users.
- Symmetrical designs often seem aesthetically pleasurable and familiar, as our brain naturally recognized and appreciates patterns. This familiarity can contribute to the positive user experience as users are more likely to trust and engage with interfaces that find familiar and visually appealing.
- Perfect symmetry in design promotes stability and consistency, giving users a sense of reliability and coherence within a product. This symmetry helps to establish brand identity and gain user loyalty, as users expect a consistent experience every time they communicate with the product.

CONCLUSION

Symmetry creates a sense of order, balance and structure in a

design. It can also add visual interest and a sense of movement to a design. Balance in fashion design does not necessarily mean achieving perfect symmetry or equal weight distribution. It is about creating a visual equilibrium that suits the desired aesthetic and the wearer's body shape. The choice of balance type will depend on the designer's intent, the desired effect, and the wearer's preferences.

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