Analyses the Application of Vertical Line in Clothing Structure

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Abstract
Vertical line is an important form of clothing modelling design, with lines divided clothing processing, the natural formation of clothing to transform, to better reflect the style of clothing, this paper will analyses the line, the characteristics of application in the clothing structure design are expatiated.

Keywords: clothing structure design, vertical line, decorative line, clothing modelling

1. Introduction
Clothing modelling design include clothing internal design and clothing structure design, clothing design is also called external profile design, clothing structure design is also called the inside line, it refers to the outer contour on the basis of overall appearance structure planning arrangements, the viewer's line of sight from the contour to interior space to create the basic impression. [1] as the structure of the line and process is different, the style of clothing also reflects the different, clothing manifests in the human body, so the line in the design of structure characteristics of the intimate contact with the human body.

2. The Role of Vertical Line
2.1 Structure Line
Structure line can be missing stitches in clothing, including the contour line of clothing, is also a connecting line between various components, which combined into multiple surface concave and convex surface based on the human body, clothing structure line is the two-dimensional plane into three-dimensional stereo clothing, according to the characteristics of human body engineering, the garment overall reasonable is decomposed into different pieces, structure line by the shoulder seams, side seam, back stitches, etc. In the clothing design, must handle line shape and position in the clothing, clothing of the modelling of whole and local design change is usually rely on the line.

2.2 Decorative Line
Decorative line is the decorative effect from the division lines that such as mosaic, splicing, embroidery on clothing structure design. In order to reflect the creative theme clothing design, often use two different fabrics design with collocation splicing method. [1] Different materials, different colors, different width of the strip, rendering the clothing to profile the different visual effects, gorgeous color and sophisticated production process make the surface appear to be more abundant space for clothing. Traditional Chinese clothing has been adopted this approach, such as the cheongsam joined the trim, moldings and other methods of representation.

2.3 Decorative Structure Line
In practical use vertical line’s decorative and the functional properties are often used in combination, a highly decorative vertical line on the surface of some vertical line, but its inherent implies a specific functionality. [10] Such as Issey Miyake works, structural lines and decorative clothing line has no clear dividing line, diversified structure lines to strengthen the clothing contour shape and increase aesthetic appeal of clothing. Princess line, pleating and provincial clothing line is also commonly used in decorative structure line .it cut in pieces, can put either structure better reflected and rise a beauty of function.
3. **Vertical Design Principles**

3.1 **According to Human**

Clothing service in the human body, firstly, we must clearly understand the structure of the human body, the human body are mostly in the movement state of human body, so be sure to meet their motor function, analyses the relationship between clothing and body torso, upper extremity relationship with sleeves, legs and pants relationships. Vertical line is designed to be comfortable to wear, easy premise, different age and size, according to the design of its reasonable dividing line.

3.2 **The Fabric Properties**

Clothing materials constitute the material basis of clothing, different material properties vary widely, making the dividing line design, to fully consider the characteristics of clothing materials, for different performance fabrics, and some soft light, and some solid crisp, the dividing line treatment different methods, the design should take full advantage of the characteristics of materials, so that to achieve unity between the dividing lines and fabrics. [3]Vertical line by the thick degree of restriction of fabric, the thick fabric can use line, will be more have stereo feeling, decorative pattern and choose one of the fabrics is unfit for too much line processing, can damage the fabric style.

3.3 **Combined with the Pattern Design and Production Process**

Vertical line design can be considered when the function of the structure design, such as princess line, the structure is to play a role in closing the province, while the curvature and shape of the princess line depends on the modelling of clothing. Under certain conditions, the process implementation is the guarantee of clothing modelling design and critical conditions of mass production, factory assembly line processing, if the line design is unreasonable, affecting both the beauty clothing, clothing cumbersome process also affects the production efficiency of the factory. When vertical line designs to meet the functional, the process should take into account the simple operation.

3.4 **The Law of Formal Beauty**

Clothing modelling with X, H, A, V and O, the modelling is clothing profile mostly reflected, it achieve this must rely on the line, especially X, X is the most embodies the characteristics of female waist to make split design and the effect of closing the province to achieve its waist. The length and shape of vertical line to agree with the style of the clothing, the perfect realization of the profile shape of clothing plays a role in helping and contrast, and color of clothing to add more artistic and visual spatial effects. By vertical line direction of the line variation of the partial formation of different shape, the line density, docking, merits and other forms of garment will cause shape changes. If the clothing is relaxed profile shape, vertical line should be smoothly expanded form, if it is a fit, vertical line should be refined to close the body, or will become inconsistent.

3.5 **Principle of Comport**

With the development of the Times, the people turn to pay higher and higher comfort requirement of clothing, although some clothing can satisfy the demand of basic functions, and modelling is very beautiful, when wear on the body, let a person feel cabined feeling and tension. When designing line modelling, therefore, should follow the principle of clothing bring comfort to people, although the modern clothing styles, modelling is protean, wearing comfortable still is the important factor to consider people choose clothing, designers can through modern high-tech elastic fabric is both satisfy people desire for beauty and let a person feel the dress is very comfortable.

4. **The Classification of Vertical Line**

4.1 **Straight Vertical Line**

Straight vertical line is refers to the vertical line in clothing pattern is linear. Straight line with a "hard", "simple", "male" image, thick line gives "strong" and "blunt" and "heavy" feeling; fine straight line there is "weak", "neurotic" and "sharp" feeling. [5] Straight vertical line is the straight line around clothing split position, the front piece of vertical line from the shoulder, breast and waist to hem, the back piece of vertical line from the shoulder blade, waist to hem. Straight line with horizontal segmentation, vertical segmentation and slash split three forms. Horizontal vertical line to the left extension has widened in the visual effects, such as apparel in the yoke or horizontal decoration design, and performance in lace, fillet, etc.
Vertical lines are split up feeling there is elongated in the visual effects, and often gives a simple, stable feeling, in obese people vertical dividing lines used in wearing apparel that can make people look slender, narrow space effects. And is often used to tuck in women's clothing decoration, make its have the function of the tall and straight. Slash has lively and movement, using slash will become lightweight, commonly used in the design and creative design dress in clothing design.

4.2 Curve Vertical Line
Curve vertical line is relative to the straight line and curve line for more women's clothing design, can better describe the shape of the female curvaceous. Big wave front lace, cuff and the collocation of the crepe lace embodies the downy sense, when design curve vertical line, it want to combine uneven body, not arbitrarily split and combined. Curve vertical line can be divided into geometric arc segmentation and segmentation, arc segmentation highly expressive, charming the female body can be summarized into a few refined soft curves, and geometric segmentation, such as the lovely gentle circular dividing line, oval supple and have a sense of weight, fan light., acute; The waveform shape like in the dance and so on. Curve vertical line round and give people a sense of movement, so the curve dividing line should be used in accordance with costume design style.

4.3 Irregular Vertical Line
Irregular vertical line of clothing designed according to the needs of content, in accordance with the laws of formal beauty in the clothing on arbitrary segmentation, such as adopting polyline, arc, all kinds of curve, to maintain steady state changes, the new and unique to make clothing colorful presentation style changes. Line is a straight line change, it has many characteristics, such as straight line is concise and easy, line ups and downs, up and down, let a person feel the character and personality is distinct, but not easy to blend, using line area should not be too big. Irregular line, also known as free segmentation, it can be a straight line and curve of cross combination, also can be curve and linear permutation and combination, from the design point of view, this segment of the most creative, in this sense, we can create a better clothing.

5. The Relationship of Vertical Line and Clothing
Vertical line is an important means of clothing structural design, is the unification of function and aesthetic, is a combination of local and overall. Curve and straight, horizontal and oblique, changes sparse and dense let clothing colorful expression. Vertical lines are used appropriately in clothing modelling, determines the overall beauty of clothing, the clothing style and clothing decorated with charm, designer inspiration and ideas can be applied also to reflect the element lines, but also in the shape of split full account of the human body, functionality and comfort to meet the principles. Split design is based on modeling clothing outline and detail design of the structure, each detail and overall coordination to make clothing, it is not the focus of drawing shapes in the plane, but the main consideration which is reflected in the appearance of the shape of clothing.

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