

# Constructivism of Ballet Movement Used in Fashion Design

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**Abstract:** In this century, both ballerinas and fashion designers have developed ideals and ideas with form, geometry space and creativity. Fashion designers prefer to combine dance aesthetics with details. This paper takes the geometric structure design of constructivism as the core, applies these special structures to the fashion design. The unique structures and fabric modification technique are used in clothing, and express different and special visual effects in several ways. By exploring the relationship between people, free, space and geometry in ballet, and extending the design concept of constructivism, the garments show more movement and freedom.

**Keywords:** ballet, movement, constructivism, geometric, body structure, material

## 1. Introduction

### 1.1 Background of Study

Designers are also inspired by some elegant dances, shocking movements, and charming gestures. Dance and dancers always provide designers with inspiration for fashion design. Decompose the human body structure, use figure to reconstruct, and express dynamic aesthetic feeling.

### 1.2 Aim and Objectives

This paper studies ballet with the concept of constructivism, which is a kind of constructivism and geometrism. It uses wisdom to revive some unique fashion design elements from these sculptures, and at the same time shows a new perspective and communication movement of ballet art. Therefore, the objectives of the project are as follows:

- (1) Have a general understanding of geometric sculpture and Russian constructivist sculpture.
- (2) Have a comprehensive understanding of other sculpture designs in costume design.
- (3) Analyze the application of constructivism inspired geometry, space, fabric, pattern and color in fashion design.
- (4) Provide new design inspiration for Russian sculpture for fashion design.
- (5) Create fashion series for clothes by using ballet movements and structural and geometric patterns of constructivist sculptures.

### 1.3 Scope of Study

This paper mainly introduces the geometry and fabric design of ballet and constructivism. Apply these special structures to the fashion design. Some unique structures and materials are used in the garments. Some of them express different and special visual effects in several ways. Taking geometric constructivism as the research object, this paper discusses some innovations of fashion design through the method of case study. All of these fashion designs are evaluated by artists and designers, and this information enriches the collection.

### 1.4 Methodology

#### 1.4.1 Literature Review

It contains the useful information from geometric of ballet and constructivism works. It has certain reference significance to the geometric structure and material of ballet and constructivism. These data from the internet and reference books have inspired more ideas about garment design.

#### 1.4.2 Case Study

Spatial form and space, fabrics, geometric lines and colors are always inspired by ballet and constructivism, providing the cases for this project. To comprehensively grasp the knowledge of geometrical structure and cutting lines design about fashion design. On the basis of these cases to explore the constructivism design has more attractive and unique.

#### 1.4.3 Design Collection

Based on the literature review and case study, the collection will contain 6 final designs, some of which are similar in structure and fabric but expressed differently. This collection has unique cutting lines and textile inspired by the movement

of ballet and constructivism sculpture.

## 2. Literature Review

### 2.1 Introduction of Ballet and Constructivism

Ballet refers to the European classical form with certain standard of movements, skills and aesthetic requirements. Or generally refers to the form of dance expression that uses human body movements and gestures to express the drama content and promote the plot development, as well as certain emotions, artistic conception, psychological state and behavior.[5]



Figure 1. Short movie - Ballet rotoscope

Constructivism refers to a sculpture composed of pieces of metal, glass, wood, cardboard or plastic fabric. It accepted cubism's techniques of mounting and embossing, which changed from adding and subdividing traditional sculpture into fabric and combination. It also absorbs the geometric and abstract concept of absolutism, and even applies it to suspended objects and relief objects, which have a decisive influence on modern sculpture. [2]

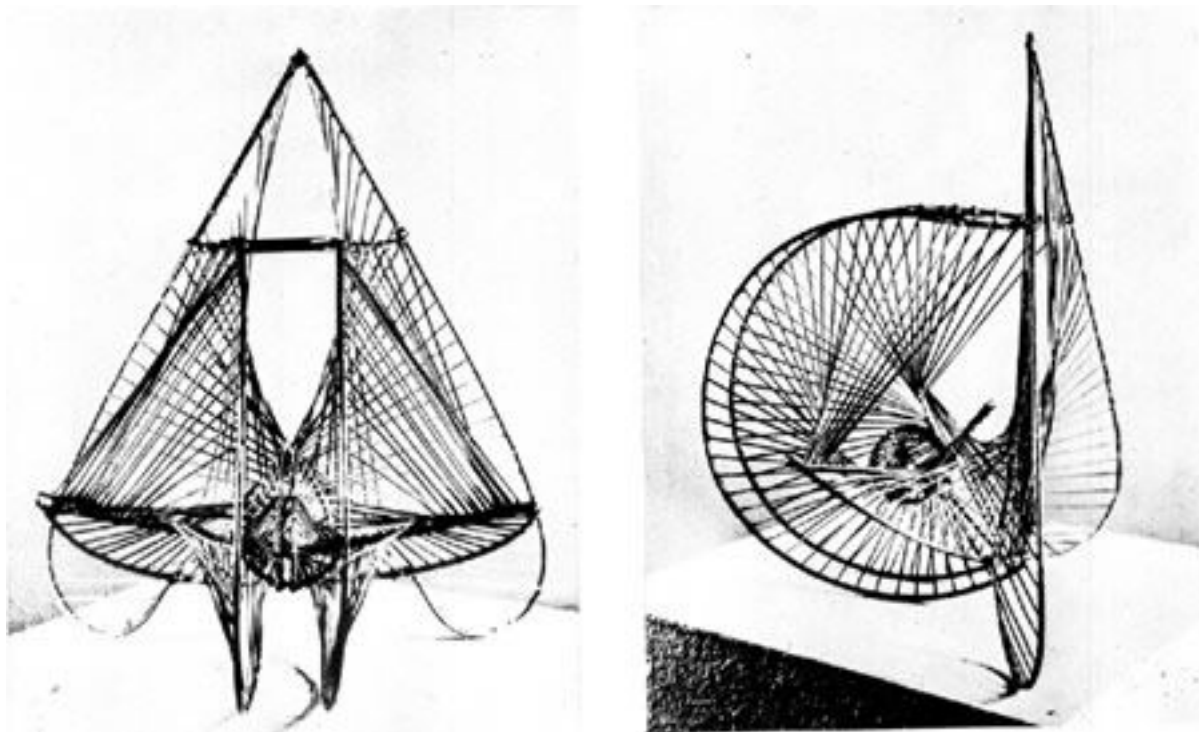


Figure 2. Antoine Pevsner

## 2.2 Study of Ballet and Constructivism

Ballet grew out of the Italian courts of the Renaissance. In the first 25 years of the 19th century, ballet grew rapidly in Italy and Russia. There are many schools of ballet, but the French and Russian schools are the mainstream, influencing western and eastern Europe. [7]The French school has delicate, soft and smooth dance movements with a small range, while the Russian school is passionate, vigorous and powerful with a large range.

With the change of the 20th century's view of the human body, ballet movements are inclined to more body-building design, and the speed also requires fast and adagio has a strong contrast.

Constructivism began in Russia's agitation of a kind of art, has a far-reaching effect on modern art. In 1921, after the development of its principle mature theoretical scholars named it as constructivism. Constructivism artists use materials such as iron, tin, wood, glass and plastic to create works, trying to break the gap between daily life and art. [3]Constitutionalists regarded ineffectual objects as inspiring and emphasized the holistic use of space. In 1920, Naum Gabo began to execute kinetic models.

## 2.3 Main Characteristics of Ballet and Constructivism

Ballet is the majority of the spectators viewed the performers from above most of their attention was focused on the figures, or floor patterns traced by the dancers as they moved about the figured dance or horizontal dance, as it was called consisted largely of geometric forms. [8]

Constructivism has been completely abandoned the various elements of the real world, to express the content through geometry, line, color, and it's completely fuzzy even redefine the border of the material world and spiritual world, the combination of a group of color piece, also can be the expression of a person doing anything. The constructivism outstanding artists, looks like a simplified technique, but its broader connotation.

### 2.3.1 Geometric of Ballet

The figure of ballet dancer as the subject. Point is the simplest form, it is only tension but no direction. Line has both tension and direction relative to a point. Pick up the points and lines to panel to achieve the figure construction.

### 2.3.2 Geometric of Constructivism

Constructivism sculpture was consisted of circle and lines constructed the geometric object. And the works were constructed like geometric puzzles. Viewers look the work in different side, have different thinks and ideas base on viewers' difference background.

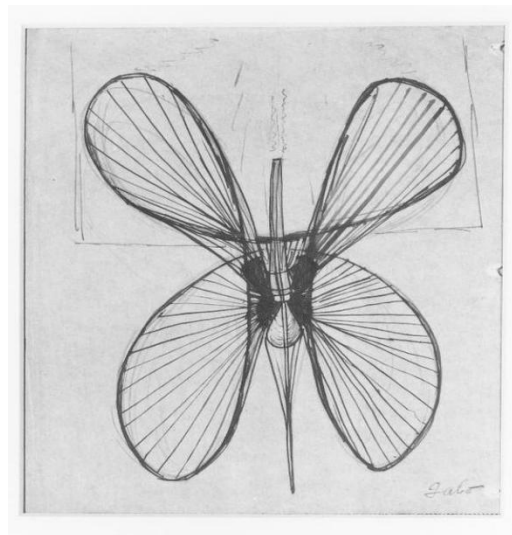


Figure 3. Sketch from Naum gabo

### 2.3.3 Material

In the 17th century ballet actor's performance is a kind of with wire hoop "agnelli" short skirt, worn by the actress is popular in Europe at the time "whalebone" skirt, they are bulky and uncomfortable. In order to fully display their graceful movements and skills, ballet dancers have made many innovations in ballet costumes, making them lighter and lighter. Ballet with tight body as the first impression element, benefited from the innovation of fabric in the later development process, dancers can release their dancing movements to the greatest extent. At the beginning of the 20th century, the development of ballet's comfortable corset and light gauze skirt had an impact on fashion.

From the constructivism, the artist always consider the movement in space, and experiment the new materials for production. Such as metal, plastic, nylon and so on.

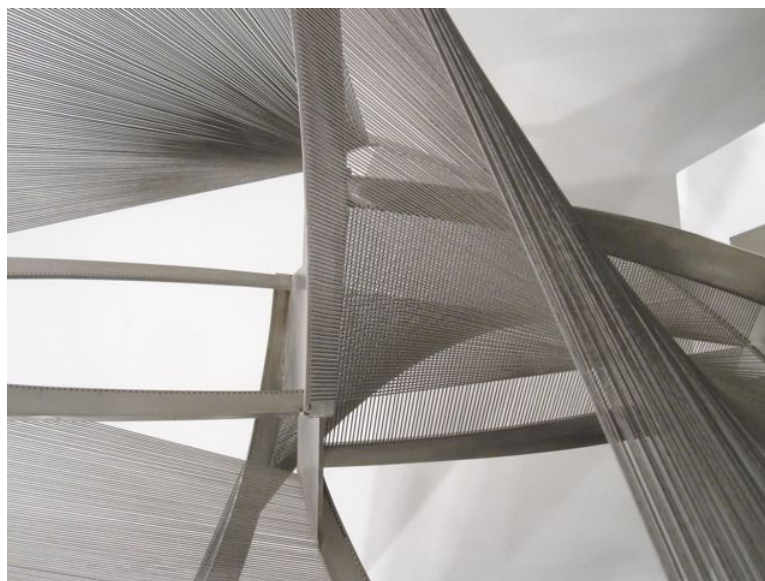


Figure 4. Naum Gabo, Torsion variation detail

### 2.3.4 Color

Constructivism combines various points, lines, planes and colors in a single picture, and establishes a visual structure with aesthetic feeling in the picture according to different practical requirements. Red, yellow, blue — the three primary colors with great weight as the core part of their color composition, color "exquisite" picture has the participation of these three colors.[4]

### 3. Case Study

The ideas of form and geometric structure of fashion design from Ballet and Constructivism. The most basic elements of ballet and constructivism are geometric form, space and material. The silhouette affects the vision of garment. Good fashion designers need to think spatially like all constructure productions, and they need use the personal skills to transform two-dimensional materials into three-dimensional forms.



Figure 5. Devota & Lomba 2017

On the show of Devota & Lomba in 2017, designers with outstanding imagination showed the three-dimensional folding, hollow out, right Angle lines and paper's unique stand profile and other details to the extreme. By stacking tulle, silk and cotton fabrics, the simplicity of design and leading technology complement each other. Outstanding tailoring and soft colors complement each other, highlighting women's exquisite figure.

### 4. Design Collection

#### 4.1 Theme

The theme of this collection is named "constructivism of ballet", which is inspired from movement of ballet. Ballet and constructivism are used as creative inspiration, and geometric lines and fabrics are used for reconstruction. Combined with the sense of costume and dance, the costume moves with the dancer's body, and the level of costume has a more dynamic sense. From the Ballet extend Constructivism and it has more geometric construction.

#### 4.2 Inspiration

The literature research is from Polyu library, looking for literature about ballet culture, ballet artist, Constructivism sculpture and Constructivism artist. It contains basic information about Ballet culture and Russian Sculptures. It is helpful to study the geometric construction and sculpture designs about Ballet and Russian Sculptures.





Figure 6. Barbara Hepworth

The inspiration comes from the movement of ballet. The majority of the spectators viewed the performers from above. Most of their attention was focused on the figures or floor patterns traced by the dancers as they moved about the figured dance or horizontal dance, as it was called, consisted largely of geometric forms, after overlaid with symbolic meanings. [6] Russian constitutionalism stresses the law of rationality on the whole, emphasizing the structure of arrangement, the brief style and the contrast of space. Formally influenced by cubism and futurism, the three characteristics are technical, texture and composition. Dimensional form and space, fabric, geometric patterns and color always inspired by Ballet and Constructivism offer many cases for this study. To acquire a comprehensive knowledge of geometric construction and cutting lines design about costume design now. Then base on these cases to explore the design of sculpture structure may be more attractive and unique.

The clothing structure of the structuralism style takes the human body as the starting point, and the designer designs and tailored the clothing in three-dimension according to the human whole curve, making it become a three-dimensional and dynamic soft sculpture art body. Let the wearer be expressive and aesthetic from any point of view.

The collection sets to design a group of 2020 autumn winter fashion apparels. Every aspects of design are comes from the movement of ballet, the details inspired from the sculpture and Constructivism.

#### 4.2.1 Inspiration of the silhouettes

The silhouette of this collection are inspired by the construction of the geometric construction. The figure as the subject, point is the simplest form, it is only tension but no direction. Line has both tension and direction relative to a point, pick up the points and line to plane, to achieve the figure construction.

#### 4.2.2 Inspiration of the structures

Fuller was inspired by the billowing folds of transparent china silk. Her work gained much attention in her time primarily because it was so very different from the classical ballet that had previously been the only widely accepted dance form. The works were constructed like geometric puzzles.[1]

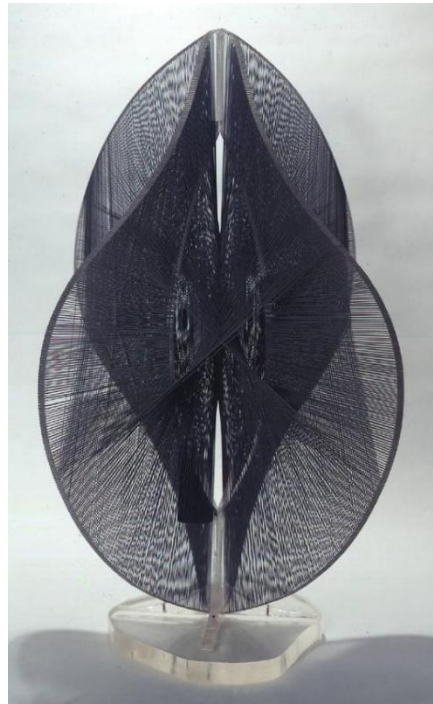


Figure 7. Naum Gabo

### 4.3 Development and application

This part is the development of this collection. And here has three main design parts as follows:

Firstly, the inspiration is from movement of ballet, it helps me develop the collar shape and the front structure of coat, as follows having two similar structure applications.

Secondly, the top stitching patterns were from the Constructivism sculpture. And the patterns are changed from the original structure patterns, using different material and fabric to express different looks.

Thirdly, the different pleats of fabric design is inspired by from the Naum Gabo's work-'Linear Construction No. 2'. Through pleated the fabric, it is for changing with different shapes. And use different structure to express the geometric details.

Most of its internal structural designs follow the principle that the surface of the human body is fitted as accurately as possible through a flat piece of clothing, and that the darts, splits and pleats are arranged reasonably according to the position corresponding to the human body, such as pointing to the chest point in the darts. Secant lines as far as possible is through the maximum curvature of the human body, and pleats are generally located between the waists and sleeve mountains, et al. By comparing the scale, the structure relation, the partition proportion and the echo relation, the design idea of balance and coordination between the outer profile and the inner shape of the garment is presented. Taking the basic form of human body as the starting point of fashion design, the human body is continuously three-dimensional through various clothing languages, and at the same time, it gives clothing a kind of independent space to take over. Design proposal: use rectangle, circle, straight line to form semi-abstract or abstract picture or sculpture, pay attention to the influence between form and space. Decomposition and reconstruction;dynamic form of expression.

### 4.4 Fabrication

To change the spatial modeling of fabric, it is also through technological means that the flat state of fabric itself is transformed into three-dimensional modeling. Common modeling techniques include folding, folding and weaving, which form a relatively three-dimensional effect by changing the shape of the original fabric, and make people touch with an obvious sense of touch. Different ways of pleating will inevitably produce completely different visual effects, and the selection of pleating is indeed able to give a brand-new treatment to some outdated fabrics, so as to realize the reuse of fabrics. Through folding can makes the clothes look like relief.

Folding means the free overlap of the original disjoint space and the attempt to upgrade from plane to solid. The folds formed by folding make the whole garment more smart;It is born because of form, the color of fabrics itself, grain, quality of a material will affect final result. In addition, the fold after folding according to the human body structure ups and downs,

full of rhythm, also add artistry for the design.

#### 4.5 Final outfits

When designing clothes, designers use different ways to deal with the surface of the human body, such as flaps, forks, folds, folds, cushions, etc. The garment is endowed with an independent three-dimensional effect, and this exquisite structure of clothing can shape the body shape, beautify and change the human body appearance.



Figure 8. Final outfits

## 5. Conclusion

Throughout the history of fashion, the bridge between ballet and fashion is not only built on ballet shoes, gauze skirts and corsets, but also on the elegance of ballet dancers and the development of the fashion industry. When the ballet becomes the symbol of graceful body, the liberation of the body binding becomes the slogan of freedom and elegance, the development of fashion is attached to the dance soul of the ballet. Designers explore the relationship between the human body and clothing, through continuous experiments, development and research, continue to challenge the unprecedented production process. Fabric re-creation provides a broader creative space for designers, so that they can more incisively and vividly display their own design ideas, give full play to the plasticity of fabric, and create a new experience of clothing creation effect.

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