## A Study on the Modern Fashion Design Applying Light and Rays

## -Focused on Futurism and Russian Rayonism -

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The essential meaning of clothing is expressing the ultimate ideal inside a time, society, and culture, and it is based on a human being. Methodological approach to that meaning begins with some assumptions: First, clothing's own particularity needs to be defined. Next, clothing is a type of reality formed artistically. Finally, it is a particular function art that includes strong cultural features. Especially, the social and cultural background in 19th or 20th century brought development in human being's aesthetic consciousness continuously, and developed science and technique in that period provided good tools for expressing the new aesthetic consciousness. In this study, light and rays are examined to see the way how essential elements in art make changes not only in fashion but also in the aesthetic consciousness across the whole field of life, and aesthetic consciousness in this 21st fashion will be illuminated in a fresh way.

Light is defined in two ways. As a general meaning, light is a prerequisite for our activity, an absolute being for our sight, a metaphor of the truth and a power for other materials' activation, and an objective principle of beauty. As a symbolical meaning, light has often been used as artistic objects of expression, and has been recognized as a new being for a liveliness provider to all the things around us occupying time and spaces. Immaterial stuff, light, produces new visual images, different from natural or artificial things. Immaterial three-dimensional constructions were made by refracted rays and immaterial art appeared making three-dimensional images with laser-light. The interests in light and rays began from the field of painting as a new optical revolution since the Renaissance period, and now it is a foundation for the creativity for art. In the period of Renaissance, Giorgione and Tiziano Vecellio tried to express light effectively in order to give unity to the picture, so they created the effect of the dazzling light by removing underpainting. Artists in the baroque period always observed the nature with new viewpoints, and tried to find out and express the continuous harmony of colors and light. They pursued various effects of light in individual and systematic ways. This view of

painting linked to Eugene Delacroix and it affected the impressionists in 19th century. Impressionists regarded that the change of sun rays caused the nature's subtle harmony. They expressed diversely on the canvas according to the variation of the natural light, Neo-impressionism was from impressionism and it took a systematic and individual movement. Neo-impressionist produced "the study on the rays and color" and made a new theory about optical mixture, divisionnisme by dividing and juxtaposing colors. After that Italian and Russian Avant-Garde artists led others to pursue light and rays again in the earth 20th century, regarding it as their aesthetic consciousness. They are Italian futurism and Russian rayonism. At the beginning, futurists, for example, Giacomo Balla, Umberto Boccioni, pursued light and rays like impressionists did. In other words, they wanted to shape their dynamism by presenting light with divisionisme. Later impressionism and futurism advanced in different ways, though they started with a common goal for light and rays. The early futurism artists expressed dynamism by mutual infiltration. Their divisionisme can't be measured scientifically, but it expresses light's movement by intuition. They prefer artificial light like electricity than the natural light. Futurists' theory of division bases on the movement of light, which can be accepted with intuition and it conveys the electric dynamism. A street lamp can be an example for that theory. After that, futurism changed to Cubo-futurism and developed in Russia. It connected with Neo-primitivist that is arisen from the dynamic harmony of colors and lines, and it is accepted as a special style, because Italian futurism and French Cubism were revised. Kasimir Malevich was the leader of cubo-futurism and it affects Russian rayonism. Rayonism was unique style not only in Russia but also in the whole world, and it was popular in a short period. Mikhail Larionov made it out and his wife Natalia Goncharova developed it. One essential feature in rayonism is "crossing of reflected rays from various objects". Most of them are done with lines and colors. "Rayonism manifesto" in 1913 in Moscow contains deep recognition about the relationship between the space and objects. The purpose of rayonism paintings is creating new space forms by the cross of reflected rays from various objects. Rays are always expressed with lines and colors. The essence of painting is harmonizing the colors in a best way to emit the strength through the interaction among the colored parts. According to the Larionov's rayonism, artists should give up various materials in a world of vision. Instead, he insists that they should express the crossing rays, reflected from objects. Rayonism is affected from cubism and futurism and it is interested in the relation of parallel rays or intensive color rays. Larionov's strong character and his insight succeeded to Kasimir Malevich and Vladimir Tatline. This fact did an important role in blooming Suprematisme and Constructivisme.

The pursuit of light and rays in 19th century and the early 20th century reflected in the fashion as well as in the art. The interest in various colors and fabrics that started from the age of impressionism in 1870 suggested a new stage for the modern fashion

development. In 1870s, synthetic fiber was improved by Hilaire Chardonnet and viscose rayon was invented by Cross and Bevan. The popular fashion in that period required many fabrics, so it promoted textile industry, and the elaborated machine made fabrics to be seen differently under light and rays. They are taffeta, brocade, satin, velvet, damask, and silk, and they came to be fashionable. That fashion shows us that the atmosphere of impressionism in art is related to the fabrics and it still continues in modern fashion with light and rays. Modern fashion has four kinds of example, applied light and rays. One fashion expresses bright light like sunrays, which appeared in the period of impressionism making the plein air important. Another fashion shows the light's dynamic features and space sense by mutual cross of the lines and volume different in the degree of clearness not in brightness of the objects. This corresponds to the futurists who try to express dynamism with artificial light and rays. Another fashion contains the theory of divisionisme that impressionists and futurists insisted. Glittering form of light is divided in small spots in it. The other one is expressed by rayonists. Reflected rays from selected object forms new spaces by mutual crossing, and lines and colors are mainly used for expression. Thus, pursuing light and rays has been seen in various works of art since the Renaissance Age in the 16th century, and they still appear in modern fashion design in the 21st century.