

Exploring the Scientific Research in Religious Painting Works in Renaissance Period-Taking Durer's Etchings *Knight, Death and Devil* As an Example

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Abstract. The development of Renaissance painting evolved into the development of humanism and the in-depth study of science and nature under the changes of the times. While getting rid of religious dogma, artists were finally able to look at the world from a rational perspective. Continuous exploration and research not only made Germany open the prelude of modern art, but also stood at the forefront of the historical stage together with other regions of Europe. Among them, the talented artists represented by Durer with the spirit of innovation and exploration raised the original social status of artists to an unprecedented height. The spirit of humanism spread freely in the European continent, and the creation of art nouveau fanaticism, accompanied by the artist's distinct and strong personal artistic color, became the most powerful proof of the attack on dogmatism in painting, and had a profound influence on European modern art. This paper will introduce the transformation of religious art painting during the Renaissance from the scientific direction and it proves that adding scientific innovation to religious painting has brought great influence on later generations.

Keywords: Durer; Renaissance; Religious art painting; German Renaissance.

1. Introduction

Religion and art belong to the social superstructure and social ideology. Art originates from human social life, and religious activities belong to the content of social life. Art has been closely associated with religion since its birth [1]. The Middle Ages in Europe was an era of theocracy, and art and religion were inseparable. Religion took a negative attitude towards the bondage of human nature and real life, thus making the works that originally reflected people or people themselves become the victims of serving the religion and the Pope. Artworks lost the soul of expressing the true feelings of human nature, as did painting works [2]. Although the form and content of paintings in this period were relatively simple and lacked innovation and creativity, they laid the foundation for the painting art of the Renaissance.

In the early 15th century, Germany was deeply influenced by feudalism, and the backward economy and politics made the development of art slow. The Renaissance spread among German thinkers in the mid-15th century, many of them in the arts and sciences. The rise of the Renaissance came largely from a renewed interest in classical learning and was also an important result of rapid economic development. The most prominent works of art in the German Renaissance are the intricate combinations of wooden altars with doors, painting, sculpture and architectural carpentry. They are not only the symbol of the gradual transition from the Gothic style to the Renaissance of modern art, but also the threshold reform of the most fundamental transformation. Wood, especially lime, soon became an easy-to-use material for the production of religious art. Painting occupies a large space in the works about this period. The painting of this period is mainly a religious subject. It has been more and more liberated from the religious decorative paintings of the Middle Ages. In these new religious paintings, artists with humanistic thoughts re-examined God by centering on people, re-established the position of God, and re-revealed the connotation of God. They wanted to change and deify nature, strip away the decaying materials that covered nature, and make nature closer to the sacred image. A large number of artistic creations combined human emotions with religious emotions [3]. Renaissance painting artists added details to the creation of figures to make their works more intuitive. In religious paintings, not only does the figure have clarity and visual impact, but the background of the painting

is also close to real life. In the Viennese Genesis, "Joseph in Egypt" is depicted in a very clear background, with buildings rising in the background, in transition from purple to mauve, melting into a gleam of light [4]. Therefore, during the Renaissance, religious art could not be completely abandoned. On the contrary, it was presented to the world in an innovative way.

During the Renaissance, artists began to conduct more in-depth research on painting materials, techniques, perspective, anatomy, etc., and art, science and nature. They broke through the fixed composition mode of painting, and innovated the creation and details of painting by rational use of scientific means. At the same time, religious paintings broke the convention and re-entered people's vision. It is because of the inherent thinking mode of medieval painters for religious figures that all the figures they express are too one-dimensional and one-sided. Religious paintings in the Renaissance paid great attention to the inner spiritual connotation of art, combining technique and spirit, image and emotion perfectly. It broke the shackles of Christian theology, awakened people's self-consciousness, raised the spirit of striving for the creation of earthly happiness, and laid a solid foundation for the emergence of Enlightenment thought later [5]. Such a true description could not be properly expressed in the religious paintings of the Middle Ages, and even the application of architecture and intense contrast of light and shadow can be seen everywhere in the paintings of the Renaissance, all of which come from the artists' keen observation and study of things. The reason why the author chooses the religious art painting of this period as the research object is that firstly, the origin and development of religious art painting have never been interrupted, and the data for people to study from this point of view are far-reaching and of great reference significance. Secondly, the Renaissance period is a major turning point in the history of art, which has a great influence on the painting of later generations. Engels once praised the Renaissance as "the greatest and progressive change that mankind has never experienced", "an era that needed giants and produced giants". In particular, the aesthetic theory formed by the Renaissance painting art spread and developed in Europe, forming the most systematic, rational and complete aesthetic system, which played a role in promoting the development of related art in Europe [6]. Therefore, starting from the religious painting in the Renaissance period, the study of these relations can have a clearer cognition and understanding of the development of religious painting in the Renaissance period, and is more beneficial to the learning of the history of art painting. The art of the early Renaissance heralds that the European realistic art with realistic techniques and style is about to enter a new height. Therefore, people have to look at the unprecedented transformation of religious painting in this period from the perspective of development and progress. The remarkable achievements in science, nature and humanity are also worth people's deep study.

2. Characteristics of Durer's Religious Paintings

Albrecht Durer was one of the greatest painters of the German Renaissance and a pioneer at that time. He was good at watercolor, sculpture and oil painting, and involved in architecture, mathematics and geometry. His etchings are the most remarkable. Due to the influence of family factors, it laid a solid foundation for his painting career in the future. He learned not only to make altarpieces, but also to carve illustrations for print publications. During his study in Italy, Durer was deeply influenced by the trend of the literary and artistic Renaissance and his artistic style changed. Durer's etchings were appreciated by the aristocracy, which made the etchings develop rapidly and become popular in European countries. Durer had extremely high artistic attainments in the making of etchings. His works were exquisite, and his figures were also of classical beauty. His technique of etchings had an immeasurable influence on the later generations. Most of the themes of Durer's etchings come from religious stories or mythological themes. Under the background of the Enlightenment era of relatively strict Christian dogma in the Middle Ages, it had a profound influence on the development of humanities, economy, political science and other aspects. Thanks to the Renaissance, the era when artists could only express themselves through the rules of the church was left behind. After undergoing the baptism of liberating minds and putting people first, religious paintings have become

more close to people's real life, and artists can understand and empathize with the previously inaccessible rules after transforming them, such as Durer's paintings. In medieval thought, almost everything has a counterpart, or even a higher representation, which is symbolic [7]. This so-called universal symbol is actually a kind of "eternal pursuit of metaphor". Germany in the 16th century was full of contradictions and disasters. People's dissatisfaction with the rule of the church and their fear and agitation for the troubled life had forced them to seek another secret paradise in such a social environment. For this reason, in Durer's religious paintings, he paid special attention to the spiritual world of the pictorial images. Rigid rules existed in the multifarious religious rules and should not appear on the free soul of human beings. This kind of interrogation directly to the soul makes Durer's works full of human glory.

3. The Knight, Death and Devil in the Science

Durer's three etchings -- *Melancholy*, *Saint Jerome*, *Knight, Death and the Devil*, are his three representative works of printmaking art. The common feature of these three prints is that the images deeply contain the philosophical content of understanding the times. Although the three prints have no organic connection in the plot, the theme of the images is the same. They all reflect the artist's firm to seek the justice of human cause and the truth of nature, and the images have profound realistic features. Among them, the *Knight, Death and the Devil* is the most philosophical meaning. From the picture, he describes the scene of a knight meeting the devil and death in the wild. The painter alludes to the situation of the religious reform in Germany with the help of an image of religious literature.

In the center of the picture is a heavily armored knight in a helmet, powerful and calm. With his helmet and armour, sword and spear in his hand, he walked into a dark forest, accompanied by his horse and his faithful hound. He did not notice a horned death riding a thin horse suddenly darting out of the forest. With an hourglass timer at the head of a venomous snake, Death had a hideous face that seemed to tempt and hint at the knight. Behind the knight came a devil with a poleaxe. Death stood in his way, and the devil tried to bring him down. There was an unspoken contrast between Death's horse and the knight's steed, and it was clear that these figures represented evil, perishable time and death, but the knight ignored them and marched on. His firm step meant fortitude. He did not even notice the bones and skeletons lying on the ground. In this knight's mind, there was only one goal, and that was the huge castle looming in the distance on the top of the hill, perhaps the knight's final destination.

The three figures appear to be undisturbed by their surroundings and are full of dynamic tension. There is no denying that the image of the knight implies a certain reality. Durer also conveys the firm and powerful spiritual power through the body language of the knight and further shapes the image of the knight through the interference formed by death and the devil. At the same time, in order to emphasize the meaning of the painting, Durer also deliberately made the atmosphere of terror through the skulls on the roadside, the running lizard, and arranged the hunting dogs under the horse of the knight. These images as a backdrop for painting expand the meaning of pictures in a sense.

In the picture, people can see the beautiful and tight muscle lines of the horse running on the horse of the knight, and even the texture of the muscle direction is clearly visible. Renaissance artists in the infinite pursuit of painting things can be close to real life, so the grasp of details become stricter. The hounds follow the knights at their heels, their windward fur flowing and obedient. The manes, which fit into the human beard, are so layered that the viewer can even feel the warmth of touching them through the painting. The knight's eyes are solemn and firm, which is particularly striking in the picture. His face is a little old and tired after the baptism of time and war, but the description of the facial muscles adds a delicate sense to the figure itself. The outline of the armor is enough to show Durer's excellent observation ability. The helmet worn by the figure seems to be shining with the cold silver light under the irradiation of the cold moon, and the knight is plated with piety.

Durer portrays death walking with the knight as a zombie that is limping and rotting. The skull that has lost its fat cover and the human muscle tissue that has not completely deteriorated benefit

from Durer's research on anatomy. However, the construction that should be shown on the human body is arranged by him to the expression of death, and the anthropomorphism of death is Durer's innovation on the original religious culture. For depictions of the same mount, Durer uses a contrasting approach. Death's mount has a drooped head, dull eyes, and a tangled mane. Death's hourglass records the passage of time, suggesting that the knight's death is imminent.

What is striking is that, unlike the image of the devil in the public mind, Durer shaped the devil into a monster with a long nose, curved horns and a hairy face in the *Knight, Death and the Devil*, which is based on animals, plants and people themselves. It holds a spear in its hand, and a long scythe shaped ornament on its head has the same meaning as the scythe in the concept of Death. Echoing the whole painting, there is a skull on the ground in the direction of progress. It is self-evident that the knight is heading towards the ominous land.

The knight moves through the scene, looking away from the threats that lurk around him, seemingly disregarding them. His determined state, signifying fortitude, is therefore often seen as a symbol of courage. The fort on the distant hilltop symbolizes tenacious faith; the hound in the picture symbolizes loyalty and passion; the point of the knight's spear is decorated with a fox's tail. Foxtail is a common amulet, but it has cunning connotations in ancient Greek legend. Durer used subtle changes of lines to show the texture of different objects, and used the technique of contrast between light and dark when describing the picture. In the distance of the picture, the castle bathed in the sun, knights, death and devils were shrouded in the shadow of the mountain. The contrast between sunlight and darkness, the knights and mounts reminiscent of the popular equestrian statues of the Renaissance, Durer "erected" a monument to the praise of great chivalry.

This painting is full of Durer's ingenious conception of innovation in both plot restoration and combination. The significance of scientific design carried in the painting has been the focus of people's interpretation of Renaissance painting for a long time. In Durer's paintings, he did his best to perfectly present the exploration of human nature by combining religious stories with reality, and handled the relationship between time, characters and space in a very harmonious and intriguing way. His superb observation ability and exquisite painting technique provided a powerful copy for later generations, and also had a profound influence on the later artistic trend of Renaissance art.

4. The Influence of the Development of Science in Religious Painting on Later Generations

In the Renaissance period, rationalized religious beliefs and secularized social tastes were combined under such special historical conditions to bring about the products of the times, which formed a new artistic direction in the development history of fine arts. The art in this stage is both harmonious and contradictory. It leads to the strange transformation of belief and the fierce collision between reality and humanity. It is not only an ancient and mysterious religious expression but also the starting point of humanistic thinking. The development of painting is an inevitable product of the times, and religious painting plays a transitional role in the development of new forms of painting. It gradually emancipates itself from the shackles of religious dogma and makes painting return to the painting itself. Painting creation is inseparable from artists' thinking about the painting itself. The creation passion is based on the more secular painting of life. Rational data thinking is the exploration and respect for things. Therefore, religious painting in the Middle Ages ran counter to the original intention of artistic creation and could not survive for a long time. Renaissance artists rebuilt the identity of life and rational respect, and in a strong humanistic atmosphere, they demonstrated individuality and freedom and returned to humanity. These great achievements were based on the strict anatomy of the time. At the same time, faced with a series of disasters and natural life and death, people began to suspect that everything preached by the church could not save their living situation, so they took the initiative to explore the reasons behind natural phenomena, observe, analyze and solve problems with rational thinking, and pursue the rigor and accuracy of thinking [8]. Just as Durer's works are still praised, reproduced and copied by people hundreds of years later, it is not only

a simple pursuit of art but also a reflection and thinking of reason by later generations. The transformation of new forms of religious painting also played a role in publicity and dissemination to a large extent. Although religious painting in the Renaissance gradually weakened the impression of the engraving of religious dogma, it was not easy to completely eliminate the influence of religion on people's beliefs. Even with rational religious culture, people's spiritual world still needed the support of religious tradition. The artist began to realize that "faith is not the grace of the existing church," and that only through pure and pious faith can "eternity be achieved." [9]. Therefore, the scientific innovation of religious painting affects people subtly and cautiously. At the same time, the rational transformation of religious painting integrates doctrines, figures and stories, which has become a unique religious art. In order to achieve "reproduction" and "realism" in the picture, painters in the Renaissance combined art and science [10]. It also provided a wide free imagination space for the later non-religious painting appreciation, with a high aesthetic value and artistic promotion.

5. Conclusion

There is no shortage of revolutionaries in the Renaissance, and artists are constantly exploring and pursuing, so the painting styles of the Renaissance are varied and endless. However, in terms of the essence of painting innovation, scientific exploration is the anchor point for artists to shift their artistic attention. The breakthrough of painting techniques and scientific research is the most outstanding contribution of Renaissance painting art without breaking away from the original continuous narrative style and the elaboration of substantive story content. Although religious painting faded out of the mainstream stage in the art painting of the later generations, the artists' bold attempts and innovations in the religious painting of that period will not be wiped out in the historical process, which is the concentrated expression of the experience of the external world in the works of art. They exist in the personal experience, and it is a manifestation of the experience of the inner spiritual world and the sublimation of the field of the human soul. Just as in the *Knight, Death and the Devil*, Durer regarded the religious war in the real world as one with the struggle of his spiritual world, and regarded the endless terror events as a kind of spiritual and physical experience, "to find the direction for his moral code". The reformation of religious painting made Renaissance painting release its new rhythm of life within its form. As the basic element of scientific painting under the influence of rationality, the painting contains the spirit of the artist's initiative and creation. Science promoted the development of Renaissance painting, fully affirmed the subjective creativity of human beings, and showed its distinct special evidence of the times. It broke and exceeded the original religious painting works, and played an immeasurable role in the development of painting art in the later generations.

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