

The Relationship between Mathematical Thinking and Artistic Creation Through Albrecht Dürer's works

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Summary

Research launched the idea that science and art together represent weft and warp cohesion in the fabric of the human mind, and also the two sides of the coin of life, which reflect the identity and determine the value. The core idea of the research depending upon the discovery of exciting mathematical relations included through one of the most famous paintings of Albrecht Dürer by mathematicians. The main problem of the research is an attempt of reading and interpretation of this remarkable and dominant presence of the complex mathematical relations in a clear and explicit way in some works of Albrecht Dürer and explore the depth of this recruiting elements in the context of the artistic work to clarify the idea and enrich the artistic value of the work. Research aims to understand and absorb how to recruit simple and compound mathematical elements in the artistic work as well as to determine the recruitment of scientific elements in the work of art as decorative units, and the impact of scientific credibility to the artistic attraction by an attempt to explore techniques and mechanisms that employed purely scientific expertise in the branches of the different knowledge to serve art without prejudice to the concept of art and mathematical value and assumed that the elements of mathematic in the works of Dürer not mere random elements, but tools with the idea of expression and express opinion. The manner of dealing with mathematical elements in artistic work of Dürer based on scientific methodology understandable and clear through known Techniques and certain tools along with assuming a controversial conflict and the problematic relationship between mathematical thinking and artistic creativity and any of them did not lose or hide the other, both independent and has influential presence in the other in the same time. Research depends on the analytical and descriptive approach in dealing with the work of Dürer consistent with the idea of seeking the curriculum of historical chronology and historical development of the idea of research in the works of Dürer. Research based on several axes in attempt to cover its aspects and to achieve its objectives. The artist, historical period and artistic era to which he belongs, and his most important works, then analyze the mathematical thinking and mathematical elements through the works of the artist. After an analysis of artistic creativity and artistic elements and decorative units in some work, then eventually discussing concepts of the relationship of artistic creativity and mathematical thinking through one of the most important paintings of Dürer- Melancholia (depression) finally, the suggested designs approached analytically.