THE RELATIONSHIP OF ART AND MATHEMATICS AS TWO DISTINCT DISCIPLINES

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Mathematics and art are perceived as two distinct disciplines- one that was governed by logic, numbers, quantity and accuracy, while the other, was expressed with imagination, colors, and artistry. On the other hand, these two disciplines are more interconnected with each other than we might think.

The astronomer Galileo Galilei in his II Saggiatore wrote that "The universe is written in the language of mathematics, and its characters are triangles, circles, and other geometric figures". According to his interpretation, artists who want to study nature and life must first understand the language of mathematics. Meanwhile, mathematicians who try to comprehend art use geometry, figures and analogy on explaining the in-depth meanings of each masterpiece.

Some scholars have presented various definitions of mathematics and its connection to art. The mathematician Jerry P. King illustrates mathematics as an art, stating that "the keys to mathematics are beauty and elegance and not dullness and technicality". He also emphasized that beauty is the encouraging factor for mathematical research. Mathematics can be distinguished in many forms of arts, such as music, dance, painting, architecture, and sculpture.

Kaplan (2022) explained that just as art is obsolete, so is ancient mathematics since it is not subjected to changes. Just as art is preserved for a longer period, so is mathematics making it an art rather than a science.

To conclude, the interconnectedness of mathematics and art are multifaceted. Several mathematical ideals and concepts have been a foundation for many different forms of art. On the other side, art opens gates on people to appreciate and experience mathematical beauty. From the various geometric forms, shapes and proportions, art illustrates how apparently two distinguished fields can inform and inspire one another.

Finally, both art and mathematics seek to provide aesthetic beauty whether through accurate calculations or artistic innovations. Their connections show us that though they have distinct features, they can still have complementary ideals in which as combined can enrich the understanding of the world.

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