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Author: Mrs. Vanja Malloy
Courtauld Institute of Art, United Kingdom

COSMIC ART: PAST, PRESENT, FUTURE

Abstract

Many people mistakenly still think that the fields of science and the arts are distinctly separate. However, this could not be further from the truth, especially when examining artwork from the 20th century. This revolution within the arts can be loosely understood to have begun in the 1910s through 1930s, a period that experienced a rapid development in science including Minkowski's fourth dimension of space-time, Einstein's 1916 Theory of General Relativity and the acceptance of space as curved or non-Euclidian. Further, it resulted in new cosmological theories such as the first model of an expanding universe introduced in 1917 by William de Sitter. These scientific developments had substantial philosophical implications, which were absorbed by the avant-garde, and resulted in the 1936 Dimensionist Manifesto. Seeking to internalize the developments of modern physics and astronomy within modern art, this manifesto was widely endorsed by the most prominent figures of the avant-garde such as Marcel Duchamp, Jean Arp, Naum Gabo, Joan Miró, László Moholy-Nagy and Wassily Kandinsky. Marking that astronomy was the main source for this cross-disciplinary interest, the Manifesto called for the creation of an absolutely new art: 'cosmic art' in which a total conquest of the art of four-dimensional space was achieved ('Vacuum artis') and rigid material is abolished and replaced by gaseous materials. This paper will trace the evolution of this radical reduction in the use of physical matter to form sculptural volume in space and how this interest in modern astronomy has had a continued presence within the arts, especially in the artwork of the 1980s. By starting off with an overview of Gabo's constructions from the early 1920s, Moholy-Nagy's works with light and Calder's mobiles, I will contextualize a movement to liberate modern sculpture from the constraints of an enclosed and static form while explore the ideas of modern physics and astronomy. The main focus of this paper will be on how this early 20th century interest in astronomy has been adapted into and inspired the artwork of the 1980s such as Mario Ramiro's *Gravidade Zero* (Zero Gravity), 1986 and artists such as Tom Shannon and Vassilakis Takis. Through this discussion, I hope to give substance and depth to the development of this artistic movement, which joins together art and astronomy, but further still, to reveal potentially new avenues of future growth within this inter-disciplinary relationship.