

Physical time - relative time - biological time

Prof .Dr. Essam Mohamed Mahfouz Hussein

emm01@fayoum.edu.eg

linkedin.com/in/essam-mahfouz-89ba371b



Physical time is the time measured in hours, which moves forward regularly, and is represented in the expression of the different times of daily time. Physical time has passed through two phases or two scenarios: Newton's absolute time Newton Einstein's relative time Einstein The pivotal difference between them is that the absolute perception returns matter to time, i.e. it perceives matter or imagines it through the concept of time, while the relative perception does the opposite, i.e. it perceives and perceives time through matter and physical time is the most accurate and precise form possessed by the human mind, and it developed with physics and turned into a coup. Essentially with the emergence of the theory of relativity, which revolutionized all scientific and artistic circles in the twentieth century and led to the emergence of many artistic trends that were based on scientific foundations that benefited from physics, such as taking advantage of the theory of light that led to the emergence of color theories, and benefiting from the theory of relativity that led to the emergence of The motion picture that paved the way for the emergence of cinematic art, and with the development of physics and mathematics, digital art appeared in the late twentieth century.

Thus, we find that physical time is divided into two types: -Absolute time - Relative time. Absolute time: Isaac Newton (1622-1727) imagined that time is an absolute reality, and he emphasized in his famous book "The Origins". Principals Which was issued in 1687 to the fact that absolute time by its nature flows steadily without having to do with anything outside it, and that time is an infinite thing that passes and passes at the same rate for any observer in any location in the universe. Simultaneous (which takes place at the same time) in separate locations of the place and this concept had a role in changing the concept of art and its directions and was the beginning of the artist's interaction with new vocabulary and new entrances in art. At the same time, although it is flat through multiple perspective angles, the futuristic school also benefited from the feature of synchronicity, especially in the field of

cinema. Albert Einstein (1879-1955) came up with the theory of relativity that turned things upside down and changed the physical idea radically and opened a new page in The history of science at the beginning of the twentieth century was based on several foundations: - The theory of relativity made time an inseparable dimension from the three dimensions of space, length, width, and height. Time- space- The ratio of time is made relative after it was absolute, and time in relativity becomes long or short according to two things: The first is speed, so time slows down as the speed increases. The second is mass - the distance is no longer the distance between two purely spatial points, but rather the distance between two moving points or two events separated by a period of time. Relativity denied the property of the irreversibility of time and events. Events exist so that their temporal sequence can be assumed in the opposite direction, when the human mind became able to perceive different systems of temporal order. Einstein's theory had a reflection in various scientific, philosophical, literary and artistic trends, where the laws of motion were extremely important in the emergence of relativity in art, and the most prominent factor in it was the replacement of the third dimension (which is the depth in painting) with the fourth dimension, and the fourth dimension of the image is the temporal dimension, the dynamism of life and things requires That the photographer take into account this temporal dimension of the things happening, and that his works reflect this dynamic that resulted in the emergence of multiple creations through which the artist was able to add the actual movement in the plastic art. Actual as event art Happening and performance. Biological time: Biological time is the internal time or biological clock Biological Clock As scholars call it. And it is not limited only to man, but we see it assigning unaware organisms specific time periods, through which the living organism can know the beginning of the day from its end and its evening from its morning, and what it is of time through biological processes such as hunger, thirst and sleepiness... Every creature He carries with him his time in which he controls his activity and determines his time. There are several factors in the artistic work that affect the latent time inside the human being, such as sound, light, movement and space. ., and affect his biological clock, making it give false measurements, and the artist plays on the different measurements of this biological clock to confirm some of the meanings and emotional states that he wants to communicate to the forum, which depends on the time of the viewer receiving the artwork. The biological clock is a relative standard clock that differs from one person to another as a result of his experiences, memories, repercussions, life system, influences surrounding him, place factors and psychological preparation that make the meeting feel long or short .