Perspective on Golden Ratio (φ)

Faezeh Moosavi-Movahedi *

The golden ratio or the Phi number, of 1.618 is a proportion known since antiquity to be the most aesthetically pleasing and it has been described and studies by many scientist and artists. The properties of Golden ratio can be instituted in the pattern of mathematical series and geometrical patterns, e.g. golden rectangle, triangle and spiral and they are known as the base of nature construction and the most pleasing to human visual sensation and not limited to aesthetic beauty. Phi has an important role in nature construction; this number is the reason of the symmetry and the best geometrical arrangement. The spiral galaxies whirl with a golden spiral superimposed; the orbital data of all planets, asteroids, moons and rings in the solar system are based on the golden ratio. We can find this ratio in plants phyllotaxis and structure; in animal's growth patterns and genealogy; in human body ratio, health and beauty. We can follow the Golden ratio in the past architecture, e.g. in pyramids, Parthenon and Persepolis; also, Renaissance art is very important in this field. Persian-Islamic architecture and art we can find this unique mathematics the reason of beauty and strength. This paper seeks to represent a panoptic view of the miraculous Golden Proportion and its relation with the nature, globe, universe, arts, mathematics and science.

Keywords: The Golden Ratio, Phi Number, Fibanoci, Aesthetics, Balance, Symmetry, Geometry.

* Corresponding author: Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Iran, Email: fmoosavi@ut.ac.ir