



“The Golden Ratio”

Lodge Presentation:

The following short article is written with the intention to be read within an open Lodge, or in fellowship, to all the members in attendance. This article is appropriate to be presented to all Fellowcraft and Master Masons. Fellowcraft Masons should be invited to attend the meeting where this is presented. Following this article is a list of discussion questions which should be presented immediately following the presentation of the article.

The Golden Ratio

As we ascend the winding stairs we are admonished to be lovers of the seven liberal arts and sciences. Throughout the Fellow Craft degree, we are reminded of the importance of geometry. It is found on the staircase, in the beautiful “G” lecture, and in the charge. We are told it has many useful applications from the laying out of armies to astrological observances. We eventually equate Geometry with the Divine. Today it seems strange that we take the mathematical principles of geometry and give them religious significance. Did we as Masons at one-time reverence Math as Deity?

The answer to this lies in the Enlightenment and in a very special mathematical concept. During the Age of Enlightenment men thought there was one universal concept that explained the mysteries of the universe and they had found it. They had rediscovered a secret lost for thousands of years. A secret known and revered by the ancient Greeks. A secret found in Asia, South America, Polynesia, and the Mediterranean. A secret that explained everything. A secret that bound all things together. The answer was found in a Mathematical ratio.

The Golden Mean, Golden Average, Golden Ratio, Golden Number, Divine Proportion, or Divine Number all names for that all powerful secret. Numerically it is expressed as 1.6180339887498948420 ... or

1.618 or phi. We find the Golden Ratio when we divide a line into two parts so that: the whole length when divided by the long part is also equal to the long part divided by the short part. The magic of this number though is not what it is or how it is obtained but where it is found.

When man began to unravel the secrets of the natural world during the Enlightenment he found this proportion everywhere he turned his attention. The same ratio that described a seashell, the way sunflower seeds are arranged in the flower, pine cones, and algae also was found in musical scales, guitar strings, the orbit of the planets, and the human body. Honeycombs in beehives are laid out according to this ratio and were noted for their strength. Generals using the same formula to deploy troops for battle also found that like the honeycomb the formation was strong and very hard to penetrate.



“The Golden Ratio”

The Greeks and Japanese had used this ratio in both art and architecture. The Parthenon contained many examples of this ratio, Japanese pagodas, and the great pyramids all seemingly laid out according to the same plan. Ancient Gardens throughout the Orient are almost perfect examples of this proportion while in the West De Vinci's Vitruvian Man is almost perfect to the ratio. The human mind is hard wired to see things that conform to this ratio as aesthetically pleasing. Marketing companies use models whose facial proportions are as close to the Golden Mean as possible.

Simply put our Brothers thought they had stumbled onto the secret of creation. By using Geometry, he could explain Deity's ordering of all things. In his search for answers one idea kept popping up. This idea was so important to rational man that almost all books published between 1550 and 1770 show these proportions almost exactly within 1 millimeter. The concept of "The Music of the Spheres" was debated It could not be coincidence that musical scales, pianos, guitars, and the air vents on drums all worked under the same law as planetary orbits, the layout of the solar system and spiral galaxies. It had to be the handy work of the Divine.

If we understood Geometry, we understood creation. If we understood creation, we understood God. Therefore, Geometry and Deity were linked. This ratio found throughout nature when applied to architecture, art and even medicine made it both more beautiful and stronger. To our early Brothers it seemed they had found the key which opened so many secrets.

Written by W. David Ritchie for the Education Committee
Grand Lodge Free and Accepted Masons of Wisconsin



“The Golden Ratio”

Discussion Questions

The following discussion questions are written to be presented immediately following the presentation of the topic above. There is no right or wrong answers to these questions, they are designed to promote thought and engage all the members that are present in conversation. Take care that the presentation of the topic and the discussion questions does not exceed 30 minutes. The presenter can present any part of the questions below, or any additional questions, he feels is appropriate.

- In which places in our ritual is the divine connected to geometry?
- Where is the divine connected with architecture?
- How has science impacted Masonry through the years?
- What are other examples of the Golden Ratio that you can name?
- How is geometry used in everyday life?
- Do you see the hand of Deity resting upon Masonry? Where?
- Do you think we will ever discover a universal key?
- The Fibonacci Sequence ties directly to the Golden ratio (Take any two numbers in sequence and their ratio is very close to the golden ratio) as does the Vitruvian Man. In what ways does the Dan Brown perception of Masonry fit with the Fellowcraft degree? How does it differ?