

# THE GAVEL

#### MONTEZUMA LODGE NO. 1 AF & AM

431 Paseo de Peralta Santa Fe, New Mexico 87501-1958 Just west of the Scottish Rite Temple

Phone: 505-982-0971 - Email: hiram@montezumalodge.org

Volume 19 Issue 4

"The Oldest Masonic Lodge in the Rockies" Organized May 8, 1851

April 2019

#### From the East...



## Who was King Solomon?

Solomon was the second son of King David and Bathsheba. His name means "peaceable." His alternative name was Jedidiah, meaning "beloved of the Lord." Even as a baby, Solomon was loved by God. Now, Kink David was the young shepherd who gained fame first as a musician and then later by killing the giant "Goliath". David was also the second King to reign over Israel and Judah.

King David wanted to build the Holy Temple in Jerusalem as a dwelling place for God However, Nathan the prophet told King David that it was not his destiny to build the Holy Temple because he had spilled much blood and the questionable means of getting Bathsheba. His son Solomon would build the Temple. Nonetheless, King David wished to participate in any way he could. And so he instructed Solomon in the building process and procured the necessary materials for the construction.

A period of four hundred and eighty years had passed since the Jews had left Egypt and had set up the Tabernacle in the wilderness, and in King Solomon 4<sup>th</sup> year of reign he undertook the construction of the Temple. He chose a site on the top of Mount Moriah. This was the same spot where Abraham had once proved his readiness to offer up his dearly beloved son in obedience to God.

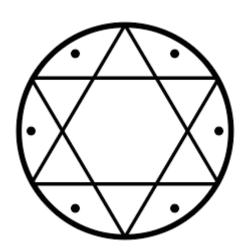
Tens of thousands of men were needed to perform the many tasks required for an undertaking of such gigantic proportions. Men were sent to Lebanon to cut down cedar trees. Stones were hewn near the quarries. In the valley of the Jordan the bronze was cast. Craftsmen were brought in from Tyre to help perfect the work. Ships

set sail eastward and westward to bring the choicest materials for the adornment of the House of God.

For seven years the work was unwearyingly pursued. The Temple rose as if by magic. The sound of no hammer nor of any iron tool was heard on the spot, for iron is a reminder of the sword, the symbol of strife and bloodshed. The stones were cut to the required shape in their quarries and then brought up to Moriah, there to be fitted together.

The Temple was primarily a house of worship and a monument to God's greatness. It was the only place where Jews were allowed to sacrifice animals to God.

The most important part of the Temple was a room called the Holy of Holies which is Kodesh Kodashim in Hebrew as we heard in last month's talk. Here the two tablets upon which God inscribed the Ten Commandments at Mt. Sinai were kept. The Babylonians destroyed the Temple in 587 BC. Under the command of King Nebuchadnezzar.



Seal of Solomon

#### **Regular Meetings**

RECURRENCE
First Monday
Fourth Wednesday
Second Tuesday
Third Tuesday
Second Wednesday
First and Third Thursday

EVENT
Regular Communication at 7:30 PM, Dinner at 6:00 PM
Property Management Board at 6:00 PM
Regular Communication at 7:30 PM
Regular Communication at 5:30 PM

Regular Communication at 7:30 PM, Dinner at 6:30 PM Regular Communication at 7:00 PM, Dinner at 5:30 PM ORGANIZATION Montezuma Lodge No. 1 Montezuma Lodge No. 1 York Rite Bodies

Santa Fez Shrine Club

Cerrillos Lodge No. 19 Santa Fe No. 19 Eastern Star

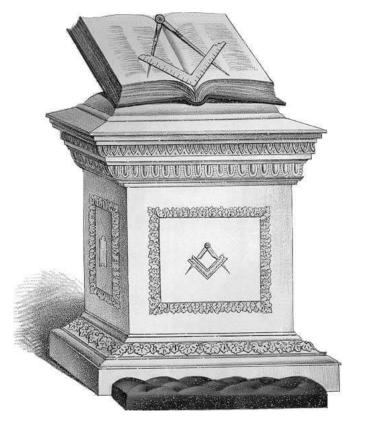
We have been holding our Quest meetings every Saturday morning at 10:00 AM. Quest Club is a forum for everyone. Mason and non-Mason alike can voice ideas and discuss any topic.



# Special Notices And Events

# Property Management Board The monthly meeting of the Property Management

The monthly meeting of the Property Management Board was scheduled for **Wednesday**, **April 24**<sup>th</sup> at 6:00 PM in the library. The next scheduled meeting is Wednesday, May 22, 2019



#### In This Issue From the East ...... 1 Special Notices and Events ...... 2 Property Management Board ...... 2 Fairview Cemetery Clean-Up Day...... 4 From the West ...... 5 Scottish Rite Council of Kadosh ...... 5 From Southern California Research Lodge **SCRL** - Cover Page......10 SCRL - Editor's Word ......11 **SCRL** - Cover Story ......12 SCRL - Moral Advantages of Geometry.....13 **SCRL** - Reference......14 SCRL - Illustrations ......16 SCRL - M∴W∴ R. Stephen Doan ......18 SCRL - Masonic Pop Culture ......20 SCRL - Symbology ......21 **SCRL** - Masonic Pioneer - Henry Bromwell.....22 SCRL - Short Talk Bulletin ......23 SCRL - Final Word.....24 Dinner Menu.....25 Lodge Officers......25

## From The East (Cont.)

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King Solomon greatest strength was his unsurpassed wisdom, granted to him by God. He had unsurpassed skills in architecture and management turned Israel into the showplace of the Middle East. As a diplomat, he made treaties and alliances that brought peace to his kingdom.

His biggest faults is that he married the daughter of the Egyptian Pharaoh to seal a political alliance. He could not control his lust. Among Solomon's 700 wives and 300 concubines were many foreigners, which angered God. The inevitable happened: They lured King Solomon away from Yahweh into worship of false gods and idols. He is said to have died of natural causes at the age of around 60 years old.



Fraternally, Patrick Varela Worshipful Master

#### Please Join Us for the

# 2019 Annual Fairview Cemetery Clean-Up Day

Please come out for this annual community event to help:

- Pick up trash
- Rake dirt areas
- Sweep off and clean headstones

- Minor landscaping
- Fence repair
- Other minor tasks!

(Annual Association Meeting to Follow)

Simply show up on Saturday, May 11, 9:00 am at Fairview Cemetery

1134 Cerrillos Rd.







Local Masonic Lodge Members at the Fairview Cleanup in 2018

or RSVP to Bro. Mike Mulligan or if you have questions or need more information at mmulligan01@yahoo.com

#### From The West













# The Scottish Rite Council of Kadosh Chivalric Degrees

BRO. JEE W. HWANG, 32<sup>0</sup>
SENIOR WARDEN, MONTEZUMA LODGE, NO.1

1<sup>ST</sup> LT. COMMANDER, CORONADO COUNCIL OF KADOSH, NO.1

APRIL 1, 2019













#### Brief Overview of Scottish Rite Masonry

The Scottish Rite is an appendant Masonic organization. Since its founding in 1801, the primary purpose of the Scottish Rite has been to provide more light in Masonry to Master Masons. The main medium for which more light is provided is through a series of 29 Degrees (4<sup>th</sup> to 32<sup>nd</sup>), grouped into four sets and administered by the Four Coordinate Bodies. Scottish Rite Honours are conferred by the Supreme Council.

#### Scottish Rite Masonry Jurisdiction Map



#### Brief Overview of Scottish Rite Masonry

There are two Scottish Rite Jurisdictions in the United States of America and are governed by their respective Supreme Councils:

- The Scottish Rite of Freemasonry Southern Jurisdiction USA, Charleston, 1801
- Scottish Rite Northern Masonic Jurisdiction USA, New York, 1813

#### The Scottish Rite of Freemasonry Southern Jurisdiction



























Valley of Santa Fe





Organizational Structure of Scottish Rite

Ancient Craft Masonry Conference of Grand Masters Grand Lodge Districts Local Lodges

Scottish Rite Supreme Council Orients Valleys Subordinate/Coordinate Bodies

John R. Adams, 33° IGH Personal Representative



















Notable Figures in Scottish Rite

Albert Pike, 33° Sovereign Grand Commander (1859-1891)



2019 Coordinate Bodies **Elected Officers** 























The Supreme Council, 33°, S.J.

Ronald A. Seale, 33° Sovereign Grand Commander



2019 Coordinate Bodies **Elected Officers** 

George E. Moss, 32° KCCH Wise Master Aztlan Chapter of Rosé Croix, No.1

















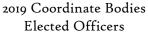


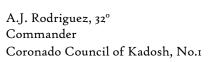


Orient of New Mexico

Wesley D. Thornton, 33° Deputy of the Supreme Council in New Mexico



























2019 Coordinate Bodies **Elected Officers** 

Kevin L. Fitzwater, 32° KCCH Master of Kadosh New Mexico Consistory, No.1





Council of Kadosh

19th to 30th Degrees

hese degrees focus on chivalric and philosophical virtues, aditions, and lessons, and are presented through examples of ligious devotion and heroic courage.







The primary purpose of the Scottish Rite is to provide more light in Masonry through a series of 29 degrees.

These degrees are administered by the Four Coordinate













31st to 32nd Degrees

The Consistory

These degrees are considered capstone degrees as they touch





Bodies of the Scottish Rite.









on all the previous degrees. The overall lesson is that a Mason must master himself as well as the lessons of Freemasonry and make himself a Master of the Royal Secret.



















Lodge of Perfection

4<sup>th</sup> to 14<sup>th</sup> Degrees

Known as the Perfection Degrees due to the last of its series being called Perfect Elu, they are a continuation of the Legend of Hiram story.



The Supreme Council, 33°, S.J.

32<sup>nd</sup> Degree-Knight Commander of the Court of Honor 33<sup>rd</sup> Degree-Inspector General Honorary, Grand Cross

of the Court of Honor, Sovereign Grand Inspector General

In addition to the degrees, there are certain "honours" bestowed by the Supreme Council.



















Chapter of Rose Croix

15th to 18th Degrees



"Rose Croix" refers to the symbol of a rose blooming upon a cross meaning self-sacrifice and suffering in the cause of humanity. Graduates of these degrees are called "Knights Rose Croix"



ster of the





23rd° Chief of the

Degrees of the Council of Kadosh



the Brazer



Prince of Mercy,

or Scottish







## Kadosh in Hebrew means Holy or set apart















23rd° Chief of the

Pure Philosophy and Mystical Degree





or Scottish Trinitarian





of the Temple



Scottish Knight of

















The degrees of the Council of Kadosh prepares a candidate to be conferred the level of Knight Kadosh Mason which drawls much of its inspiration from the chivalric virtues and ideals of the legendary Knights Templar















**Knighthood and Chivalric Degrees** 





or Scottish



Knight of the Sun, or Prince Adept



of the Temple



Knight of Saint Andrew











#### Degrees on the Practice of Virtue and Lessons of Philosophy



25th° Knight of the Brazen



26th° Prince of Mercy, or Scottish Trinitarian



27th° Knight of the Sun, or Prince Adept



Royal Axe, Prince of

Knight Commande of the Temple



Knight of





#### 28th<sup>0</sup> – Knight Commander of the Temple

The lesson of this degree teaches us to scorn selfishness, and to uphold the knightly virtues of charity, truth, and honor.

...the Knight Commander owes protection, as of old; against bold violence, or those, more guilty than murderers, who by art and treachery seek to slay the soul; and against that want and destitution that drive too many to sell their honor and innocence for food (Pike, Morals and Dogma).















Lodge







# 28th0 - Knight

#### Religious and Mystery Degrees







Knight of the Sun, or Prince Adept

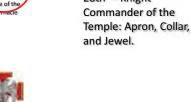


of the Temple



Knight of Saint Andrew













#### 29th<sup>0</sup> - Scottish Knight of Saint Andrew

The virtues of this degree are "Love of God, loyalty to superiors, faithful adherence to promise and active resistance to unfair judgment."

Humility, Patience, and Self-denial are the three essential qualities of a Knight of St. Andrew of Scotland. The Cross... is an unmistakable and eloquent symbol of these three virtues. (Pike, Morals and Dogma).























29th<sup>0</sup> - Scottish **Knight of Saint** Andrew: Banner, Scarf, Jewel, Collar

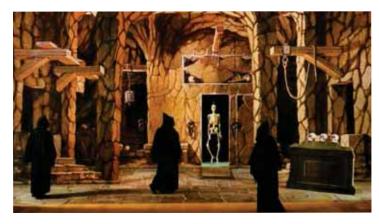


























#### 30th<sup>0</sup> - Knight Kadosh, or Knight of the White and Black Eagle

The lesson of this degree is to be true to ourselves, to stand for what is right and just in our lives today. To believe in God, country and ourselves.

The great truth expressed in the Knight Kadosh Degree is that individuals are supreme over institutions; thus this degree teaches the political truth of Masonry...



























#### 30th<sup>0</sup> - Knight Kadosh, or Knight of the White and Black Eagle

...The heart of man craves only justice and love. Men are good. Evil institutions alone have  $\it made\ them\ bad;\ and\ it\ is\ the\ duty\ of\ Masonry\ and\ of\ every\ Knight\ to\ aid\ in\ leading\ them\ back$ to the truth (Pike, Legenda XIX-XXX).



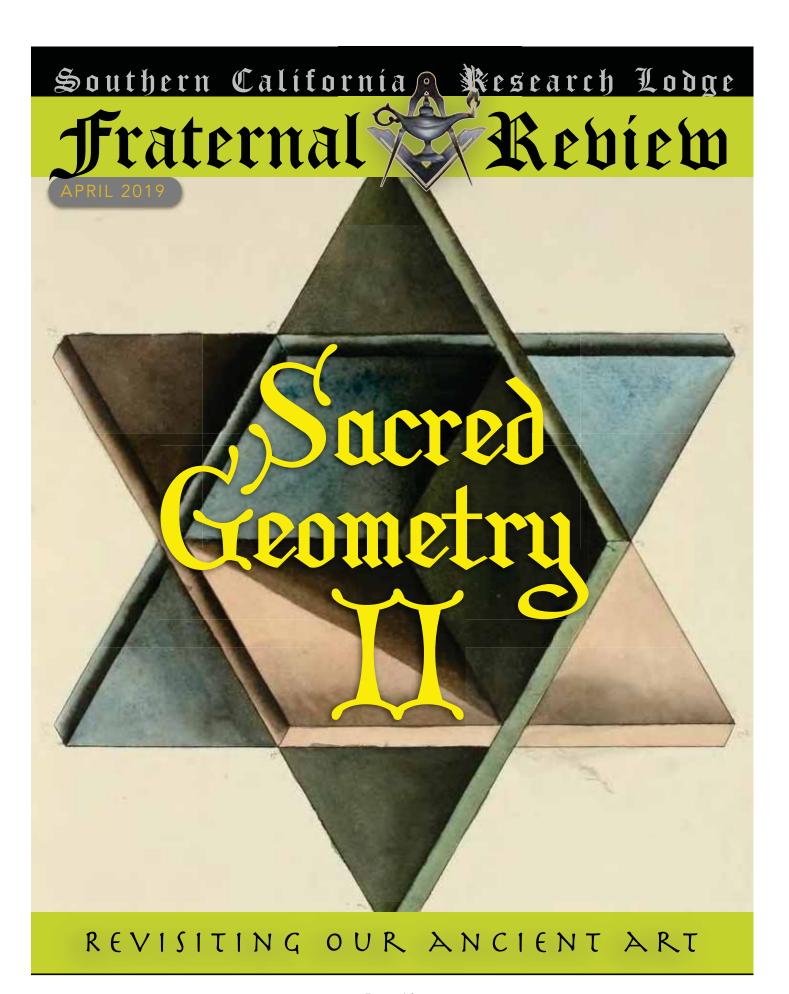












#### EDITOR'S WORD

# Photo by Leticia Burgos

#### Masonry and The Fundamentals of Geometry

In our May, 2018 issue on Sacred Geometry, I noted that math from high school days isn't easy for many of us to understand; for example, the formula for measurements of the sides of a right triangle,  $a^2 + b^2 = c^2$  (a squared plus b squared equals c squared) or  $\sqrt{2}$ , the square root of two. The prolific Masonic author, Bro. Carl Claudy, has helpfully explained that we are not expected to become geometers; but just to understand some basic concepts. Our goal is learning to appreciate what the science of geometry means to Masonry, as a demonstration of the "glorious works of creation,"

the "perfections of our divine creator." In this issue, you'll find a few simple explanations that assume the reader has no math background. And without getting into the math at all, Bro. Claudy discusses many applications of the legendary Pythagorean Theorem or 47th problem of Euclid (page 15). Squares and square roots are explored with diagrams, on page 6.

Let me again emphasize the importance of hands-on experience—taking the time to do geometric constructions with a straight edge, compass and graph paper, and/or using software. Practicing with these working tools brings insight into universal patterns found in numbers and geometrical forms. They are the basis of all growth and development in God's creation. They are true regardless of their size or orientation. The line segment AB (below) could be one inch or 100 miles long. It could be horizontal, vertical, or somewhere in between. Regardless, AB would equal BC.

Let's start with this "square," ABC, a well-known Masonic symbol, described as "an angle of 90° or the fourth part of a circle." As shown at center right: (1) draw a line; (2) locate a point nearby, near its midpoint; (3) with center point 2, swing an arc, making segment AB. Draw a line through A and point 2, to locate C.

A square as a polygon—ABCD—can be constructed from the Mason's

square by (1) drawing a line through B and 2, and (2) opening the compass to the width AC, and swinging an arc with the center B to locate point D. The square can be doubled to make an oblong square—a rectangle that is twice as long as it is wide and a symbol of the ideal Masonic lodge room. On page 13 there are some constructions and thoughts of MWBro. Rex Hutchens who writes, "For a Mason interested in studying geometry as it relates to Masonic symbols, the oblong square is nothing short of a revelation." (This issue has several quotes from Hutchens' article, "Thinking Inside the Box," in *Philalethes*, Vol. 70, No. 2, Spring, 2017.)

This symbolic shape of the lodge room floor illustrates a fundamental aspect of geometry. It is about universal proportions. The size of a Masonic oblong square is the ratio of two to one, written 2:1. It could be two feet long by one foot wide (2x1), or it could be 10x5, or 100x50. Its proportions are the same by any measure—cubits, feet or miles. Proportions and ratios, including the famous golden ratio are introduced in our Reference section (pages 6-7).

Getting back to what geometry means to Masonry, and what makes it sacred, in "Moral Advantages of Geometry" (page 5), M.W. Bro. R. Stephen Doan reminds us that geometry is "the basis upon which the superstructure of Freemasonry is erected," and that it is about morality—the values and principles of right conduct, and about finding the Supreme Being in the harmony of nature. May each of us be reminded of all this, every time we enter a lodge room and see the letter G in the East.

C. Douglas Russell, Editor in Chief, Fraternal Review and Former Master of SCRL

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#### SCRL Fraternal Review

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#### **PUBLICATION STAFF**

Editor In Chief - C. Douglas Russell

Managing Editor - Dago Rodriguez, PM

Copy Editors - Brett Fisher, Jeriel Smith

Pop Culture Editor - Michael Laidlaw

Calendar Dates Editor - Jeriel Smith

Layouts: Dago Rodriguez, PM

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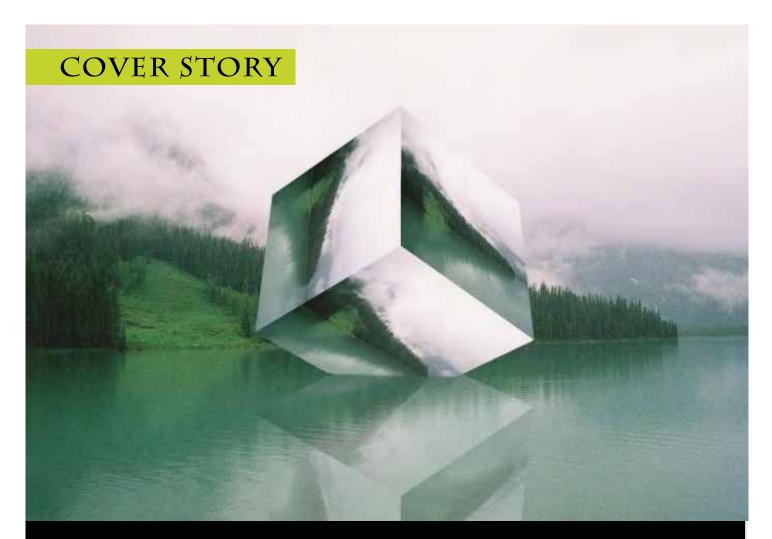
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As geometers, equipped only with compasses and straight-edge, we enter the two-dimensional world of the representation of form. A link is forged between the most concrete (form and measure) and the most abstract realms of thought. By seeking the invariable relationships by which forms are governed and interconnected we bring ourselves into resonance with universal order. By re-enacting the genesis of these forms we seek to know the principles of evolution. And by thus raising our own patterns of thought to these archetypal levels, we invite the force of these levels to penetrate our mind and thinking. Our intuition is enlivened, and perhaps, as Plato says, the soul's eye might be purified and kindled afresh "for it is by it alone that we contemplate the truth."

We may ask how the practice of Sacred Geometry helps us confront the profound questions of existence: What is the nature of Spirit? What is the nature of Mind? What is the nature of Body? My individual practice of Geometry gives this reply: The Body is the most dense expression of Mind, and Mind is all the subtle extensions of Body; and underlying this entire world, from the most dense to the most subtle, there is one substance. This substance is Spirit which has become entranced by the beauty of geometrizing.

[Robert Lawlor, Sacred Geometry, Philosophy and Practice. (London: Thames & Hudson Ltd., 1982, reprinted 2007), 14 & 108.]

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## Moral Advantages of Geometry

In the master's lecture of the Fellow Craft degree, we are told that "Geometry, the first and noblest of sciences, [is]... the basis upon which the superstructure of Freemasonry is erected." By the time we reach this lecture in our Masonic journey, we probably have figured out that the medieval stonemasons from which our fraternity evolved used geometry to design and erect the structures on whose construction they were employed. At this point in the lecture, we expect additional instruction on the symbolism inherent in the builder's trade. Instead, the master throws us a curve: He tells us that geometry can help us trace nature to her most concealed recesses in order to discover the power, wisdom, and goodness of the Great Architect of the Universe.

But what does Geometry have to do with God? Geometry is mathematics. Builders use it to resolve questions of shape, size, and relative position of the parts of a structure.

The master then states that through geometry we can "discover how the planets move in their respective orbits" and "account for the return of seasons, and the variety of scenes which each season displays to the discerning eye." More confusion. How do the movements of planets and the change in seasons help us learn how to do good and be better men? The master continues: "Numberless worlds are around us, all framed by the same Divine Artist, which roll through the vast expanse, and are all conducted by the same unerring law of nature."

What is the master's message? The reference to the "unerring law of nature" is an important hint. Geometry is a Masonic symbol but its symbolism goes far beyond the lessons of the builder's trade. It is much more profound. Geometry relates to the nature of God, or the Supreme Being as we Masons refer to the divine. This symbolism is designed to help us better understand the nature of the divine and what is expected of a moral life.

Most of us would probably agree that God is not a person sitting on a Carnelian throne with wheels of fire. God has been referred to in that fashion, but we understand the reference to be symbolic. We cannot see God—we can only know God by what God does.

This is nature's role. The planets move predictably in their orbits, and seasons change in a repeating cycle. There are forces in nature, sometimes violent, which can disturb the predictability of life. Yet, all things return to a pattern we recognize. The world may change, but a certain balance or harmony always reemerges. Nature has a way of correcting the forces that disturb its predictability, and we can count on that.

Quantum physics helps the scientist understand the most elemental nature of our physical existence, and even at the subatomic level we find laws that cannot be violated. In them, Masons are invited to find equilibrium, harmony, and evidence that God exists. We are invited to find God by what God does.



How does geometry fit in? Geometry helps the astronomer predict the movement of planets. It helps the meteorologist predict the return of the seasons by charting the sun. Geometry helps the botanist find symmetry in plants. In other words, geometry proves that there is a repeating pattern in nature, and this is our evidence that God exists, as the creator and sustainer of that harmony. Geometry is therefore shorthand: It refers to the work of God and therefore God itself.

Understanding this relationship between geometry and God helps us understand not only what we need to do as Masons, but also who can become a Mason. We require an applicant for the degrees to affirm a belief in a Supreme Being. Christianity, Judaism, and Islam, among other religions, include such a belief.

But geometry encourages us to take a broader view of God than is often found in the teachings of any specific religion. It encourages us to find the Supreme Being in the harmony of nature—that religion in which all men can agree, as Rev. James Anderson wrote in his *Constitutions* of 1723. It is only logical that a man who finds the Supreme Being in the harmony of nature can be a Mason, too.

Geometry is about morality, the values and principles of right conduct, because it gets to the root of what morality is: harmony. If God is about harmony, then we should be, too.

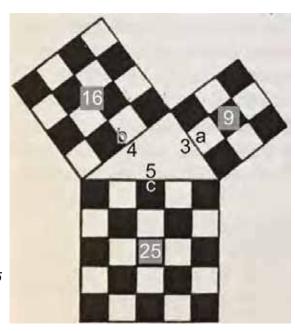
[R. Steven Doan, PGM, "Moral Advantages of Freemasonry," *California Freemason*, Volume 63, Number 1, October/ November 2014, 7-8.]

April 2019  $\sim$  TheResearchLodge.com - 5

## REFERENCE

#### **Squares and Square Roots**

The diagram at right shows a 3:4:5 triangle, oriented as it is on the frontispiece of Anderson's Constitutions: the right angle is pointing up; the hypotenuse at the bottom. The Pythagorean theorem or 47th problem of Euclid states, in every right angle triangle the square of the hypotenuse is equal to the sum of the squares of the other two sides: a squared plus b squared equals c squared:  $a^2 + b^2 = c^2$ . A number is "squared" when multiplied by itself:  $3 \times 3 = 9$ ,  $4 \times 4 = 16$ , and 9 + 16 = 925. Any one side of a square is considered its root. A square with 3-foot sides is 9 square feet in volume. Conversely the square root of 9 is 3, or  $\sqrt{9} = 3$ . The 3:4:5 triangle is a special case with rational numbers.—Ed.



#### **Rational and Irrational Numbers**

Numbers, like humans, can be rational and irrational. A rational number can be expressed with whole numbers, e.g., a ratio of one to two (1:2). As a fraction, it's 1/2, which is 0.5000 in decimal numbers. Also rational is the ratio of one to eleven: 1/11 = 0.0909... Rational numbers eventually end in zeros, or repeat themselves. Irrational numbers never end, without repeating: e.g.,  $\sqrt{2} = 1.41421356... \sqrt{2}$  multiplied by itself

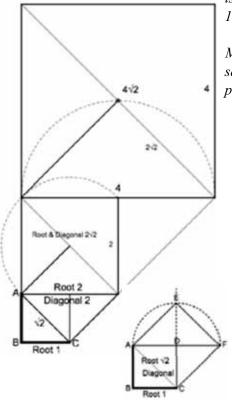
> is 2. Try it on a calculator:  $\sqrt{2^2} = 2$ , or, 1.41421356 x 1.41421356 = 1.99999999. With infinite decimals it's exactly 2.

The construction to the left starts at the bottom with a speculative *Mason's square. AB and BC* = 1 *unit each, so the hypotenuse* =  $\sqrt{2}$ . *These* squares grow naturally. The root of each new square is the diagonal of the previous one; and each square is twice the size of the one before it —Ed.

#### The Geometry of the Plant Kingdom

When we speak of roots of squares and roots of cubes, we are using a very ancient designation which associates this mathematical function with the vegetal root. The root of a plant, like the mathematical root, is causative, the former being embedded in the earth, the latter embedded in the square. The visible growth of the plant, its proliferation into nourishes because it is able to break down (divide) the fixed, dense mineral constituents of the soil into compounds which the plant can transform into its own tissue. In the vital sense the geometric root is an archetypal expression of the assimilative, generating, transformative function which is root. Like the vegetal root, the root of 2 contains the power of nature which destroys in order to progress, (it severs the initial square) and it also contains the power which instantaneously transforms 1 into 2.

specificity, depends upon the root for stability and nutrition. The plant root

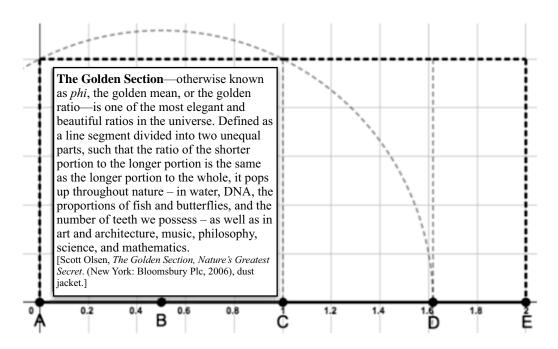


[Robert Lawlor, Sacred Geometry, Philosophy and Practice. (London: Thames & Hudson Ltd., 1982, reprinted 2007), 29-30.]

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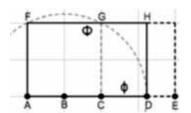
#### The Golden Ratio or Divine Proportion

The diagram shows a construction of this magical ratio. The line segment AE is two units long. Raise a one-unit square with the root AC. Place the point of the compass at its midpoint, B. The arc locates point D at 1.6180327..., which is the irrational golden number, often rounded off to 1.618.



When line segments are divided, the ratios of the parts to each other and of the larger portion to the whole are almost never the same. Take the segment AE above. Point B divides it unequally. AB is one-fourth of its length; BE is three-fourths. The ratio of the shorter portion to the longer one, AB:BE is 1:3 or 1/3 = 0.333...; the ratio of BE to the whole AE is 3/4 = 0.75. The ratios are nowhere near the same. The golden ratio is the only ratio where the relation of the parts to each other, and of the larger part to the whole, are identical! Divide segment AD at C. AC = 1; CD = 0.618. The ratio of the shorter portion to the longer, CD:AC is

0.618/1 = 0.618. The ratio AC to the whole AD is 1/1.0618 = 0.618. The diagram at right contains the golden rectangle, ADHF. The ratio of its length to its width is 1.618:1, the golden ratio. Remember, these numbers are proportions. A golden rectangle could be any size. The Greek letter phi (pronounced *fee*) is used to represent the golden number. Both the capital and lower case phi are used:  $\Phi = 1.618$ ;  $\phi = 0.618$ .



#### Fibonacci Numbers and the Golden Number

Fibonacci numbers form a sequence where one number is added to the one before it, to get the next number. The sequence starts: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144 ...

Add 0 and 1 = 1. Add 1 + 1 to get 2; then 1 + 2 = 3; 2 + 3 = 5, 3 + 5 = 8, 5 + 8 = 13, etc. Amazingly, as it continues, the ratio between pairs of numbers gets closer to the Golden Number,  $\phi$  (0.61803): 21/34 = 0.61765; 34/55 = 0.61818; 55/89 = 0.61798; 89/144 = 0.61806. These numbers are alternating above and below  $\phi$ , and as this continues, they keep getting closer and closer to the exact number.

[Except for "The Golden Section," explanations and constructions on this page are by the Editor.]

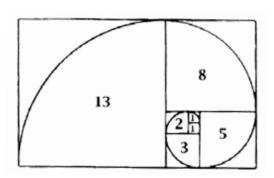
#### **ILLUSTRATIONS**

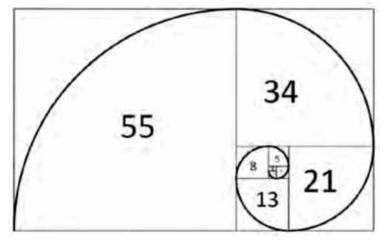
# Fibonacci numbers and golden rectangles are the basis of numerical and geometric patterns in man-made products and in nature.

Today we consistently find ourselves reaching for that plastic card in our wallets and handbags. Most credit cards measure 86mm by 54mm, almost exactly an 8:5 rectangle and one of the most common Fibonacci approximations to the golden rectangle.

Because of its aesthetic qualities, embodied in its unique ability to relate the parts to whole, golden ratios are used in the design of many modern household items, from coffeepots, cassette tapes, playing cards, pens, radios, books, bicycles, and computer screens, to tables, chairs, windows and doorways.

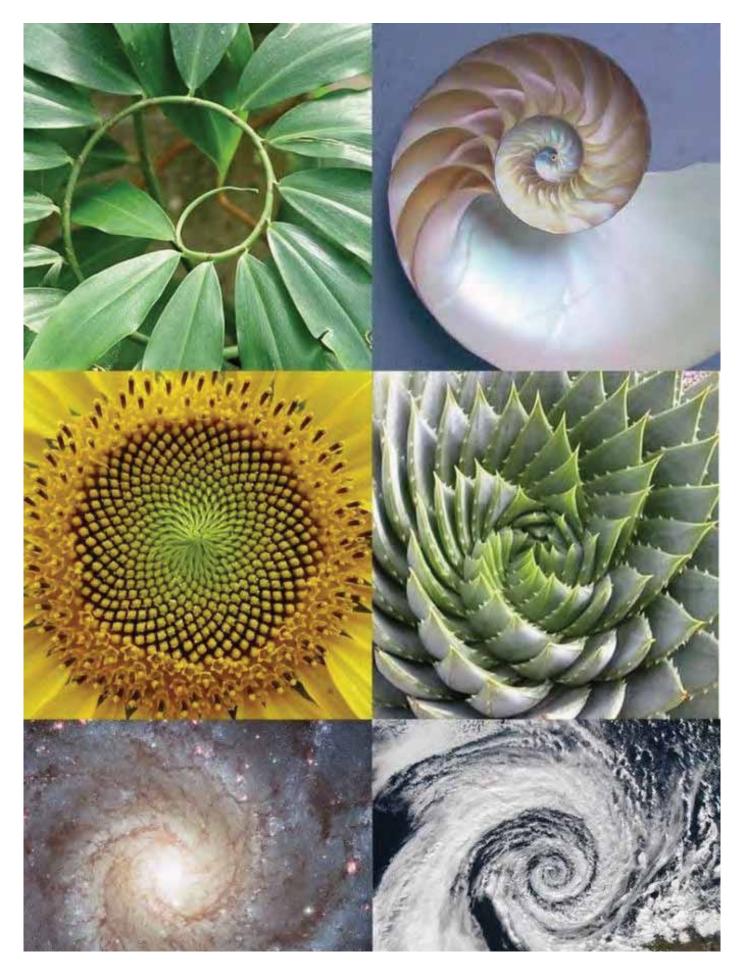
[Scott Olsen, Ph.D., *The Golden Section*. (New York: Bloomsbury USA, 2006), 40-41.]







This spiral grows out of an oblong square in the proportion that Bro. Rex Hutchens has identified as that of the ideal Masonic lodge room. A close-up of the start of the spiral shows two unit squares side-by-side, making a 1:2 rectangle. While the squares in the construction on page 6 keep doubling in size, these rectangles grow out from one another in the proportions of pairs in the Fibonacci sequence: 2:3, 3:5, 5:8, 8:13, etc. Thus each new rectangle is ever closer to being a golden rectangle. This is the geometry of the spiral that is the basis of nature's designs, as shown on the next page.—Ed.



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#### M.W. Bro. R. Stephen Doan

#### INTERVIEW BY C. DOUGLAS RUSSELL

R. Stephen oan G is the resident and a Fellow of the hilalethes Society the oldest independent asonic research society in orth merica and a fre uent speaker on asonic topics. e served as Grand aster of asons in alifornia in 1 2-1 3. e also served as Grand Sovereign of the Red ross of onstantine and is its current Grand Recorder. He has been Chairman of the Board of the Midnight Mission in Los Angeles for more than twenty-five years. He practices law in Rancho alos Verdes alifornia.



# Q: What led you to join Freemasonry?

A: All the men whom I admired as a boy were Masons. Much of our family's social life revolved around our Masonic hall and the people we met there.

# Q: Where and when were you made a Mason?

A: I became a Mason in November of 1970 where my dad and paternal grandfather were made Masons: Triangle No. 548 (through consolidation, Sunset No. 369). In 2008, I became a plural member where my maternal grandfather was made a Mason: Santa Monica-Palisades No. 307. I also now belong to Los Angeles Harbor No. 332 near my home and a new small lodge, The Downtown Masonic No. 859.

# Q: What has been your involvement in various Masonic bodies and publications?

A: I write a monthly Masonic education piece for the members of the Philalethes Society and a column for the Society's quarterly journal. I write several articles on Masonic Christian Knighthood for each issue of the Red Cross of Constantine's semi-annual magazine. Periodically, the *California Freemason* has an article from me.

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# Q: Since being raised a Master Mason has the sensibility of Sacred Geometry (in relation to our Craft) evolved? If so, how?

A: Freemasonry challenges us to understand how the world works and how we can make it better. It encourages us to use symbols to find what can improve lives. Sacred Geometry is a subset of that search: it uses geometric forms and proportions as its symbols. Because the study of Sacred Geometry has a long and rich history, it can be a valuable resource in our Masonic journey. Since I became a Mason, more men have joined who are interested in these philosophical studies, thus the renewed interest in Sacred Geometry.

# Q: What led you to write an article on geometry and Masonry?

A: When I was made a Fellow Craft Mason and got the portion of the California Monitor for that degree, I puzzled about the meaning of a heading in it: Moral Advantages of Geometry. My article was one of my efforts to share with others my exploration of that puzzle.

# Q: Your article, "Moral Advantages of Geometry," reprinted in this issue, was published five years ago. How has your thinking evolved since then? What points would you now emphasize, and how would you further elaborate them?

A: A subset of symbols is icons. Click an icon on your computer, and it opens a program. A religious icon is not meant to be idolized but to help the viewer access what made the person portrayed worthy of imitation. In essence, an icon can be a portal to another plane of perception. Geometry can be an icon: if you let go, contemplating the harmony it symbolizes can help you experience the sense of well being that harmony brings and help you thereafter sense when your actions foster harmony.

# Q: Both last year's Fraternal Review on sacred geometry and this one, encourage Masons to actually do geometric constructions. Do you agree with this? Do you see it being done, and how could more of it be encouraged?

A: Each of us is different, each with his unique path to a deeper understanding of what he needs to do to improve himself and his relations with others. If doing geometric constructions helps you in that work, then by all means do it. If you struggled with Geometry in school, doing geometric constructions now might not be the best approach for you!

Q: In his article "Thinking Inside the Box" in Philalethes (Spring, 2017) Bro. Rex Hutchens tells us our ritual counsels us to study geometry and that the Letter G suspended in the East is a constant reminder of this. Would you also recommend this study, and how might it best be done?

**A:** We cannot prove that God exists. We can however infer God's existence by what God does. Geometry can help us find harmony at the root of all. Quantum physics can also. From these studies we can infer a master plan whose harmony Masons should strive to foster.

# Q: Is there a particular book, or two, on geometry that you would recommend to Masons for their study?

A: Freemasonry challenges you to think for yourself. If one answer could satisfy everyone's needs, our ritual would give it in great detail. Our ritual gives hints; you must learn how to use those hints to find what helps you learn, subdue your passions and improve yourself in masonry. Bottom line: do not rely on what someone else says. Look for yourself. Start by googling "Sacred Geometry" and see where the references take you. Gather what resonates with you. Do not get bogged down in minutiae. Look for the golden thread, the simple explanation.

# Q: We read that the ancients created their temples with careful reference to geometry and proportion. How is this reflected in modern Masonic buildings and lodge rooms?

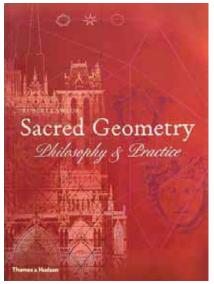
A: I wanted to be an architect when I was a boy and have remained interested in design even though I chose an entirely different career. The ancients did not have unlimited resources, so ultimately their designs were about functionality. Could the space accommodate the people who would worship there? Was it inviting to the force that was to be worshipped there? When the assembly spaces were enclosed and constructed of durable material, acoustics became a concern. Design elements which seem to follow principles of Sacred Geometry also have good acoustical properties! Lodge rooms are or ought to have the east in the eastern part of the room, and you can see this in many lodge halls. It is ironic that King Solomon's Temple (on which lodges are based) had the altar on the west side of the building so that the sun could shine into the space when you entered in the morning.

#### MASONIC POP CULTURE

# SECTION NATURES GREATEST SECRET GROWN Olsen

Sacred Geometry:
Philosophy & Practice
By Robert Lawlor
Thames & Hudson 1982
Perfect Bound 112 pages

#### **READ IT**



From the Publisher: The thinkers of ancient Egypt, Greece and India recognized that numbers governed much of what they saw in their world and hence provided an approach to its divine creator. Robert Lawlor sets out the system that determines the dimension and the form of both man-made and natural structures, from Gothic cathedrals to flowers, from music to the human body. By also involving the reader in practical experiments, he leads with ease from simple principles to a grasp of the logarithmic spiral, the Golden Proportion, the squaring of the circle and other ubiquitous ratios and proportions.

# The Golden Section: Natures Greatest Secret

By Scott Olsen Bloomsbury Press 2006 Hard Cover 58 pages

From the Publisher: A concise and useful handbook on the Golden Section—also known as the Golden Ratio and Golden Mean. The Golden Section is a line segment divided into two parts, such that the ratio of the short portion to the longer portion is equal to the ratio of the longer portion to the whole. It is one of the most elegant and beautiful ratios of the mathematical universe because of its combination of elegance and simplicity—hence the divine nature of its name. Drawing on art, architecture, philosophy, nature, mathematics, geometry, and music—and beautifully illustrated in the Wooden Books fashion with all manner of images—The Golden Section will tell the story of this remarkable construction and its wide ranging impact on civilization and the natural world.



#### SEE IT

YouTube Spirit Science 23 The Sacred Geometry Movie 105 minutes, April 14, 2014

Master the Geometry of the Ancients with Patch Tarot, and Discover the Truth of your Nature. Geometry is everywhere, and it can be understood both scientifically and spiritually. It is present everywhere in nature, with spirals of the fibonacci sequence within blooming flowers, to the birth of it's cell starting as a sphere, followed then by a vesica pisces and into the torus. We are living, breathing geometry in a beautifully complex form. <a href="https://www.youtube.com/watch?">https://www.youtube.com/watch?</a> v=FSmdSw9eEIA&t=17s

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#### HEAR IT

Whence Came You?

Sacred Geometry

Episode 278

39 minutes, January 15, 2017

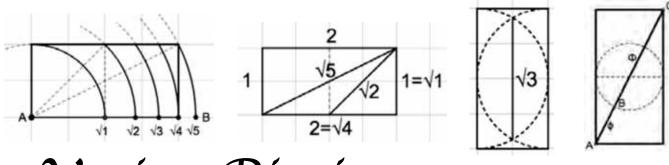
Why don't we study this stuff in lodge? Is it really Masonic? Is it a perversion of what we should be doing? Is it just something misguided men look for within Freemasonry? Well this week we talk about all of this as well as the topics of its history, its origin and of course a secret or two... <a href="https://www.youtube.com/watch?v=OcVStzilbOc">https://www.youtube.com/watch?v=OcVStzilbOc</a>

#### SYMBOLOGY

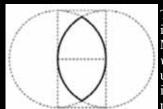
From ritual of the early 1700s, the form of the lodge was said to be an oblong square. This was symbolic, not literal. Since it is a geometric figure, MWBro. Rex Hutchens has used it "to provide a convenient and easily constructed tracing board to illustrate various geometric principles." The oblong square in Masonry is a rectangle whose length is twice its width—classic grave dimensions, which could relate it to our third degree. "The biblical use of the oblong square as a 1:2 proportion for the enclosure of the Tabernacle and the Holy Place within the Temple of Solomon may also have influenced early Masons to adopt this form."

(1) Our operative forebears often used rectangles of lengths  $\sqrt{1}$ ,  $\sqrt{2}$ ,  $\sqrt{3}$ ,  $\sqrt{4}$ , and  $\sqrt{5}$  and seldom any others. This was probably because of their ease in generation since one had only to adjust the compass to the diagonal of one rectangle to generate the next. (2) Add diagonals and most square roots show up; (3) a *vesica piscis* provides  $\sqrt{3}$ . (4) the golden ratio appears where a diagonal cuts a circle in the oblong square.

[Excerpted and paraphrased from Rex R. Hutchens, "Thinking Inside the Box, The Geometry of the Oblong Square," *Philalethes*, Vol. 70, No. 2, Spring, 2017, 68-69. The images here are adapted from those in the article.]



# Vesica Piscis



The *vesica piscis*, or "bladder of the fish," is a simple geometric shape formed by the intersection of two circles. It has a long traditional history, both in operative and speculative Masonry. ... the collars of the officers of a lodge are properly in the shape of the *vesica*. ... The *vesica piscis* was a major symbol within the ancient tradition of sacred geometry. It was also an ubiquitous feature of the Gothic architecture that was based upon those ideas, and which was so intertwined with origins of the guilds of operative masonry that most believe eventually gave rise to our Order.

Though not mentioned explicitly in extant lectures, it is present in the visual arts, regalia and ceremonial forms of the Craft from an early period. It remains an excellent and appropriate form for Masonic seals, especially for lodges that emphasize Masonic tradition.

[Excerpted and paraphrased from Shawn Eyer, P.M., "The Vesica Piscis & Freemasonry," accessed 3/1/2019, <a href="http://academialodge.org/article\_vesica\_piscis.php.">http://academialodge.org/article\_vesica\_piscis.php.</a>.]







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MASONIC PIONEER

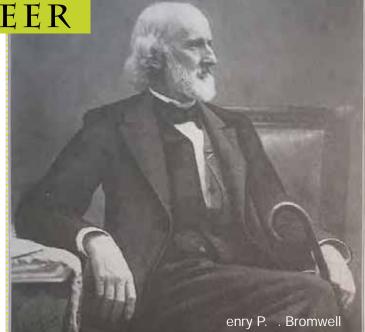
If the assertion be true that "Masonry is founded in geometry," and especially if it be at all permissible to declare, as many writers have done, that "Masonry is geometry"—if it be in any sense the least proper to speak of the Almighty as the "Great Geometrician of the Universe," then there must be something in geometry itself—something occult, but not wholly inscrutable, involved in the laws of that sublime science, which neither theologians nor philosophers (in general) have at all divined. ...

Unless the expression that "Masonry is founded in geometry," and the like, be wholly reckless, the sweeping generalization by which is thereby offered a unification of two of the most diverse bodies of knowledges known to mankind, would, indeed, take rank as the enunciation of a philosophy verily transcendent—one branch of its subject being the science which, apparently more than any other, is exclusively and inseparably allied to mere matter and space; the other having to do only with the abstract and sublime truths of the intellectual and moral degrees of the universe. ...

No man can occupy himself intently in searching the secrets of geometry or numbers without bringing to light something remarkable, if not astonishing, which had eluded the notice of all former students, so far as the world could know. What wonder, then, that those most devoted to and most expert in the mazes of geometric knowledge came to regard the "mysteries" of geometry as something not only of divine origin, but as possessing, in some degree, a quality akin to Divinity itself—an emanation or putting forth into nature, and partly within the grasp of man, something of the very mind of God—something of the "Logos," or wisdom, ... eternally outflowing in new evolution.

What wonder if they saw, or thought they saw, in the possibilities of this profound and inexhaustible science a key to unlock the chambers in which more recondite mysteries than those of matter and space lie concealed? A clue which might lead the patient explorer through the mazes of the inner labyrinths of the universe, to the secrets of a veritable correspondence between the laws of matter and of mind—between the operations of physical forces in the world of effects, which we call nature, and those of the supernal influences, which rule the exalted processes of the world of causes, which we call the world of thought and reason; of volition and affection—the world of life? ...

Thus might be reached a philosophy altogether transcendent, as compared with any ever offered to the human mind—the unification of all possible sciences, physical and metaphysical, throughout the entire domain of human thought—one whose teachings and influence must be a veritable gospel of light, to exalt the affections of the human soul—give new wings to



the mind in its excursions—incite the perceptions to deeper penetration—unshackle the understanding, and attune the united powers and faculties of man to the same order and harmony he could discover throughout the universe of God. ...

In what is here said, we can see some reason why the founders of any such system as symbolic Masonry should bring geometry to their aid in designing to furnish to the minds of their initiates a means, when diligently explored, of ascertaining the relations between the three Degrees of existence cognizable by man, and thereby discovering truths of the intellectual and moral degrees of life which could not be otherwise obtained. [Excerpted and paraphrased from Henry P.H. Bromwell, *Restorations of Masonic Geometry and Symbolry*. (Boulder, CO: Published by Lovers of the Craft, 2010, first published in 1905), 78-84.]

Among Bromwell's many constructions is a right triangle with one-unit sides, positioned like the 3:4:5 one in Anderson's *Constitutions*, the hypotenuse on the bottom. This design includes the shape

of the apron as worn by Entered Apprentices, found in other old Masonic diagrams. Bromwell uses triangles in a grid to prove the  $47^{th}$  problem:  $1^2 + 1^2 = \sqrt{2^2 (1 + 1} = 2)$ . The two squares above are the size of 4 triangles, the one below, 8 triangles; the proportion of 1:2.

## Short Talk Bulletin: The 47th Problem of Euclid

In our Fellowcraft degree [we insist that geometry] is of a divine and moral nature, and that by its study we are enabled not only to prove the wonderful properties of nature but to demonstrate the more important truths of morality. ... The 47<sup>th</sup> Problem is at the root not only of geometry, but of most applied mathematics; certainly, of all which are essential in engineering, in astronomy, in surveying, and in that wide expanse of problems concerned with finding one unknown from two known factors. ... It is behind the discovery of every unknown from two known factors. It is the very cornerstone of mathematics.

The engineer who tunnels from either side through a mountain uses it to get his two shafts to meet in the center. The surveyor who wants to know how high a mountain may be ascertains the answer through the 47th Problem. The astronomer who calculates the distance of the sun, the moon, the planets and who fixes "the duration of time and seasons, years and cycles," depends upon the 47th Problem for his results. The navigator traveling the trackless seas uses the 47th Problem in determining his latitude, his longitude and his true time. Eclipses are predicated, tides are specified as to height and time of occurrence, land is surveyed, roads run, shafts dug, and bridges built because of the 47th Problem of Euclid—probably discovered by Pythagoras—shows the way.

It is difficult to show why it is true; easy to demonstrate that it is true. If you ask why the reason for its truth is difficult to demonstrate, let us reduce the search for "why" to a fundamental and ask "why" is two added to two always four, and never five or three?" We answer, "Because we call the product of two added to two by the name of four." If we express the conception of "fourness" by some other name, then two plus two would be that other name. But the truth would be the same, regardless of the name. So it is with the 47th problem of Euclid. ... For "true" means absolute—not dependent upon time, or space, or place, or world or even universe. Truth, we are taught, is a divine attribute and as such is coincident with Divinity, omnipresent.

It is in this sense that the 47<sup>th</sup> Problem "teaches Masons to be general lovers of the arts and sciences." The universality of this strange and important mathematical principle must impress the thoughtful with the immutability of the laws of nature. The third of the movable jewels of the entered Apprentice Degree reminds us that "so should we, both operative and speculative, endeavor to erect our spiritual building (house) in accordance with the rules laid down by the Supreme Architect of the Universe, in the great books of nature and revelation, which are our spiritual, moral and Masonic trestleboard."

With the 47<sup>th</sup> Problem man reaches out into the universe and produces the science of astronomy. With it



he measures the most infinite of distances. With it he describes the whole framework and handiwork of nature. With it he calculates the orbits and the positions of those "numberless worlds about us." With it he reduces the chaos of ignorance to the law and order of intelligent appreciation of the cosmos. With it he instructs his fellow-Masons that "God is always geometrizing" and that the "great book of nature" is to be read through a square.

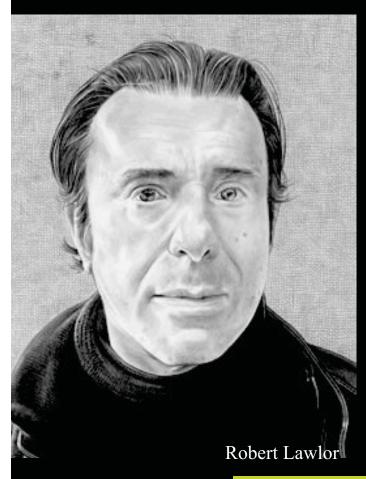
Considered thus, the "invention of our ancient friend and brother, the great Pythagoras," becomes one of the most impressive, as it is one of the most important, of the emblems of all Freemasonry, since to the initiate it is a symbol of the power, the wisdom and the goodness of the Great Artificer of the Universe. It is the plainer for its mystery—the more mysterious because it is so easy to comprehend.

Not for nothing does the Fellowcraft Degree beg our attention to the study of the seven liberal arts and sciences, especially the science of geometry, or Masonry. Here, in the Third Degree, is the very heart of Geometry, and a close and vital connection between it and the greatest of all Freemasonry's teachings—the knowledge of the "All-Seeing Eye."

He that hath ears to hear—let him hear—and he that hath eyes to see—let him look! When he has both listened and looked, and understood the truth behind the 47<sup>th</sup> Problem he will see a new meaning to the reception of a Fellowcraft, understand better that a square teaches morality and comprehend why the "angle of 90 degrees, or the fourth part of a circle" is dedicated to the master!

[Carl H. Claudy, "The 47th Problem," in *The Short Talk Bulletins I*., S. Brent Morris, Ed., (Burtonsville, MD: Masonic Service Association of North America, STB Vol. 8, Number 10, October 1930, 2013), 344-47.]

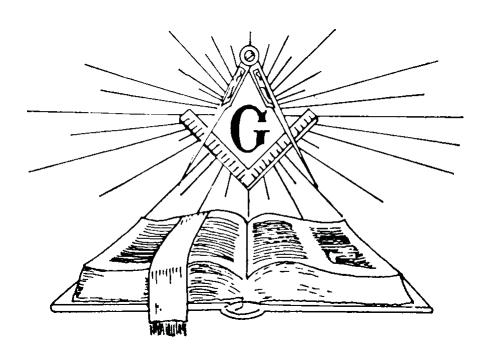
# FINAL WORD



"Numbers are the sources of form and energy in the world. They are dynamic and active even among themselves. ... almost human in their capacity for mutual influence." (Theon of Smyrna.) Numbers, in the Pythagorean view, can be androgynous or sexual, procreators or progeny, active or passive, heterogeneous or promiscuous, generous or miserly, undefined or individualized. They have their attractions, repulsions, families, friends; they make marriage contracts. They are in fact the very elements of nature. The tools of geometry and number represent the means to attain knowledge of both external and internal space and time. These instruments, once used by architects and philosophers, became instead, from the time of the "Age of Reason," the tools of the engineer.

[Robert Lawlor, Sacred Geometry, Philosophy and Practice. (London: Thames & Hudson, Ltd., 1982), 14.]

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#### Montezuma Lodge #1 AF&AM

431 Paseo de Peralta Santa Fe, New Mexico 87501-1958 Just west of the Scottish Rite Temple

Secretary
Don Helberg, PM
Lodge Office: 505-982-0971
Home: 505-471-0168
email: hiram@montezumalodge.org

Editor Robert H. Sherman, PM email: rhsjjs@comcast.net

## May Dinner Menu



Join us on May 6<sup>th</sup> for dinner at 6:00 PM before the stated meeting. The entire family is invited. Dinner will be catered by Whole Hog of Santa Fe.

Pulled Pork, Beef Brisket, Chicken
Baked Beans
Potato Salad
Green Salad
Deserts and Ice Cream
Lemonade, Coffee, and Ice Tea



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#### **Return Service Requested**

#### 2019 Officers

Worshipful Master: - Patrick J. Varela (H): 505-471-2555

**Senior Warden** - Jee W. Hwang (C): 704-654-1270

**Junior Warden** - Michael J. Mulligan (C): 505-660-1672

**Treasurer** - Dan Esquibel, PM (C) 505–660-7395

Secretary - Don L. Helberg, PDDGM (H): 505-471-0168

Lodge Office: 505-982-0971 Email: hiram@montezumalodge.org

Chaplain - Robert H. Sherman, PDDGM (H): 505-983-9508

**Senior Deacon** - Charles A. Hannaford (H): 505-466-2732

Junior Deacon - Alexander J.Marcus (C) 505-577-6322

Senior Steward - Christopher J. Williams (c) (208) 995-6922

Junior Steward -

Marshal: - Alfonso J. Rodriguez (C) 505–501-0078

Tyler: - Jerry Noedel, PM

#### What is the purpose of Freemasonry?

"To admit, make and pass Freemasons according to the Constitution and By-Laws of the Grand Lodge. To advance the moral and social interests of its membership; to foster good citizenship, honest industry and upright living; to cultivate the exercise of charity in its best and broadest sense; to assist the widows and orphans of its deceased members; to stimulate friendship, harmony and Brotherly love and generally to promote, in its own way, the happiness of mankind — it is a fraternity of good men, linked together by honorable and indissoluble bonds, to accomplish these noble purposes, eschewing all interests in factional politics and sectarian religion and free from the dictation of both."

#### For more information about Masonry:

- □ Call the Lodge at 982-0971
- □ Stop by the Lodge
- □ Visit our website @ www.montezumalodge.org
- ☐ Ask any Mason