

“The Foundation of All Masonry”: Masonic Emblems Viewed Through a Pythagorean Lens

By Christopher B. Murphy, May 2013

The Constitutions of the Free-Masons stands as the first enduring document the Grand Lodge era. Perhaps more commonly known as “Anderson’s *Constitutions*” (after its compiler, Bro. James Anderson) this document contains a history of the Craft, as was common to documents of the era and of the Old Charges before it. That history contains the following lines:

...the Greater PYTHAGORAS, prov’d the Author of the 47th *Proposition of Euclid’s* first Book, which, if duly observ’d, is the Foundation of all Masonry, sacred, civil, and military...¹

In this passage, Bro. Anderson refers to the 3-4-5 right triangle, one of our nine Master’s Emblems. By stating that Euclid’s 47th is the “Foundation” of all “sacred” Masonry, Anderson is suggesting that this figure, and the underlying concepts, are the collective key to what later Lectures would call “the metaphysical or spiritual art.” The importance of this emblem is evident when we consider the frontispiece of the 1723 *Constitutions* themselves. The tableau consists of the passing of the *Constitutions* scroll from the outgoing Grand Master, to the Grand Master-elect. Within this scene are just two items that are distinctively emblematic of the Craft: the compasses and the 3-4-5 triangle².

Because of the significance attached to Pythagoras’ 3-4-5 triangle, it allows students of the Craft to look into the potential Masonic lessons that could be derived from examining various Pythagorean constructs. Further, given that numerological and geometric symbolism are featured so prominently in both Masonic and Pythagorean schools³, perhaps such a comparison is obvious. These assumptions, then, bring us to an examination of two Masonic emblems through a Pythagorean lens, viz: the Seal of Solomon, and the seven stars.

The Seal of Solomon

The Seal of Solomon is the six-pointed star, known more widely in the profane world as the Magen David, or Star of David. The earliest known appearance of the Seal of Solomon in a Masonic context dates to 1633: the “interlaced triangles” are found on an Operative’s rule which passed into the ownership of the now-defunct Grand Lodge of All England, and later came into the possession of York Lodge⁴.

The symbol appears today as a part of the Holy Royal Arch Degree, as part of the York Rite. There are grounds, however, to also consider it as a Blue Lodge emblem. It is important to recall that the Royal Arch Degree was practiced as part of Craft Masonry by the Antients Grand Lodge, from the time of their inception until the Union of 1813⁵. As such, any occurrences of that symbol in a Masonic context at any time before 1813 can be viewed as Craft usage by at least one prominent Grand Lodge. The Seal of Solomon appears in examples from throughout Europe, as early as 1742, and up to and beyond the 1813 Lodge of Reconciliation⁶. The same sigil—the

Masonic Seal of Solomon—was known differently to the Pythagoreans. To them, the six-pointed star was known as *the Hexad*.

Pythagorean teachings held that numbers were not simply quantitative figures; rather, they possessed characteristics of the Divine. Further, the sigils associated with these numbers symbolized these same characteristics. The Hexad was interchangeable with 6, and hence went a variety of different names, each a reflection of certain characteristics held by the number and the symbol. It is when we view these various names from a Masonic perspective, that we begin to discern Craft-centric lessons. We begin with an eye to the right and left pillars of the porch of King Solomon's Temple.

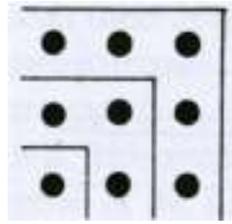
The Hexad is known as “Peace”; Masonically, we know of the “peace that brings together upon the broad platform of Brotherly Love the high, the low, the rich, the poor”, as represented by the lily work upon J.: and B.:⁷ The Hexad is also known as “Health”; Health is symbolized Masonically as part of the “plenty he has”, as symbolized by the pomegranates on J.: and B.:⁸ The Hexad is also reflects the concept of Unity; Masonically we speak of the “unity of an unbreakable chain of brotherhood⁹,” as symbolized by the network on J.: and B.: With this last example, however, “Unity” is not the name given to the Hexad, but its synonym, “Harmony.” To Men of the Craft, this is the prevailing lesson of the Hexad: Harmony. The Pythagoreans saw this in that the Hexad is the first marriage of an odd and even number (3 x 2); 5 may be the first combination of an even and an odd, but only through multiplication does the “marriage” occur. Pythagoreans also noted the harmony inherent in the “perfection” of 6. A number is “perfect” when the sum of its divisors, less itself, equals itself¹⁰. With the case of 6, the divisors are 1, 2, 3, and 6; less itself, the divisors of 6 are 1, 2, and 3, the sum of which is 6. Thus, the Hexad represents Perfection¹¹.

The Hexad is also known as the “Form of Forms.” Pythagoras identified that every group of three consecutive integers, beginning with 1 (ie. 1-3; 4-6; 7- 9; etc.), when added, equals 6; or equaled a number that when reduced equaled 6. For example:

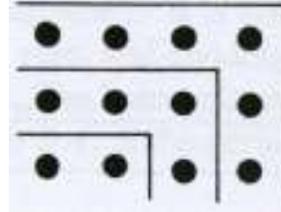
$$\begin{aligned}1 + 2 + 3 &= 6 \\4 + 5 + 6 &= 15; 1 + 5 = 6 \\7 + 8 + 9 &= 24; 2 + 4 = 6 \\10 + 11 + 12 &= 33; 3 + 3 = 6\end{aligned}$$

When we place the Hexad within a Masonic context, further elements of harmony are revealed. Specifically, it is through this method that various dichotomies of the Pythagorean Table of Opposites can be reconciled¹² when projected upon the Lodge and Lodge room.

Two sets of opposites can be considered in concert: even/odd and oblong/square. In order to better conceptualize the characteristics of number, the Pythagoreans often drew numbers as shapes. Even numbers could be drawn as Oblong shapes, and Odd numbers drawn as Squares (figs. 1 & 2).



(Figure 1)



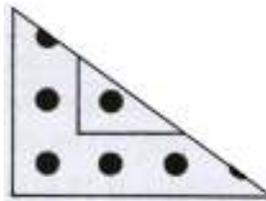
(Figure 2)

6 is even, and therefore 6 is oblong. The Wilkinson MS of 1727 contains the following:

Q. What is the form of your **Lodge**?

A. An Oblong Square¹³

But if one divides Figure 2 along its diagonal, another familiar shape appears, that being the 3-4-5 triangle of Pythagoras (fig. 3). By thus dividing the 6, we reveal the 5. From the Oblong, we derive the Square; from the Even we derive the Odd.



(Figure 3)

Also of note here, is that the Pythagorean table of Opposites notes a correspondence between Even/Oblong with the Female, and Odd/Square as Male. In 1724, *Grand Mystery of Freemasonry Discover'd* tells us:

Q. Why do Odds make a **Lodge**?

A. Because all Odds are Men's Advantage.¹⁴

But just as the Even yields the Odd and the Oblong yields the Square, the reverse is also true. For this, we need basic geometry. The area of a triangle is $\frac{1}{2}(\text{base})(\text{height})$. In the case of the 3-4-5 triangle, the area is equal to $\frac{1}{2}(3)(4)$, or 6. When applying the 3-4-5 triangle to the Table of Opposites, harmony is brought about via applied use of the Hexad with Masonic Ritual. Thus we find that the Lodge is associated with both odd/square/male **and** even/oblong/female.

Harmony is revealed when yet another name for the Hexad is discussed: "Wisdom." For this reflection of Harmony, we look directly to the Lodge Room. The East is the Seat of Wisdom, and the Entered Apprentice is taught that Wisdom is one of the three supports of a Lodge, along with Strength and Beauty. The West is the Seat of Harmony, which the Senior Warden instructs is the "strength and support of all institutions, but more especially of ours."¹⁵ Via the Masonic ritual itself, we see that "Harmony" and "Wisdom" are each synonymous with "support", and by pairing "Wisdom" and "Harmony" with cardinal points within the Lodge, we can also state that the East and West are synonymous. Thus, Harmony is brought about by bringing another two

opposite into equilibrium. Of course, East and West are not found on the Table of Opposites; but “Right” and “Left” are.

And so, by a combined application of Pythagorean number symbolism and Craft ritual, the totality of the harmony of the Hexad is brought into focus. When paired with Masonic usage, the Harmony of the Hexad reconciles the odd/even, oblong/square, male/female, and right/left dichotomies. The Pythagorean concepts of the Hexad unite polarities otherwise diametrically opposed. Recalling that Bro. Anderson stated that Pythagorean concepts stood as the foundation for Masonry, we can now re-read a second passage in the 1723 Constitutions with added Light:

“...whereby Masonry becomes the Center of Union, and the Means of conciliating true Friendship among Persons that must have remain’d at a perpetual Distance.”¹⁶

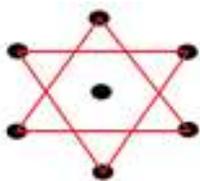
The Seven Stars

A curious collection of seven stars cast in the night sky is a Masonic symbol so ubiquitous so as to be rendered nearly invisible. The Lecture of the first Trestleboard states that these stars “have an allusion to as many regularly-made Masons, without which no Lodge is perfect”¹⁷. Mackey tells us that the seven stars represent “right and justice to the order and country”¹⁸. Others suggest a connection to the Pliades, along with all the associated astrological and astronomical connotations, as well as a reference to Revelations 1:16, “and he had in his right hand seven stars”¹⁹. Often, the stars are seen surrounding the moon, which stands opposite of the sun, in representation of the three lesser lights. Just as often, those seven stars scattered about the sky, seemingly at random, illustrating nighttime.

A third arrangement is of particular interest when approaching the subject from a Pythagorean perspective, that being six stars gathered around a central, seventh star.

This particular arrangement is seen as early as the mid-18th century²⁰. It is found on trestleboards, aprons, paintings, and exposures²¹. This arrangement of the seven stars may certainly possess the symbolic meaning of the other arrangements of the seven stars, but it can also be conceived of as yet another Pythagorean emblem of harmony. More precisely, it can be viewed as three other emblems of harmony, depending on how the stars are connected.

Point within a Circle



The first of these comes when the external stars are connected into two “interlacing triangles”. In this pattern, as the Seal of Solomon, the seven stars represent Harmony, for all of the reasons noted above. There is a secondary layer of symbolism within this particular design. The two triangles are comprised of a collective 360°, as is a circle. With the center star, we find revealed an encoded circumpunct, or a point within a circle.

Masonically, this symbol was presented with explicit meaning in 1730, when we read in the infamous *Masonry Dissected*:

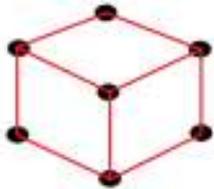
- Q. How many principles are there in Masonry? A. Four.
Q. What are they? A. Point, Line, Superficies, and Solid.
Q. Explain them. A. A Point the Centre (*round which the Mason cannot err*)...²²

The explanation of this symbol is expanded upon when the parallel lines are added:

“In all regular, well-formed, constituted Lodges, there is a point within a c...e round which a Mason cannot err; this c...e is bounded between North and South by two grand parallel lines... in going round this c...e, we must of necessity touch on both those parallel lines...”²³

In both of these instances, but in a more pronounced way with the parallel lines, the point within a circle represents balance, a true centeredness. As the Mason travels his life’s path, he will have the opportunity to explore one extreme or another, but in keeping himself upon that circle, in keeping himself always near and always equidistant from the center, he is a living demonstration of internal harmony.

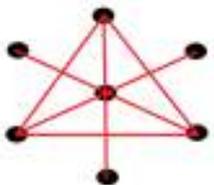
The Cube



The second symbol to emerge from the matrix of seven stars occurs when the points are joined as if they are the vertices of a cube, or *hexahedron*. Simply, the cube is a construct consisting of six sides, which represent a direct connection to the properties of the Hexad. Thus, the cube is another emblem representing harmony.

The cube has another important connotation. The Ancient Greeks credited Pythagoras with discovering at least some of what would come to be known as the Platonic solids. These solids are each comprised of a certain number of congruent faces, with the same number of faces converging at each of the vertices; there are only five such solids within Euclidian geometry. Plato (428 BC-348 BC) was a student of Pythagorean teachings, although not directly of Pythagoras himself. In his *Conversations with Timaeus*, Plato associated the Platonic solids with the four classical elements. In Platonist philosophy, the cube corresponded to the Earth. This connection is essential for understanding the third symbols embedded within the seven stars.

The Tetrahedron and the Pythagorean Y



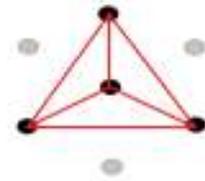
The final emblem is actually a combination of two emblems. To derive the first, connect the top-center, bottom-left, and bottom-right stars so as to form a triangle. Then connect the center star to each of the three vertices of

the triangle. In order to discern the meaning of this glyph, we need to consult the Pythagorean concept of the *Tetractys*.

The Tetractys are 10 points arranged as an equilateral triangle; one point comprising the top tier, then two, three, and four points comprising the subsequent tiers. To the Pythagoreans, the Tetractys was no less than a map of reality itself, illustrating the complexity that will inevitably grow from the source of all things, and the equally certain return to the source itself. Indeed, the Tetractys was, to the Pythagorean, “the font and root of eternal nature”.

Recalling that each discreet number has its own characteristics, we can deconstruct the Tetractys. It begins, as do all things, with the 1, or *Monad*. The Monad represents the very source of creation, the Divine progenitor. The 2, or *Duad*, represents “the other,” and introduces the concept of option. The *Triad*, or 3, represents consensus or commonality amidst polarity. Finally, the 4, the *Tetrad* symbolizes complexity and multiplicity. Yet along this progression, we see a return to the source, as 1, 2, 3, and 4 sums to 10, or the *Decad*. Just as the Hexad is the “form of forms” due to mathematical reduction, so too does the 10 reduce to 1 (1 + 0); thus we find the Decad as a reiteration of the Monad.

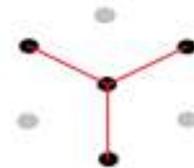
So important was this conceptualization of the universe, that the Pythagorean school used the Tetractys to map out other hierarchies of complexity. For instance, magnitude. Magnitude progresses from a Point (zero dimensions), to a Line (one dimension), to Superficies (two dimensions), to a Solid (three dimensions). Using the Tetractys as a model, these degrees of magnitude correspond to the Monad, Duad, Triad, and Tetrad, respectively—it bears repeating that these degrees also stood as the four “principles” of Masonry²⁴. The simplest three-dimensional, or “solid”, object is the Tetrahedron, which is drawn in precisely in the manner our stars are joined for the first part of this symbol.



Another use of the Tetractys was to arrange the classical elements into a hierarchy of complexity. Fire was the simplest, followed by Air, Water, and, lastly, Earth; these correspond to the Monad, Duad, Triad, and Tetrad, respectively.

And so: within the Tetractys model of complexity, there is a correspondence between the tetrahedron and Earth. As established above, Earth corresponds with the cube. Also established above, the cube corresponds with 6, and thus with the Hexad (or Seal of Solomon), and is thus representative of Harmony. As such, following the established chain of correspondences within the Pythagorean context—otherwise described in the Euclidian axiom “Things which are equal to the same are equal to each other”²⁵— the Tetrahedron is yet another representation of harmony.

The second star-construct, paired with the tetrahedron, is revealed when the upper-left, upper-right, and bottom star are each connected to the center star. The resultant Y-shape represents the teaching known as the “Pythagorean Y.”



To the lay person, the Pythagorean Y represents a personal choice in conduct: a life of leisure, or a life of labor and challenge. The easy path ultimately leads to a fall, be it from gluttony, sloth, arrogance, false confidence, or any other ill that comes from self-indulgence and avoidance of trial. The rigors of life, on the other hand—phrased Masonically as “the struggles of the ardent mind²⁶”—ultimately results in enlightenment²⁷. To continue:

...after his laborious ascent up a light of winding stairs, he can only approximate by the reception of an imperfect, and yet glorious award of the light which none but craftsmen ever saw²⁸.

But the esoteric lesson differs. Instead of representing an either/or decision stemming from a man’s base self, we see that the Y is truly a representation of man’s nature descending from the Creator, and man’s duty to answer to both aspects of his nature. Pythagoras admonished his students, “go not beyond the balance”²⁹. This axiom was manifested in the fact that Pythagoreans were active and contemplative; they were thinkers and doers, in equal parts to equal enjoyment. By eschewing either extreme, each Pythagorean has, in essence, subdued his passions, and in so doing achieved inner harmony.

Conclusion

Pythagorean thought was given great significance by Bro. . Anderson, but Pythagoras’ place in Craft lore was already well-established by 1723. Pythagoras is first found in a Masonic context in the Cooke MS, dated to c. 1450. He is briefly mentioned with regard to music, but is later credited with discovering the pillars upon which the seven Liberal Arts and Sciences were inscribed by the antediluvian Masons. It is therefore Pythagoras, that “great clerk”, who is responsible for propagating Grammar, Rhetoric, Logic, Arithmetic, Geometry, Music, and Astronomy after the flood. Pythagorean contributions to the Craft, its philosophy, and its symbolism have therefore been present for nearly six-hundred years.

Even today, echoes of Pythagorean thought are present within Freemasonry. Euclid’s 47th Proposition is one of our nine master’s emblems. Contemporary Masons ascribe the following meaning:

...it teaches us that as Speculative Masons *we are under a particular obligation to foster and promote the liberal arts and sciences.*³⁰

As long as we recall that it is Pythagoras who was “prov’d the Author” of Euclid’s 47th Proposition then we realize that today’s Master’s emblem charges us with promoting the arts and science just as Pythagoras himself did when he recovered those secrets from our antediluvian Brethren. Further, the broader indication is that we are always to remember and recognize the influence of ancient Pythagorean philosophy on contemporary Craft labor. With our minds thus keyed, we can examine our Craft symbolism from a freshly revealed perspective. Specifically with regard to the Seal of Solomon and the seven stars, we can infer guidance toward harmony: harmony within ourselves, harmony in our interactions with others, harmony with our Brethren, harmony within the Lodge, and harmony with the Great Architect.

¹ Anderson, James The Constitutions of the Freemasons Containing the History, Charges, Regulations, &c. of that most Ancient and Right Worthy Fraternity. London (1723) pp. 20-21

² Anderson, frontispiece

³ Known most widely for his mathematical contributions, Pythagoras of Samos (b. circa 570 BCE) was also a philosopher. He developed a school designed to aid his adherents to come to a greater understanding of the Divine source of all things. Focusing on numerical, geometrical, and harmonic manifestations of Deity, Pythagoreans sought enlightenment and balance. The Pythagorean Sourcebook and Library (Phanes Press, 1988), compiled and translated by Kenneth Sylvan Guthrie collects the extant documents of Pythagorean thought and teaching. Unless otherwise noted, the statements of Pythagorean thought are gathered from Guthrie.

⁴ Jones, Bernard. Freemasons' Guide and Compendium Nashville: Cumberland House. (2006) p. 520. See also, *The Tyler-Keystone* Brownell, John, et. al. Vol. XXI, No. 4, p. 72, 08/20/1906.

⁵ The earliest explicit reference to the Royal Arch Degree being conferred appears in 1744; see Fifield Dassigny Serious Enquiry into the Cause of the present Decay of Free-Masonry in the Kingdom of IRELAND. Edward Bate: Dublin (1744). There are arguments to suggest that some pre-1744 writings indicate the practice of the Royal Arch Degree; for a brief yet comprehensive overview of those arguments, please see Jones, pp. 494-496.

⁶ For multiple examples, please see MacNulty, W. Kirk. Freemasonry Symbols, Secrets, Significance London: Thames & Hudson. (2006) ; for the 1742 example, see Pietre-Stones Review of Freemasonry, <http://www.freemasons-freemasonry.com/TBs.html>

⁷ Middle Chamber Lecture (hereafter noted as "MCL")

⁸ MCL

⁹ MCL

¹⁰ The next perfect number after 6 is 28, then 496, then 8128. These were known to the Greeks. As of 2013, there are 48 known perfect numbers, the highest being 34,850,340 digits long (source: http://en.wikipedia.org/wiki/List_of_perfect_numbers) retrieved 2013.04.17

¹¹ See, Guthrie. See also The Theology of Arithmetic, attributed to Iamblichus, translated by Robin Waterfield (1988) Phanes: Grand Rapids, MI

¹² The Pythagorean Table of Opposites consists of the following dichotomies: finite/infinite, odd/even, one/many, right/left, rest/motion, straight/crooked, square/oblong, male/female, light/darkness, and good/evil.

¹³ Harry Carr & G.P. Jones (Eds). Early Masonic Catechisms London: Quator Coronati (1975) p. 130 (hereafter noted as "EMC"); emphasis added

¹⁴ EMC, p. 77; emphasis added

¹⁵ Vermont workings, emphasis added

¹⁶ Anderson, p. 50

¹⁷ Complete Workings (2012) Lewis Masonic: Surrey p. 68. See also Rees, Julian. Tracing Boards of the Three Degrees in Craft Masonry Explained Lewis Masonic: Surrey (2011) p. 22 for the Emulation Lecture

¹⁸ Mackey, Albert; Hughan, William James, Hawkins, Edward. An Encyclopedia of Freemasonry and Its Kindred Sciences. Vol. II. Masonic History Company: New York (1916) p. 519

¹⁹ Mackey, et. al., p. 684

²⁰ See MacNulty for various examples

²¹ For exposures, see Jachin and Boaz, or an Authentic Key to the Door of Free-Masonry. London: W. Nichol. (1762); for other examples, see MacNulty

²² EMC p. 164; italics in original. Please note that the magnitudes of geometry being referenced as "principles" dates to at least 1727, in the Wilkinson MS (ECM, p136), albeit with no further explanation

²³ Complete Workings, p. 200

²⁴ ECM, p. 164

²⁵ Simson, Robert , ed. The Elements of Euclid. Philadelphia: DeSilver, Thomas & Co. (1838) p. 8

²⁶ "Symbolism of the Fellowcraft Degree" Vermont Masonic Monitor

²⁷ See Guthrie p. 158 for illustration of the Pythagorean Y

²⁸ VT Masonic Monitor

²⁹ Guthrie, p. 159

³⁰ VT Masonic Monitor, emphasis added