

A View of
CONTEMPLATIVE GEOMETRY IN FREEMASONRY
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Part II

Preston's 'Masonic' Geometry

ref. AQC vols. 79, 82 & 85

Many things appear in the early manuscripts, exposures and rituals of the Craft which one would like to think have deeper symbolic or 'allegorical meaning or hidden mysteries.' The general rule of thumb tends to be that 'what you see is what you get.' Grand jurisdictions steadfastly and understandably do not come forward to give further meaning to the ritual beyond what is published or conveyed 'mouth to ear' in their Standard Work, though thousands of books and papers have been written in an attempt to fill in the perceived gaps towards revealing that which appears to be concealed.

Enter William Preston who, after many years of study, presented his Lecture on the First Degree on 21 May 1772. What Preston set forth to accomplish may perhaps be best expressed in his own words:

. . . that, as Master of Caledonian Lodge No. 325/134, he was led
"to enquire, with a more minute attention, into the contents of our various lectures. The rude and imperfect state in which I found some of them, the difficulties I encountered in my search after others, and the variety of modes established in our assemblies, rather discouraged me in my first attempt: persevering, however, in my design, I continued my pursuit; and with a few zealous friends to the cause, who had carefully preserved what ignorance and the degeneracy of a corrupt age had rejected as unintelligible and absurd, I diligently sought for the ancient and venerable Landmarks of the society." [*Illustrations of Masonry*, First Ed. 1772, pg. xx.]

History, of course, has shown that Bro. Preston's work was perhaps 'unintelligible or absurd' to some . . . or at least too long or difficult to present to the Craft. At least, however, we are left with a body of Work that gives us some insight into some of the possible thoughts or intentions of this particular writer relative to some of the 'meanings' of the catechismal Work.

This body of Work, not to be confused with his *Illustrations of Masonry*, 1772, are collectively known as "The Lectures of English Craft Freemasonry," of which there are several different versions. An excellent compilation of these Lectures was prepared by Bro. P. R. James [1966-1972] as per the above AQC references, which I would highly recommend be sought out by those seeking further Light in Masonry.

Citing, for the present, only portions of the "Second Lecture" [Fellow-Craft], there are matters therein which are quite relevant to our present discussion on 'Masonic geometry.'

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William Preston's Second Lecture of Free Masonry
Geometry Excerpts

Freemasonry is sometimes noted as a 'System of Degrees that teaches its Brothers . . . BY Degrees.' Obviously the new EA has not yet been instructed and is enjoined to 'wear his flap up.' The FC, on the other hand has advanced one material Point in the Craft. Bro. P. R. James notes in his AQC 83 Preston paper that ". . . the Second Lecture traces the new Fellowcraft's course to the MC in a series of discussions upon factual matters *which become more and more technical, abstract and mystical.*"

It is perhaps quite common to think of the Craft Degrees as a homogenous mass of 'stuff' to be intoned, each equally, in a mechanistic presentation every two weeks or so until the 'Sublime Degree' is attained. Many Brothers get so far as to receive their 50-year Pins [deservedly so] without the realization that the progressive lessons of the Work could actually lead them to "that undiscovered country from whose borne no traveler returns," and that he may indeed receive Master's wages and travel in foreign countries were he to actually engage in the Work, rather

than to just memorize it by rote. Would one purchase a set of architect's plans and study them for 50 years . . . and never build the house? Perhaps some . . . or many . . . may.

SECOND DEGREE
SECOND SECTION
CLAUSE III

[caps, brackets and italics added for emphasis]

1. Why were you passed? For the sake of Geometry.
2. Why? Because originally Masonry and Geometry must have been synonymous terms as they were taken for the sciences in general: but in the progress of civilization and improvement in knowledge Geometry was limited to a certain part of science though still considered as essential to all and symbolical of knowledge.
3. What is Geometry? Simply considering the act of measuring.
4. What is its origin? We cannot trace in history its beginnings but by the Egyptians . . . [and here follows the 'Euclidian' origins story, as found in the Old Constitutions & Charges].
5. What were the consequences? [the Euclidian story continued, with the ultimate 'diffusion' of geometry to Europe & its improvement there.]
6. Why is Geometry part of our system? Because architecture, the basis of many sciences, supposes a sufficient knowledge of Geometry to understand the art of building and the other subjects to which Craft Masons direct their attention.
7. What is the proper subject of Geometry? Magnitude and extension, and for this reason we **gradually** proceed in our researches **from the point to the line, from the line to the superficies and from the superficies to the solid.**
8. What do the properties of Geometry include? All the operations of modern inventions as algebra, conic sections, spherics, statics; in short every science where **proportions** are considered.
- 9 thru 13 expand upon number 8, and are of such character as to most likely be felt to be superfluous to the Craft story and usage. For the most part I would agree with the discontinuance of the lecture material here.
14. What advantages are there? Thus assisted [by Geometry] we can trace the nature and measure of an **asymptotic space which is a species of knowledge at once wonderful and comprehensive, for while it displays the mighty powers of the Great Architect of the Universe, it equally exhibits the spiritual nature of the soul of Man.**
[note: This question is also somewhat abstruse, but in spite of this there are considerable merits in the subject of this question that the contemplative Brother would find relevant.]
15. Of what does **asymptotic** space consist? The asymptotic space consists of an extension, actually infinite, comprehended between a right line and a curve, which though continually approaching each other never meet.
16. Illustrate this. These lines though infinitely produced are found by Geometry to be equal to a O or other determined figure and may be brought within the measure and calculation of the sciences, **while the mind more capacious and extensive is enabled to comprehend their utmost dimensions.**
17. What important truth is derived from this? **That Man** ['capital M, man'] **by the light of the 'mind' can penetrate beyond infinity [eternity] and can discover what no sensible experience can bring to his knowledge. It proves to his firm conviction that besides his material faculties of perception and imagination, which proceed from the organs of the body, there is in Man a power independent of these, separate from matter and by no means deriving in its origin from the body, whence he is enabled to judge, reason and determine.**
18. What is the moral elucidation? By the theory of **proportions** we trace nature through their [sic – this is normally expressed *as Nature through her*] various *windings* and discover the Wisdom, Power and Goodness of the Supreme Architect.
- 19 thru 23 continues with an oration-style of concerning the effects and consequences of the above, with illustrations of the 'symmetry of the universe.'

At the end of each Clause there is normally a summary, which in the case of the above is:

Thus we prove in elucidating Geometry that when industry and talents are exerted to perfect the system of proportions in imitation of the divine plan, the lines laid down, when improved by Geometry, will produce works will attract the respect and admiration of ages.

* * * * *

At this juncture of the discussion, we should pause for a moment to ask, “Why would we be considering here only the geometric clauses of the ritual, when surely in the three Craft Degrees there is obviously so much more to consider?”

The simple answer would be rather obvious, in that this discussion is on that very subject. It would, however, seem that from its inception Freemasonry has come straight to the ‘point’ in singling out Geometry as being a central theme of the Craft. In a most precise summary of itself, Freemasonry declares in its Middle Chamber:

*Behold the letter G suspended in the East.
It is the initial of Geometry, the basis of Freemasonry.*

Strange as it may seem, a considerable amount of the ritual, other than this simple declaration, may also be related in geometric expression, some of which will be discussed in these pages. Much of it has been discussed elsewhere . . . little if any of which has been put forth by any Grand jurisdiction. This would, of course, throw us to the winds of the speculative side of the Craft, or as QCCC would term it . . . the ‘unauthentic’ school of Masonic research. At best, we will explore some possible ‘correspondences’ between Masonic ritual and geometry and leave it to the gentle reader to determine what sits comfortably with them.

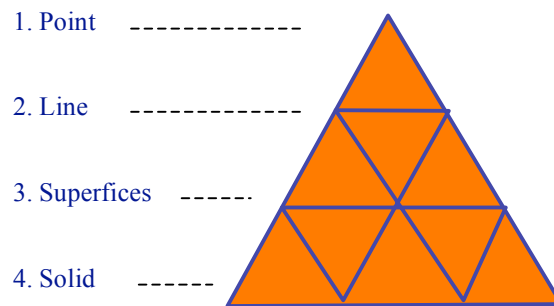
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Continuing, then, with Preston’s Lecture, we will next visit the

SECOND DEGREE
THIRD SECTION
CLAUSE V

1. How did he approach the Middle Chamber? By ascending the winding staircase and then being led through the avenue which led to the entrance of the Middle Chamber.
2. Who guarded it? A second guard, a F.C.
3. What was his duty? To demand of all who approached it the proofs of merit and instruct them how to advance by 3 steps.
4. What did he demand? The additional proofs established by Solomon as the criterion of moral rectitude and groundwork of all claim to preferment, for talents however eminent when not supported by virtue are more injurious than beneficial to society.
5. What is the test? It is symbolically represented by the square.
6. What is its construction? Of a right angle formed by the intersection of 2 lines falling perpendicularly on each other.
7. How is it considered? As a comparative measure to all other angles and therefore by it Geometry is symbolized. [n.b. It took awhile to get there . . . but here we are at our old friend geometry again . . .]
8. How is it used? In making lines square to other lines, proving perpendiculars and trying squareness.
9. What is its value? In the art of building it is the most useful of all mathematical instruments and enables the operative mason to form and fashion his work. In morals its typical representation extends equally to the monarch on the throne and the peasant in the cottage and teaches us to form and fashion our lives and instructs us in that universal law of nature deeply implanted in the heart of every man and which is the grand tenet of our profession: Do unto others as you would wish of every man to do unto you and live upon the square with all mankind.
10. What were the decorations of the Middle Chamber? **The decorations of this Chamber were all emblematical of the abstract sciences. The figures of Geometry were depicted and the 5 Platonic bodies and the figures by which the Tetractys are explained.** [For those American Brothers, who may be wondering where these emblems may be found in their current rituals, I would respectfully refer them to the Holy Royal Arch, as practiced in, for example, England. [ref. e.g. the “Aldersgate Royal Arch Ritual” or the “Worcestershire” where these emblems still appear.]

11. What struck his attention? The splendour that adorned the members of the Council, the decorations of the chamber and the sacred sign.
12. To what does it refer? It is emblem of El Shaddai and represents the omnipotence of the Deity.
13. Where was it placed? In the center of the chamber.
14. Why? To represent the Omnipotent as the Supreme Judge of the world under Whose auspicious influence the Council was assembled to judge the merits of the candidate.
15. What did he then discover? All the illustrious professors of the sciences who in regular rotation attended the Council in order to investigate the rights of the claimants for the royal bounty.
16. What is understood by the Tetractys? The Tetractys depicted in this Chamber is called the Pythagorean emblem and consists of a triangle subdivided in 10 points and into 9 smaller triangles.



[Note: this figure has been graphically represented in many other ways]

17. What does it elucidate? This emblem powerfully elucidates the mystical relation between numerical and geometrical symbols.
 - [Point] The first triangles represent unity, called by a Greek name, **monad**, and is denominated a **point** in geometry, each being the principle by the multiplication of which all combinations of forms and numbers are respectively generated.
 - [Line] The next two points are denominated **duad**, representing the No. 2 and answers to the geometrical **line**, which consists of length without breadth and is bounded by two extreme points.
 - [Superfices] The three following points are called a **triad**, representing the No. 3 and may be considered as having an indissoluble relation to a **superfices**, which consists of length and breadth when contemplated and substracted from thickness [no thickness]. This relation is proved by the consideration that no rectilinear surface can have less than 3 distinct points of extension.
 - [Solid] The 4 points at the base, denoting the No. 4, have similar relation to a solid wherein are combined the principles of length, breadth and thickness in as much as no solid can have less than 4 extreme points of boundary. And for as much as all our abstract ideas are analytically derived and synthetically included in that of a solid body, the Pythagoreans affirmed that a Tetractys, or No. 4, to be [the] No. of completion in all things and the more so because in its progressive generations is completed the **decad** or No. 10 the recurring series by which all arithmetical calculations are effected.

$$[1 + 2 + 3 + 4 = 10]$$

The Pythagorean philosophers therefore and their ancestors considered a Tetractys or No. 4:

1st as containing the decad;

2nd as completing an entire and perfect triangle;

3rd as comprising the 4 great principles of arithmetic and geometry;

4th as representing in its several points the **4 elements** of A[ir], F[ire], W[ater] and E[arth],

and collectively the whole system of the universe;

lastly as separately typifying the 4 external principles of existence, generation, emanation, creation and preservation, thence collectively denoting the G. A. of the U. Wherefore to swear by the Tetractys was their most sacred and inviolate oath.

* * * * *

In the FOURTH SECTION, CLAUSE I, we may find the following further MC explanations:

9. What were the principal ornaments? There were many relating to the rudiments of the several sciences and the most important propositions of Geometry – *the theory of proportions and the relative qualities and powers of numbers which concealed truths of the greatest importance.*

10. What were the Platonic bodies? The regular system of geometrical proportions being public since the compilation of them was made by Euclid [Book XIII], we shall give only an idea of the 5 regular solids called the Platonic bodies as they refer to symbolic Geometry;

1st the *Triadone* [Tetrahedron] or pyramid contained under 4 equal and equilateral triangles representing Fire;
[* 12. Pyramid – contained by planes, which is constructed from one plane to one point. Note: Euclid does not otherwise, separately, Define the ‘tetrahedron.’]

2nd [the] *Hexadron* contained under 6 such triangles representing water;
[* 25. Cube or Hexahedron – 6 equal squares.]

[** “To **earth**, then, let us assign the **cubical** form; for earth is the most immovable of the four and the most plastic of all bodies, and that which has the most stable bases must of necessity be of such a nature.”]

3rd the *Octriadon* contained under 8 such triangles and representing Air;
[* 26. Octahedron – 8 equal and equilateral triangles.]

4th the *Eicosiadron* contained under 6 squares and representing Earth.
[* 27. Icosahedron – 20 equal and equilateral triangles.]

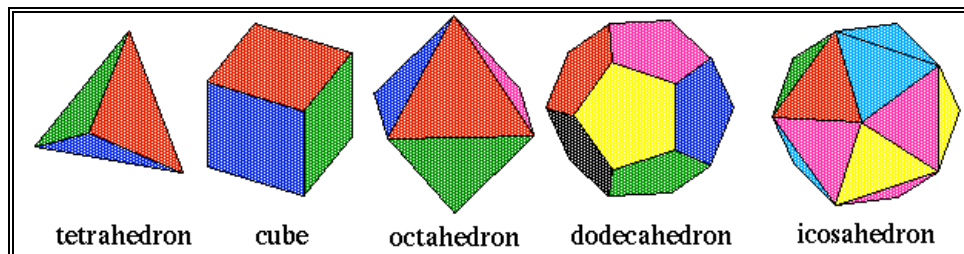
5th the *Dodikiadron* [Dodecahedron] under 12 equal and equilateral pentagram, representing the whole system of the Universe.

[* 28. Dodecahedron – 12 equal, equilateral, and equiangular pentagons.]

* The above text in brackets [] appears as the Definition Nos. in Euclid’s Book XI, each beginning with “a solid figure contained by . . .” followed by the data given.

** This text is from Jowett’s *The Dialogues of Plato*, vol. II, “Timaeus.”

From the added notes, you may see that the Preston Lectures are somewhat at variance with Euclid’s Definitions and with Plato. See further discussion on this below.



Fire Earth Air ‘Quintessence’ Water

[ref. also Harry Mendoza “The Platonic Bodies and Royal Arch Breast Jewel,”
AQC, vol. 86, 1973, pg. 329, for his assigning of these Elements to the above
Platonic Solids, which to the best of my knowledge agrees with others.
‘Quintessence,’ is also called ‘the Sphere of the Universe or Cosmos’ by some writers.]

It would appear from the above Preston Lecture that there may have been some ‘confusion in the Craft’ on the matter of the Platonic Solids. At this date further research would be needed to determine if Bro. Preston was the root of this confusion, or if later copyists recorded Preston’s original material incorrectly. For example, a six-sided polygon is the Cube, not the Octriadon [‘oct’ = eight] as given above, and this six-sided polygon has for each face a ‘square,’ not a triangle. The 4th polygon given attributed to Preston is the *Eicosiadron*, which he describes as a ‘Cube’ [which it is not], containing 6 squares. An Icosahedron, however, is a polygon of 20 triangles.

All of this being said, and of us even finding reference to the Platonic Solids among the ritual of Freemasonry in the first place, we might ask such things as:

- Do these Platonic Solids have anything to do with Freemasonry in the first place?
- If they do, why would this be the case and why do we not hear more of this from our Grand jurisdictions?

- Where, other than in Preston's Lectures is there reference to these Platonic Solids and Elements?
- Where would Freemasonry have come upon the usage of these Platonic Solids as a matter of Masonic interest?

This would take us back to the basis of Freemasonry . . . geometry. It would also take us to the Holy Royal Arch, where the Platonic Solids are specifically a part of this degree in the British system, among others. Let us first, however, go even further back in time to some of the pioneers of this 'geometry.'

Post-Preston Allusions to Geometry

Again, the present discussion is not directed towards the history of ritual . . . there are many fine books and papers on this subject, but geometry did survive in essentially the same context as it may be found before Preston.

Part III

Fra Luca Pacioli and Others . . .

