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ARTICLE 35

The Tree of Life Nature of the Sri Yantra and Some of its Scientific Meanings

by

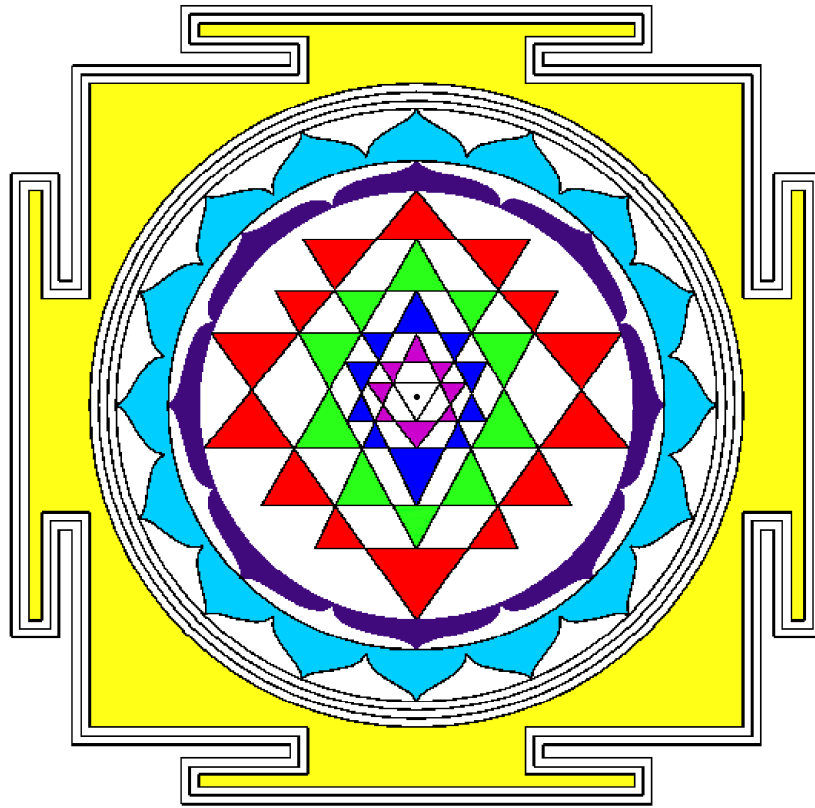
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Abstract

Revered by Hindus as the most sacred of the yantras, the Sri Yantra is said to represent the process of unfolding of Divine Creation. This article confirms their belief by correlating the Sri Yantra with the Tree of Life. The first three layers of triangles have 168 geometrical elements comprising 84 edges and 84 vertices & triangles. As discussed in many previous articles, this number is the structural parameter of the $E_8 \times E_8$ heterotic superstring. The numbers of different types of edges and vertices in these layers are exactly the same as the numbers of various types of non-zero roots making up the 168 non-zero roots of the superstring gauge symmetry group E_8 that do not belong to its subgroup E_6 . The 48 geometrical elements in the first layer of triangles consist of eight groups of six geometrical elements. This 8×6 pattern has parallels in many other holistic systems discussed in previous articles. The Sri Yantra has 260 geometrical elements, showing how it is prescribed by the Godname YAHWEH, whose gematria number value is 26. There are 260 geometrical elements in the seven overlapping Trees of Life that map the seven planes of consciousness. The Sri Yantra is also equivalent to the inner form of the Tree of Life, which has 260 yods outside its root edge when the sectors of its seven polygons are tetractyses. When each is divided into three triangles, the 14 triangles of the fourth layer have 168 geometrical elements and the 28 triangles of the first three layers have 336 elements. These numbers are the numbers of circularly polarised oscillations in, respectively, a half-revolution and a whole revolution of each curve making up the $E_8 \times E_8$ heterotic superstring. They correspond to the 168 automorphisms of the Klein Quartic and to its 336 automorphisms and anti-automorphisms. There are also 336 yods on the edges of the 42 triangles in the four layers. The 70 vertices of the 2-d Sri Yantra correspond to the 70 yods of the outer Tree of Life constructed from tetractyses. The 236 geometrical elements making up the four layers correspond to the 236 yods on the boundaries of the 14 polygons in the inner Tree of Life. The 2-d Sri Yantra is equivalent to the 120 Polyhedron with 362 geometrical elements in its faces because its four layers of triangles have 362 yods. The 8:6 division of tips of triangles in the fourth layer reflects the eight Pythagorean and six non-Pythagorean notes in the seven musical scales. The numbers in Plato's Lambda appear within in the Sri Yantra in its nine basic triangles regarded as tetractyses. The seven positive and seven negative points of these Shiva and Shakti triangles symbolize the seven Yang and the seven Yin acupuncture meridians. They also signify the seven notes and their complements that make up the seven musical scales.



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The 42 triangles in the four levels have 84 vertices and 126 edges. The Godname EHYEH (see Table 2) prescribes the number of triangles because 42 is the **21st** even integer. It prescribes the number of edges because 126 is the sum of the values of all the possible combinations of the three letters A, H & I in AHIH:

$$\begin{array}{rcl}
 & A = 1, H = 5, I = 10 & \\
 1. & A + H + I & = 16 \\
 2. & AH + HI + AI + HH & = 42 \\
 3. & AHI + HIH + AHH & = 47 \\
 4. & AHIH & = \underline{21} \\
 & \text{Total} & = \underline{126}
 \end{array}$$

The number of vertices is 84, where

$$84 = 1^2 + 3^2 + 5^2 + 7^2.$$

The number of geometrical elements is 252, which is the 126th even integer.

The first three levels have 84 edges, 56 vertices and 28 triangles, that is, 84 vertices and triangles, totalling **168** geometrical elements. This equal 84:84 division of the number value **168** of *Cholem Yesodeth*, Mundane Chakra of Malkuth, has been encountered in many previous articles. Examples are:

1. Article 15,¹ which discussed the 84 permutations of pairs and triplets of octonions belonging to the seven 3-tuples of octonions (e_i, e_{i+1}, e_{i+3}) and the 84 permutations of their inverses;
2. Article 18,² which discussed the I Ching table of **64** hexagrams and the 28 hexagrams on either side of its diagonal. Each hexagram is a pair of trigrams, so that each set of 28 off-diagonal hexagrams has ($28 \times 2 \times 3 = \mathbf{168}$) lines and broken lines. Each set comprises 84 lines and 84 broken lines;
3. Article 21,³ which discussed the 84 hyperbolic triangles in each of the two types of seven similar slices of the Klein Configuration, the diagram whose **168** hyperbolic triangles represent the **168** automorphisms of the equation known to mathematicians as the Klein Quartic;
4. Article 16,⁴ which discussed, firstly, the 84 repetitions of the Pythagorean-valued, rising intervals between the notes of the seven types of musical scales and their 84 falling intervals (pp. 17–18), and, secondly, the 84 yods belonging to the first four enfolded polygons enfolded in each half of the inner Tree of Life that either are not centres of polygons or do not coincide with Sephiroth (pp. 23–24).
5. Article 33,⁵ which found that the lowest five of the seven polygons formed by vertices of the disdyakis triacontahedron have 84 vertices & triangles and 84 edges.

The 84:84 division is an indication that the Sri Yantra constitutes sacred geometry that is isomorphic to other systems of sacred geometry. This conclusion is spectacularly

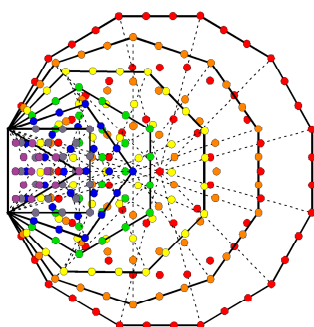


Figure 2. The seven enfolded polygons of the inner Tree of Life have 260 yods outside their shared root edge.

confirmed by the fact that, together with the eight geometrical elements in the central triangle and bindu, the Sri Yantra has 260 geometrical elements. This is the number of yods outside the root edge of the seven enfolded polygons making up the inner form of the Tree of Life when their 47 sectors are turned into tetractyses (Fig. 2). The Godname YAHWEH with number value **26**, which expresses the creative power of God, prescribes how many geometrical elements the Sri Yantra comprises.

The **168** elements of the first three layers comprise 56 vertices, 84 edges and 28 triangles. The 56 vertices consist of 28 that form the bases of the triangles and 28 that are their apices. The 84 edges consist of 28 that are bases of outward pointing triangles and 28 pairs of edges forming their points. Hence, the composition of the **168** elements is:

56 vertices = 28 base vertices + 28 apices
 28 base edges
 28 edges
 28 edges
 28 triangles

Compare this with the forms of the 8-tuples and their numbers representing the **168** non-zero roots of the superstring gauge symmetry group E_8 that are not also non-zero roots of its exceptional subgroup E_6 :

(1, 1, 0, 0, 0, 0, 0, 0) and all permutations. Number = $\binom{8}{2} = 28$;
 (-1, -1, 0, 0, 0, 0, 0, 0) and all permutations. Number = $\binom{8}{2} = 28$;
 (1, -1, 0, 0, 0, 0, 0, 0) and all permutations. Number = $2 \times \binom{8}{2} = 56$;
 $(-\frac{1}{2}, -\frac{1}{2}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2})$ and all permutations. Number = $\binom{8}{2} = 28$;
 $(-\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}, \frac{1}{2}, \frac{1}{2})$ and all permutations. Number = $\binom{8}{2} = 28$;

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We find that the numbers of types of geometrical elements making up the first three layers of the Sri Yantra are the same as the numbers of different 8-tuples of non-zero roots belonging to E_8 but not to E_6 . The geometry of the 28 triangles in these three layers is analogous to the permutations of 8-tuples representing these non-zero roots!

The 43 triangles have **129** edges, where **129** is the number value of YAHWEH SABAOTH, Godname of Netzach. The innermost triangle consists of two edges that meet at the middle of an edge of the lowest triangle of the fourth layer and one edge that joins

The 84 yods up to the top of the lowest Tree of Life correspond to the 84 vertices of the four layers of triangles in the 3-d Sri Yantra. The **48** yods up to Chesed, the first Sephirah of Construction, correspond to the **48** vertices in the 3rd & 4th layers of triangles. The **36** yods above Chesed correspond to the **36** vertices in the first two layers of triangles.

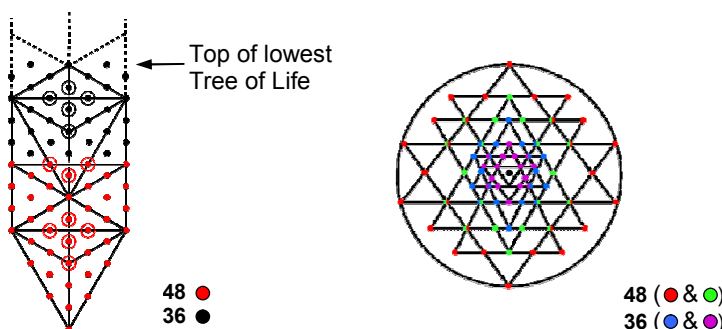


Figure 3. The equivalence of the 84 yods up to the top of the 1-tree and the 84 vertices of the 42 triangles in the 3-d Sri Yantra.

vertices of triangles in that layer, which is composed of 24 edges. The 27 edges of the central triangle and first layer therefore divide into (26+1) edges. This means that the **129** edges consist of **26** edges of the central triangle and first layer and **103** edges of the central triangle and other three layers. **26** is the number value of YAHWEH and **103** is the number value of SABAOTH.

The first layer has **48** geometrical elements consisting of eight pairs of vertices, eight triplets of edges and eight triangles, that is, *eight groups of six elements*. **48** is the number value of *Kokab*, the Mundane Chakra of Hod. The third & fourth layers of

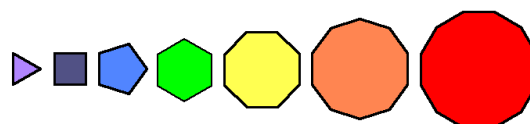


Figure 4. The **48** corners of the seven regular polygons making up each half of the inner Tree of Life.

triangles have **48** vertices and the first & second layers have **36** vertices (Fig. 3). They correspond to the **48** yods up to Chesed of the 1-tree and the **36** yods above it. The seven separate polygons in the inner Tree of Life have **48** corners and seven centres (Fig. 4). These correspond to the **48** elements of the first layer of triangles and to the seven elements of the central triangles.

The bindu point at the centre of the Sri Yantra is surrounded by **87** vertices of 43 triangles with **129** edges, that is, by (87+129=216) vertices and edges. **216** is the number value of Geburah and **87** is the number value of *Levanah*, the Mundane Chakra of Yesod. 126

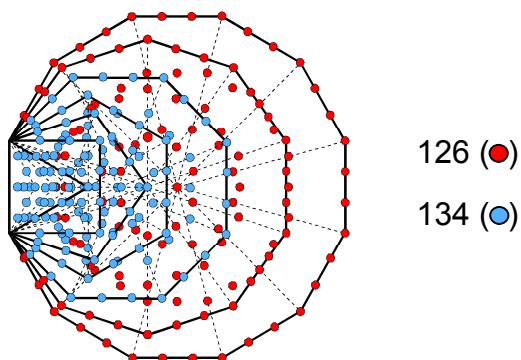


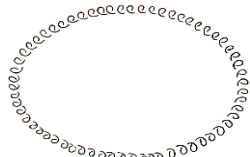
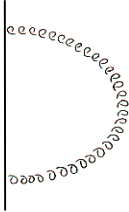
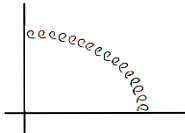
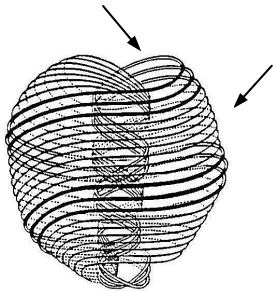
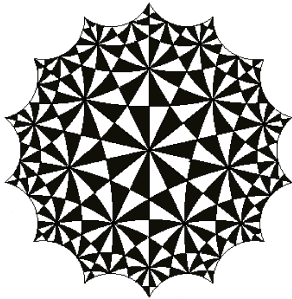
Figure 5. The 126 yods in the last two polygons correspond to the 126 edges of triangles in the Sri Yantra. The 134 yods in the first five polygons correspond to its 134 remaining geometrical elements.

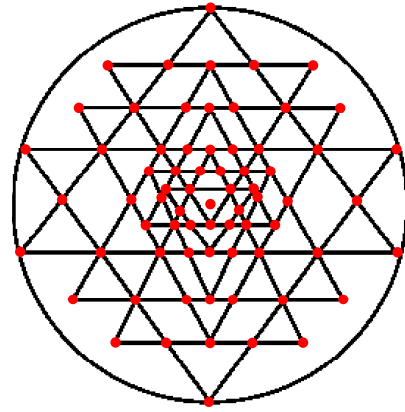
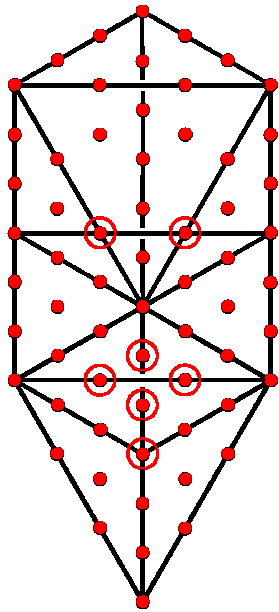
edges and 126 vertices and triangles in the four layers of triangles surround the bindu. Including the innermost triangle, the 260 geometrical elements are made up of 126 edges of the four layers of triangles and 134 geometrical elements made up of 88 vertices, three edges and 43 triangles. This 126:134 division is reflected in the 260 yods outside the root edge of the seven enfolded polygons as the 126 yods in the decagon and dodecagon and as the 134 yods in the first five polygons (Fig. 5). It is further confirmation of the Tree of Life nature of the Sri Yantra. Corresponding to its 88 vertices and **129** edges are the 88 edges of the 47 sectors of the seven enfolded polygons in the inner Tree of Life and their **129** vertices and edges.

2. Sri Yantra with triangles divided into sectors

Suppose that each triangle in the Sri Yantra is divided into its sectors. Table 3 below displays the numbers of resulting vertices, edges & triangles.

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part of the superstring that is the counterpart of the Supernal Triad of Kether, Chokmah and Binah, or Shiva, Brahma and Vishnu. The counterpart of the 504 geometrical elements in its four layers of triangles is the 504 oscillations in half a revolution of its three major whorls.

If the triangles are divided into three triangles and then each of the latter is three triangles, it is found that the four layers of triangles have 252 vertices, **630** edges and 378 triangles, totalling **1260** geometrical elements. This is the number value of *Tarshishim*, the Order of Angels assigned to Netzach.

If the 3-dimensional Sri Yantra is projected onto a sheet, the numbers of edges and triangles are unchanged but the number of vertices is reduced (Table 4). As before, the fourth layer has 28 vertices. The third layer has 12 vertices instead of 20 vertices, the second layer has 16 vertices instead of 20 vertices and the first layer has 12 vertices instead of 16. The projection of the four layers now comprises 68 vertices instead of 84, that is, 16 fewer vertices. The innermost triangle adds one vertex. Including the bindu, the

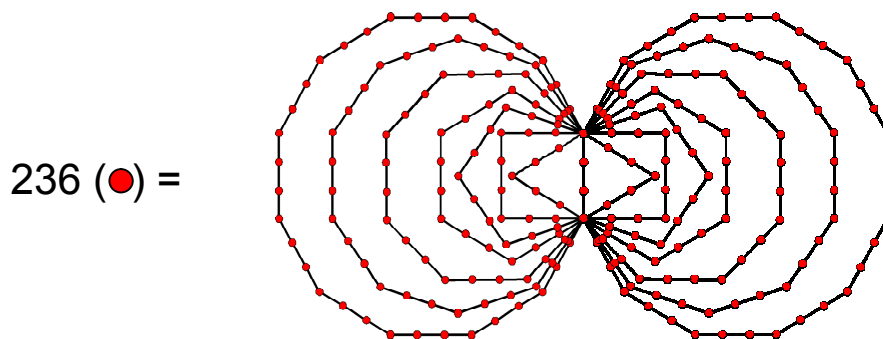


Figure 9. The number of yods shaping the inner Tree of Tree is the number of geometrical elements in the four layers of the Sri Yantra.

projected Sri Yantra therefore has $(1+1+68=70)$ vertices. This is the number of yods in the Tree of Life when its 16 triangles are turned into tetractyses (Fig. 8). It is also the number of corners of the two sets of seven enfolded polygons. The two ends of the root edge correspond to the bindu and the lowest vertex of the central triangle. In each case, the two points do not shape the holistic structure because they represent its seed source, in the latter case the bindu being an isolated point and the lowest vertex being not at a corner of a triangle but at the midpoint of the edge of one. The 68 vertices of the four layers of triangles correspond to the 68 corners of the 14 polygons outside their shared root edge.

Instead of having 252 geometrical elements (see Table 1), the four layers of triangles now have 16 fewer, i.e., 236 elements. This is the number of yods on the boundaries of both sets of seven enfolded polygons (Fig. 9). As in the 3-dimensional case, the four layers of triangles in the 2-dimensional Sri Yantra have 126 edges of 42 triangles. Now, however, it has $(68+126+42=236)$ geometrical elements. The central triangle adds one vertex and three edges but not a triangular area because it has a point at its centre. Including this bindu, the 2-dimensional Sri Yantra has $(236+1+3+1=241)$ geometrical elements. In other words, 240 geometrical elements surround the bindu. **168** of these are either edges or triangles (see Table 1) and the remaining **72** elements consist of the 68 vertices of the 42 triangles, the single vertex of the central triangle unshared with other triangles, its three edges and the bindu. This property is remarkable because the division: $240 = 72 + 168$ corresponds in the superstring gauge symmetry group E_8 to the 72 non-

zero roots of E_6 and the remaining **168** non-zero roots of E_8 . The geometrical composition of the 2-dimensional Sri Yantra therefore reflects the root composition of E_8 and its subgroup E_6 .

Seven overlapping Trees of Life have 47 Sephirothic emanations (called “Sephirothic levels,” or SLs). There are 43 SLs up to Chesed of the seventh tree, the formative, starting point of the emanation of the seven Sephiroth of Construction, each mapped by a tree. This is the number of triangles in the Sri Yantra (Fig. 10). Each triangle symbolizes

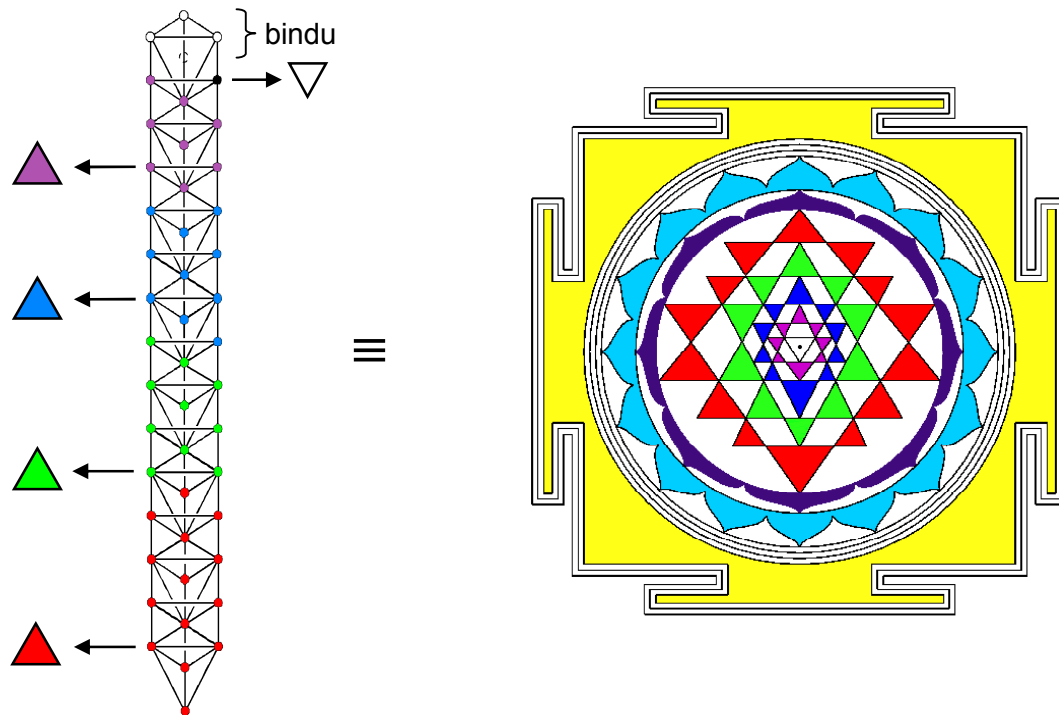


Figure 10. Equivalence of the Sri Yantra and the seven Trees of Life that map the seven planes of consciousness.

one of the seven-fold differentiations of the seven Sephiroth of Construction. Each tree maps one of the seven planes of consciousness: physical, astral, mental, buddhic, atmic, anupadaka and adi plane. As all the spiritual realms as varieties of consciousness symbolized by triangles emerge from the Absolute symbolized by the bindu, so successive SLs emanate from the Supernal Triad of the highest tree. The central triangle symbolizes the commencement of ‘objective’ existence — not in a physical sense but in the metaphysical sense of separation from the subjective unity of God symbolized by the bindu point of the Sri Yantra and by the Supernal Triad at the top of the first Tree of Life.

Spectacular confirmation that the Sri Yantra is equivalent to seven overlapping Trees of Life comes from considering the geometrical composition of a set of n overlapping Trees:

Number of vertices of triangles $\equiv S(n) = 6n + 4$.

Number of edges of triangles $\equiv E(n) = 16n + 6$.

Number of triangles $\equiv T(n) = 12n + 4$.

Number of tetrahedra $\equiv t(n) = n + 1$.

Number of geometrical elements in n Trees of Life $= S(n) + E(n) + T(n) + t(n) = 35n + 15$. Hence, seven Trees of Life have 260 geometrical elements made up of 46 vertices ($S(7)$), 118 edges ($E(7)$), 88 triangles ($T(7)$) and eight tetrahedra ($t(7)$). Compare this with the

composition of the Sri Yantra indicated in Table 1: 260 geometrical elements comprising 88 vertices, **129** edges and 43 triangles. Amazingly, both the Sri Yantra and seven Trees of Life have the same number of geometrical elements! The latter has 252 vertices, edges and triangles — the same number that the four layers of triangles have. The eight elements possessed by the bindu and innermost triangle correspond to the eight tetrahedra in the seven Trees of Life. The number 88 applies to vertices in the Sri Yantra and to triangles in the seven Trees of Life. What is so significant here is not only that both structures have the same *number* of geometrical elements but also that this number is 260 — the number of yods in **26** tetractyses and the *number of yods needed to construct the inner form of the Tree of Life, starting from the root edge* (see Fig. 5). This is additional evidence that the Sri Yantra represents the seven Trees of Life mapping the seven planes of consciousness.

In my book “The Universal Nature of Sacred Geometry and its Scientific Meaning,”⁸ I showed how, when considered separately, the seven polygons making up the inner Tree of Life have, when constructed from tetractyses, as many yods as there are SLs up to the first Sephirah of Construction of the **49th** Tree. In other words, the seven enfolded polygons encode seven overlapping Trees and the seven separate polygons encode **49** overlapping Trees. Each plane of consciousness mapped by a Tree of Life has seven subplanes that, too, can be mapped by a Tree of Life, making ($7 \times 7 = 49$) Trees. The Sri Yantra is a map of the seven planes of consciousness that can be mapped both by seven Trees and by **49** Trees. The latter is simply the seven-fold differentiation of the former.

3. Yod composition of the Sri Yantra

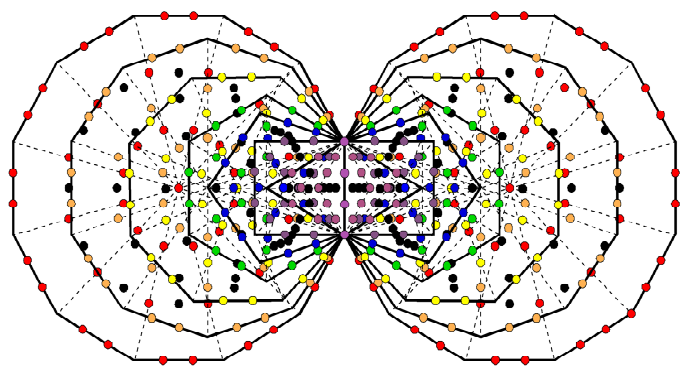
Suppose that each of the 43 triangles in the Sri Yantra is turned into a tetractys. Table 5 shows the numbers of yods in each layer.

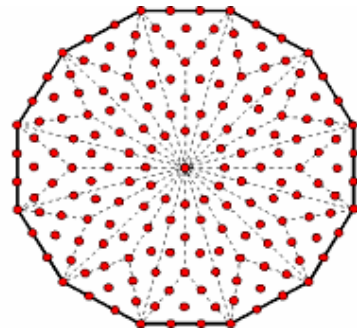
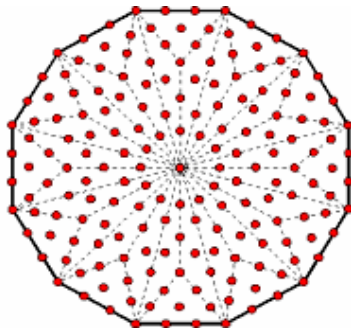
Table 5. Yod population of the 3-d Sri Yantra (triangles as tetractyses).

	Vertices	Hexagonal yods on edges	Yods inside triangles	Total
Bindu	1	0	0	1
	3	$3 \times 2 = 6$	1	10
Subtotal	4	6	1	11
	$8 \times 2 = 16$	$8 \times 3 \times 2 = 48$	8	72
	$10 \times 2 = 20$	$10 \times 3 \times 2 = 60$	10	90
	$10 \times 2 = 20$	$10 \times 3 \times 2 = 60$	10	90
	$14 \times 2 = 28$	$14 \times 3 \times 2 = 84$	14	126
Subtotal	84	252	42	378
Total	88	258	43	389

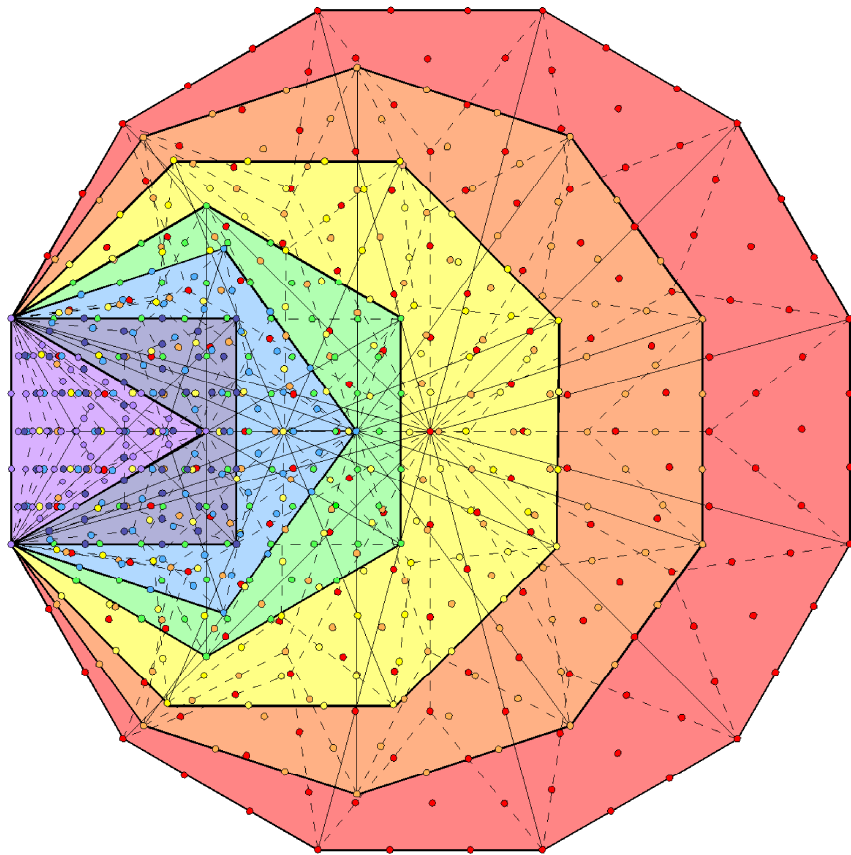
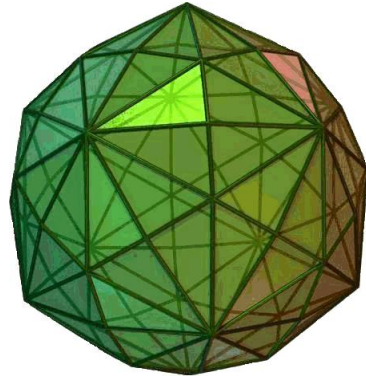
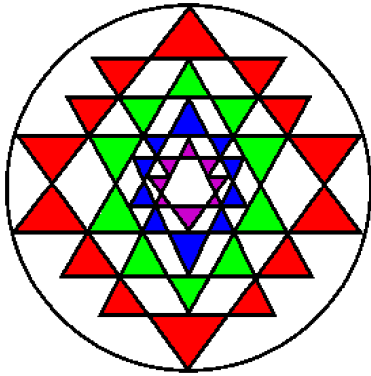
The four layers of triangles have 378 yods, of which ($378 - 42 = 336$) yods lie along their 126 edges. The latter yods are made up of 84 vertices, 84 hexagonal yods on the 42 edges of the fourth layer and **168** hexagonal yods on the 84 edges of the first three layers. Once again, we encounter the superstring structural parameters 84, **168** and 336. The number 336 is the number of yods needed to form the boundaries of all 42 triangles in the four layers. It has the same **168:168** division as found earlier for the geometrical elements composing the first three layers of triangles. The number 336 defines the shapes of the triangles in the four layers, confirming its shape-defining character vis-à-vis the heterotic superstring as the number of times each of its ten curves oscillates during one complete revolution as it spirals around its spin axis. This result is very satisfying, for it not only confirms the validity of Besant’s and Leadbeater’s account of superstrings over

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same number of bits of information — yods or geometrical elements.

Consider next the 2-d Sri Yantra with their triangles constructed from three tetractyses. Table 7 indicates that, Instead of 756 yods (see Table 6), the 42 triangles now regarded

Table 8. Yod composition of the 2-d Sri Yantra (triangles as three tetractyses).

	Vertices	Number of yods on edges	Number of yods Inside tetractyses	Total
Bindu	1	0	0	1
	1	$3 \times 2 = 6$	9	16
Subtotal	2	6	9	17
	$4 + 8 = 12$	$8 \times 3 \times 2 = 48$	$8 \times 10 = 80$	140
	$6 + 10 = 16$	$10 \times 3 \times 2 = 60$	$10 \times 10 = 100$	176
	$2 + 10 = 12$	$10 \times 3 \times 2 = 60$	$10 \times 10 = 100$	172
	28	$14 \times 3 \times 2 = 84$	$14 \times 10 = 140$	252
Subtotal	68	252	420	740
Total	70	258	429	757

as in one layer have 740 yods. Instead of **630** boundary yods, they have 614 yods. The number of yods other than the 68 vertices of triangles is 672. If the central triangle is divided into three tetractyses, it has **15** yods other than vertices. The 2-dimensional Sri Yantra therefore has $(672+15=687)$ yods other than vertices. 687 extra yods are needed to construct each of its 43 triangles from three tetractyses. Amazingly, the seven enfolded polygons of the inner Tree of Life have 687 yods! (Fig. 13).

Constructed from three tetractyses, the 42 triangles surrounding the central one have 740 yods that comprise 110 vertices (68 vertices of triangles) and **630** hexagonal yods. The total number of vertices is **112**. This is the number value of *Beni Elohim*, the Order of Angels assigned to Hod. The fourth set of triangles has 252 yods (42 vertices & 210 hexagonal yods). 42 hexagonal yods are centres of the 42 tetractyses, leaving $(210-42=168)$ hexagonal yods lining the edges of these tetractyses. The superstring structural parameter **168** defines the shape of the 42 tetractyses in the 14 triangles, showing how superstring structure is embodied in the Sri Yantra.

4. The Sri Yantra defines the seven musical scales

As shown in Article 14,⁹ the seven types of musical scales have 14 different notes with tone ratios:

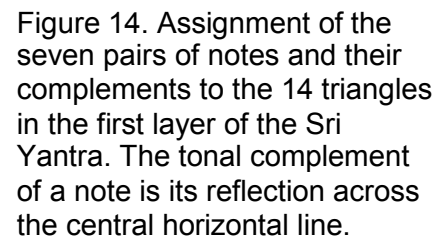
1 **256/243** 9/8 **32/27** 81/64 4/3 **1024/729** **729/512** 3/2 **128/81** 27/16 **16/9** 243/128 2

(Numbers in red denote notes not belonging to the Pythagorean scale (C-scale). Including the tonic, they consist of seven pairs that, as intervals, span an octave. In order of increasing pitch, they are:

1.	1	2	$1 \times 2 = 2$
2.	256/243	243/128	256/243 $\times$ 243/128 = 2
3.	9/8	16/9	$9/8 \times 16/9 = 2$
4.	32/27	27/16	32/27 $\times$ 27/16 = 2
5.	81/64	128/81	$81/64 \times 128/81 = 2$
6.	4/3	3/2	$4/3 \times 3/2 = 2$
7.	1024/729	729/512	1024/729 $\times$ 729/512 = 2

The seven notes in the first column consist of four Pythagorean notes and three non-

Compare this division of types of notes in the seven musical scales with pattern of triangles in the first layer of the Sri Yantra. Each of the seven triangles in the upper half has its counterpart in the lower half (not every pair, however, is, literally, a pair of mirror images, for only the four triangles joined across the central, horizontal line are identical).



5. Connection between the Sri Yantra and Plato's Lambda

numbers (Fig. 16) whose ratios define the tone ratios of the notes of the Pythagorean scale.¹⁰ Their sum is 90, the sum of the integers at the corners of the tetractys is **36**, the sum of the seven integers arranged at the centre and corners of a hexagon (shown in Fig. 15 by dashed lines) is 54 and the sum of the integers forming the hexagon is **48**. These numbers define the tone ratio 3/2 of the perfect fifth because $54/36 = 3/2$ and the tone ratio 4/3 of the perfect fourth because $48/36 = 4/3$.

16

corners of the hexagon. The sum of the nine integers surrounding the central one in the Lambda tetractys is 84. According to Table 1, this is the number of vertices of the 42 triangles formed by the intersection of the nine triangles. Moreover, the first and second layers have **36** vertices and the third and fourth layers have **48** vertices. The former is the sum of the numbers at the corners of the Lambda tetractys and the latter is the sum of the numbers arranged in a hexagon. The first two layers therefore are the counterpart of the corners of the Lambda tetractys and the last two layers are the counterpart of the hexagonal array of six integers.

42 of the 84 vertices are the tips of the 42 triangles and the other 42 vertices are points where triangles join. The 42:42 division of vertices has its counterpart in the Lambda tetractys as the sums of the two pairs of diagonal rows of numbers:

$$1+2+4+8+27 = 42, \text{ and } 3+12+9+18 = 42.$$

These correspondences demonstrate that the Lambda tetractys is arithmetically equivalent to the Sri Yantra. The reason for this is that the former is an archetypal array of numbers that generate by combination the properties of the Tree of Life.

The **36:54** division was found¹¹ in the disdyakis triacontahedron as the 360 tetractyses needed to construct each of its 120 triangular faces from three tetractyses and the 540 internal tetractyses needed to construct the 180 interior triangles formed by its 180 edges when each is built from three tetractyses.

A tetractys defines the Sri Yantra in another way. The number 84 is the sum of the squares of the first four odd integers:

$$84 = 1^2 + 3^2 + 5^2 + 7^2.$$

As

$$\begin{aligned} 1^2 &= 1 \\ 3^2 &= 1 + 3 + 5 \\ 5^2 &= 1 + 3 + 5 + 7 + 9 \\ 7^2 &= 1 + 3 + 5 + 7 + 9 + 11 + 13, \end{aligned}$$

$$84 = 4(1) + 3(3+5) + 2(7+9) + 1(11+13) = 4 \times 1 + 3 \times 8 + 2 \times 16 + 1 \times 24$$

$$\begin{array}{r} 24 \\ 16 \quad 16 \\ = \quad 8 \quad 8 \quad 8 \\ 1 \quad 1 \quad 1 \quad 1. \end{array}$$

84 is naturally expressed as a tetractys array of 10 integers. Moreover, the central integer 8 denotes the innermost eight vertices of the first layer of triangles and the nine surrounding integers add up to **76**, which is the number of vertices surrounding them. **76** is the number value of YAHWEH ELOHIM, Godname of Tiphareth, the centre of the Tree of Life. The number value **26** of YAHWEH is the sum of the integers at the corners of the tetractys and the number value **50** of ELOHIM is the sum of the six integers arranged in a

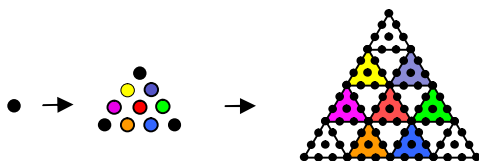
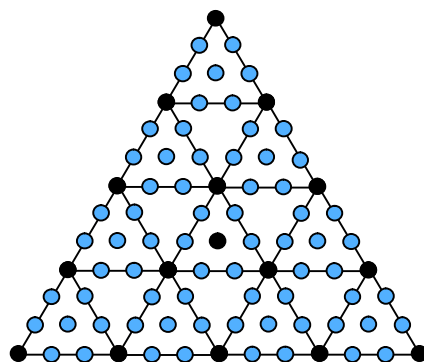
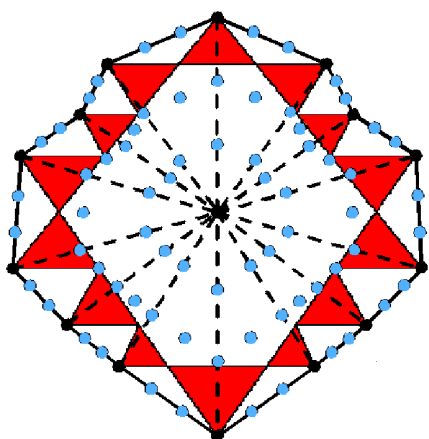
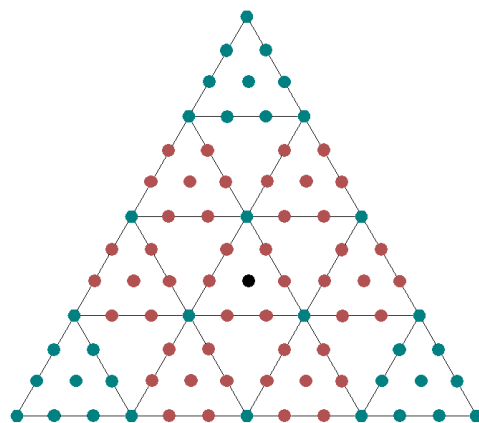
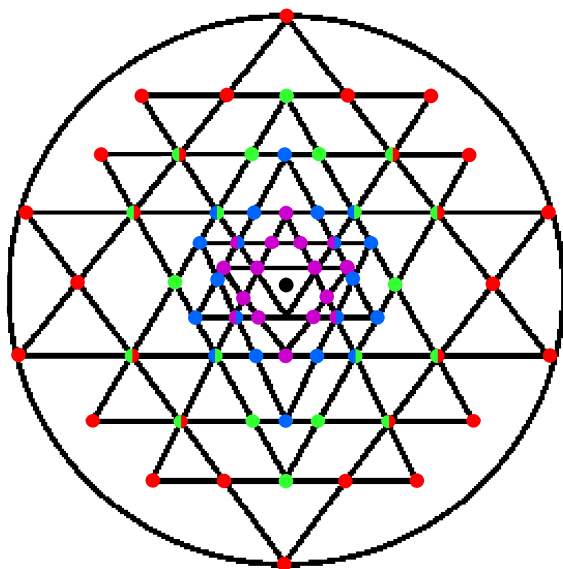


Figure 16. The next higher-order tetractys has 84 yods surrounding its centre.

hexagon. This is a remarkable conjunction of sacred geometry and number. The sum of either diagonal row of integers is **49**, which is the number value of EL CHAI, the



triangles in the Sri Yantra have **36** vertices and the last two layers have **48** vertices. The Sri Yantra is equivalent to the 2nd-order tetractys.

The number of yods in an n-sided polygon whose n sectors are tetractyses is $6n + 1$. The tips of the 14 triangles in the fourth layer of the Sri Yantra may be regarded as defining the vertices of a 14-sided polygon (not regular). It contains $(6 \times 14 + 1 = 85)$ yods (Fig. 18). 84 yods surround its centre. The 85 yods comprise 70 hexagonal yods and **15** vertices. This is identical to the pattern of 70 hexagonal yods and **15** vertices in the 2nd-order tetractys. Not only is the whole Sri Yantra equivalent therefore to a 2nd-order tetractys but also the 14-sided polygon marked out by the tips of the 14 triangles in the last layer! Wholeness within wholeness.

The yod populations of the four polygons whose vertices are the tips of triangles are shown below:

	Number of hexagonal yods	Number of yods
1st layer: 8-sided polygon	40	49
2nd layer: 10-sided polygon	50	61
3rd layer: 10-sided polygon	50	61
4th layer: 14-sided polygon	70	85
	Total = 210	Total = 256

The total number of yods needed to construct the 42 tetractyses in the four polygons is $256 = 4^4$. This is a remarkable illustration of the Tetrad Principle governing holistic patterns.¹² The Godname EHYEH with number value **21** prescribes the number of hexagonal yods. The number of yods surrounding the centres of the polygons in the first three layers is **168** and the number surrounding the centre of the 14-sided polygon is 84. It is remarkable that *both* these superstring structural parameters are embodied in the four polygons. What more convincing evidence that the Sri Yantra encodes the physics of superstrings could one ask for?

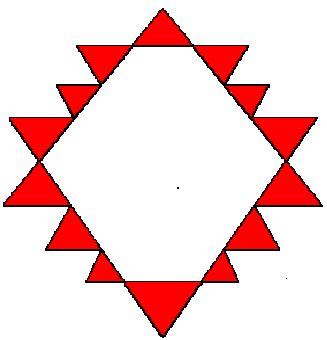
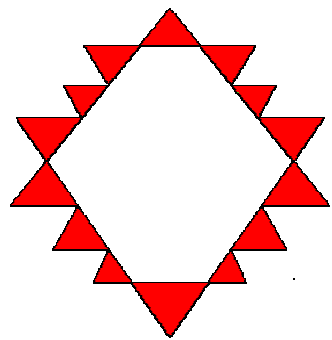
When their sectors are divided into three tetractyses, the yod populations of the four polygons are:

	Number of hexagonal yods	Number of yods
1st layer: 8-sided polygon	104	121
2nd layer: 10-sided polygon	130	151
3rd layer: 10-sided polygon	130	151
4th layer: 14-sided polygon	182	211
	Total = 546	Total = 634

There are **630** yods surrounding the centres of the polygons. **630** is the number value of *Seraphim*, the Order of Angels assigned to Geburah. In the 2-dimensional Sri Yantra, all the centres coincide, so that **630** yods surround their common centre. The number of yods needed to create the four layers of triangles other than their outermost 14 tips is $(634 - 14 = 620)$. This is the number value of Kether ("Crown").

The four polygons have 546 hexagonal yods. Of these, 126 are centres of 126 tetractyses, leaving 420 hexagonal yods on 210 edges. Including their 88 vertices, there are 508 yods on the edges of the tetractyses. In the 2-dimensional Sri Yantra, 16 vertices of the four polygons merge with other vertices and three centres merge with the fourth, leaving $(508 - 19 = 489)$ yods. There are $(489 - 15 = 474)$ yods other than the centre and the 14 vertices of the outermost polygon. This is the number value of Daath ("knowledge"). It is the number of yods, starting with the bindu, needed to delineate the shapes of the

▽				
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($488+12=500=50 \times 10$) boundary yods other than the bindu and the corners of the triangle symbolizing the triple Godhead. This shows how ELOHIM with number value **50** prescribes the population of yods that *shape* the 2-dimensional Sri Yantra.

6. The Sri Yantra defines the octonions

Seven triangles in the fourth layer of the Sri Yantra are tips of three downward pointing triangles said by Hindus to represent the 'Shakti (female) energy of creation. Seven triangles are tips of upward pointing triangles that represent the 'Shiva' (male) procreative energy. Seven tips therefore have a positive polarity and seven have a negative polarity. The seven pairs of positive and negative tips have its counterpart in the fourth (and last) class of numbers known as the octonions, or Cayley numbers. The former correspond to the seven imaginary octonions e_i ($i = 1-7$) and the latter correspond to their conjugates e_i^*

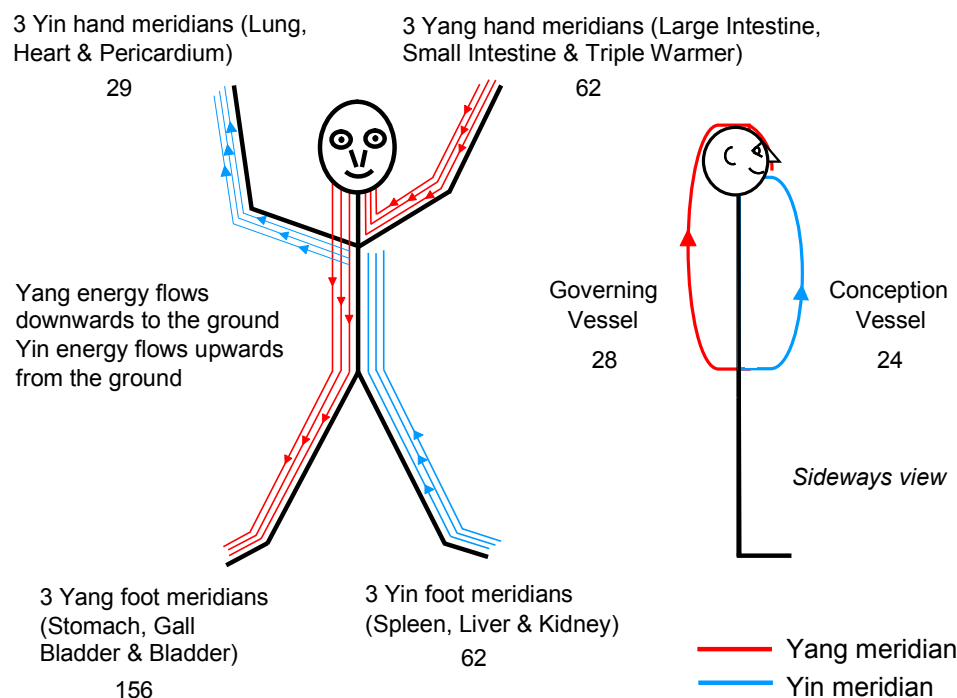


Figure 20. The flow of qi, or chi, in the hand and foot meridians. The numbers are the number of acupoints in the sets of three meridians.

$= -e_i$, where $e_i e_i^* = 1$ (Fig. 19). The seven imaginary octonions form seven 3-tuples (e_i, e_{i+1}, e_{i+3}), each having six permutations of pairs and six permutations of all three. This means that the seven 3-tuples have ($7 \times 6=42$) permutations of pairs and 42 permutations of three octonions.¹³ This is symbolized in the Sri Yantra as the 42 vertices formed by the convergence or intersection of two edges of the nine triangles and the 42 vertices created by the intersection of three edges, as the following table of numbers of vertices proves:

	Two edges	Three edges
Layer 1: 8 triangles	9	7
Layer 2: 10 triangles	6	14
Layer 3: 10 triangles	7	13
Layer 4: 14 triangles	20	8
Total =	42	42

A vertex formed by the convergence or intersection of two edges symbolizes a permutation of two imaginary octonions and a vertex formed by the intersection of three

edges symbolizes a permutation of three octonions. This has significant implications that will not be pursued here.

7. The Sri Yantra defines the 12 acupuncture meridians

The five downward triangles symbolize the feminine (Shakti) energies of creation and the four upward triangles symbolize the male (Shiva) energies. In Taoist philosophy, they are the Yin and Yang polarities. Another interpretation of the seven positive, or Yang, polarities and seven negative, or Yin, polarities associated with the tips of the triangles in the fourth layer is that the former symbolize the seven Yang meridians and the latter symbolize the seven Yin meridians known in Chinese acupuncture.¹⁴ The upper part of the human body has three Yang hand meridians, three Yin hand meridians, the

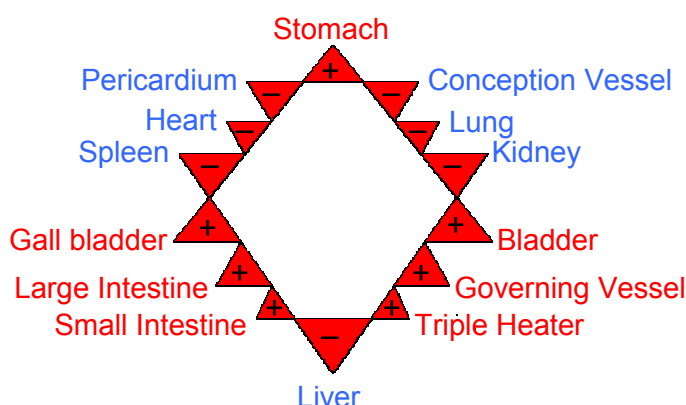


Figure 21. The seven (+) triangles in the fourth layer of the Sri Yantra symbolize the seven Yang meridians (red). The seven (–) triangles symbolize the seven Yin meridians (blue).

Governing Vessel, which is Yang, and the Conception Vessel, which is Yin (Fig. 20). The lower half of the body has three Yang foot meridians and three Yin foot meridians. The upper and lower halves of the body therefore divide the 14 meridians into eight that belong to the former and six that belong to the latter. As with the seven musical scales, the 8:6 division appears in the meridians. The eight triangles of the fourth layer whose tips do not touch the circumscribing circle symbolize the eight meridians in the upper part of the body and the six triangles whose tips touch the circle represent the six foot meridians (Fig. 21). Notice that these triangles are the tips of two intersecting Shiva and Shakti triangles forming a Star of David or Sign of Vishnu. This corresponds to the three Yang foot meridians (Stomach, Gall Bladder and Bladder) and to the three Yin foot meridians (Spleen, Kidney and Liver).

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