Universal Symbols – Part I

Scientific Interpretation of Sanathana Dharma

Ravi Jatavallabhula

rjata@brahmajignasa.com

Abstract

Purusha sukta explains Parabrahma as four-dimensional continuum[1]. In this article the author will reinterpret dharma's universal symbols - AUM, Swastika and Srichakra to prove that they are designed to represent the four-dimensional nature of Paramatma. With this new interpretation, the article will also prove that Srichakra structure illustrates the first seven planet orbits and the asteroid belt of the solar system.

1 Introduction

Sanathana dharma is designed on the basis of an advanced theoretical physics concept (Jatavallabhula 2008). The dharma provided so many scriptures, procedures to bring the common people closer to this concept. Vedas, Upanishads, Bhagavad-Gita and other major scriptures explain the nature of Paramatma in multiple ways. Rituals, festivals, temple structures and various other elements of dharma reflect the nature of Parabrahma too.

Along with the texts and practices, dharma also provided some interesting iconography to remind the greatness of Paramatma. Of which - the Namaste, Vibhudhi, Tilaka, the Universal Symbols and so many others represent the unique features of the dharma.

In this article, the universal symbols are reinterpreted to prove that these symbols represent the four-dimensional nature of Paramatma. Section 2 explains the symbol AUM, in section 3 Swastika will be analyzed to show the tesseract (Toth 2002) arrangement in it. In section 4, srichakra will be reinterpreted to show how the eight cubes in tesseract are also present in the chakra. This article will also prove that chakra's design illustrates our solar system showing the first seven planets and the asteroid belt. Finally the future work is discussed in the Conclusion section.

2 AUM

AUM is also known as pranava, originated from verbal pra-nu, means reverberate – to make repetitive sound or indicates the recurring behavior of a system. Sanathana dharma gave a prominent place for this symbol to represent the cyclic behavior or the refreshing nature of the universe.

2.1 Three in one

The 8th sloka in Mandukya Upanishad explains AUM as encapsulation of three unique sounds.

so' yamātmādhaśaramo dkaro 'dhimātraṁ pādā
mātrā mātrāśca pādā a-kāra u-kāro ma-kāra iti |8|

so' yamātmā=this atma or the continuum **adhaśaram**=the supreme sound **omdkara**=omkara **adhimātraṁ**=higher dimension **pādā**=part **mātrā**=above dimension **mātrāśca**=sub-dimensions **pādā**=parts **a-kāra**=akara **u-kāro**=ukara **ma-kāra**=makara **iti**=that said

[1] See Jatavallabhula 2008

The sloka starts with stating the syllable AUM is nothing but Paramatma or the four-dimensional continuum. In the sloka, **pādā** is used to indicate there are total four parts in this symbol and **mātrā** means literally 'dimension or measure' in Sanskrit. So the sloka says out of these four dimensions, one dimension is the master dimension and called it as AUM, and rest of three dimensions A-kara, U-kara and M-kara are part of it.
In the continuum, as the three-dimensional space transitioned to next present by the fourth dimension, the three sounds A-kara, U-kara, M-kara are carried by this supreme sound AUM. This sloka clearly explains the structure of AUM just like the structure of Paramatma is situated.

3 Swastika

The basic features of swastika are analyzed to show that it represents the four-dimensional nature of the continuum.

3.1 Geometric features

3.1.1 Two equal arms

There are two identical arms in swastika. In the Figure 1 ABCDA and EFGHE marks these two arms.

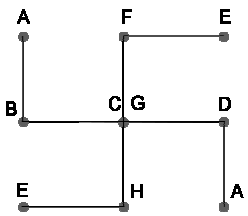

Figure 1 Identical Arms

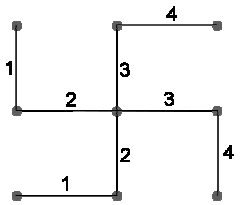

Figure 2 Equal Branches

3.1.2 Four equal branches

Each arm of swastika has four equal branches. The Figure 2 shows the equal branches on each arm. The line segments 1-2-3-4 represent four equal length branches on each arm.

3.1.3 Cyclic Nature

Swastika resembles a wheel with clockwise rotational direction. A clockwise rotation is a forward moving direction, for example bi-cycle wheels rotate in the clockwise direction moving the bi-cycle forward.
The branches AB, DA and FE, HE gives a rotational direction to swastika.

3.1.4 Tetrad

There is a 90^0 rotational symmetry in swastika geometry, that is, if the swastika goes through a simple rotation of 90^0 it looks just the same as it is before the rotation. So a cycle of rotation is when ABCDA coincides with EFGHA or vice versa.

3.2 Tesseract Resemblance

The geometric features and the rotational behavior of swastika resemble tesseract.

3.2.1 Unfolding cube

There are two seed cubes in tesseract. Since swastika is a two-dimensional geometrical shape here cube is analyzed in a two-dimensional projection. Figure 3 show the cube marked as ABCD and A-B-C-D-A illustrates unfolded sides of the cube. There are four equal branches in the unfolded cube, each representing the side of the two-dimensional cube projection.

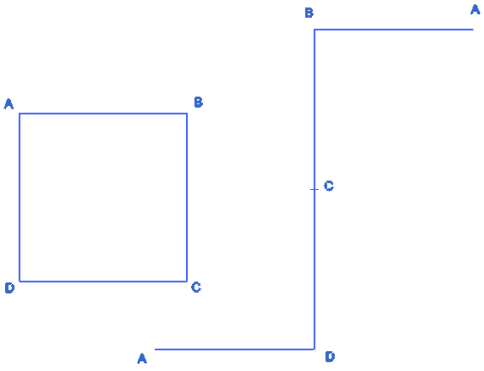

Figure 3 Cube unfolded

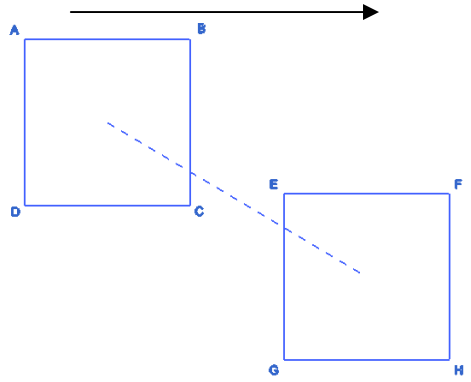

Figure 4 Two cubes and transition

3.2.2 Two cubes and the transition

There are two cubes in tesseract. First cube transitions to the second one representing the four-dimensional behavior. The rotational direction is left to right or a clockwise direction.

3.3 The resemblance

There is very good resemblance between and swastika and tesseract based on above discussion.

3.3.1 Two cubes and two arms

There are two cubes in both tesseract and swastika. Swastika has the cubes in an unfolded way, in the form of arms, showing the four equal branches per each arm.

3.3.2 Equal length branches

Just like a cube has equal sides, in swastika also each arm has four equal length branches representing an unfolded two-dimensional projection of cube.

3.3.3 Cyclic Behavior

The cyclic behavior exists in both tesseract and swastika with left to right or clockwise rotational direction. In each rotation, tesseract transitions from one cube or state to the second cube or state and cycle repeats again. Similarly every 90^0 rotation swastika achieves same shape and the cycle repeats again.

Sanathana dharma designed the swastika to represent the four-dimensional nature and cyclic behavior of Paramatma.

4 Srichakra

Just like there are eight cubes in tesseract, in srichakra (Shankaranarayanan 1979) also there are eight cubes. Figure 5 shows the eight cubes with srichakra in the

background. Sanathana dharma used specific cube projections to fit the eight cubes into srichakra.

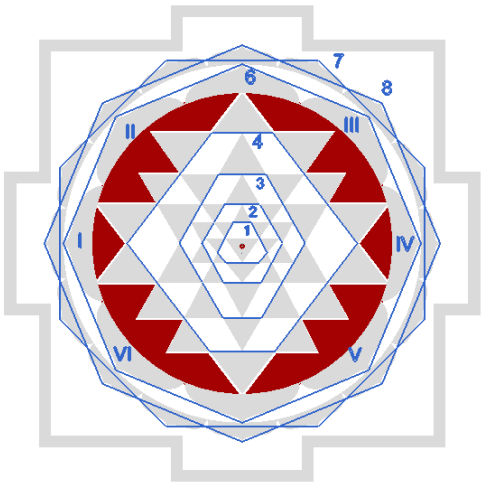

Figure 5 Eight cubes in Srichakra

4.1 Cubic Graphs

The Table 1 shows a regular cube and its projections (Weisstein). Figure 6 shows cube in trimetric view. Figure 7 shows cube in a particular angle so that at least one of four edges of each face of the cube is visible. The boundary AB-BC-CD-DE-FA represents the cube in this particular projection. Similarly Figure 8 shows all the eight vertices of the cube A-B-C-D-E-F-G-H.

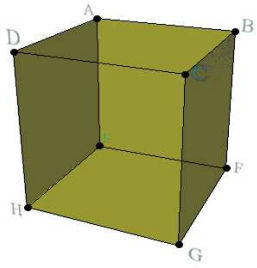	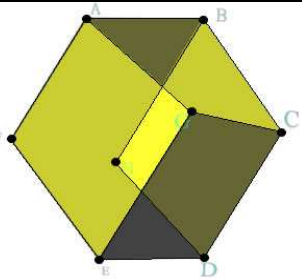	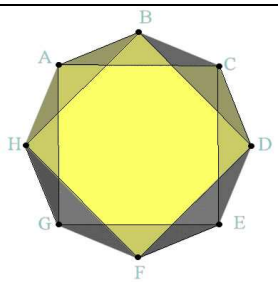
Figure 6 Trimetric view	**Figure 7 Showing six faces**	**Figure 8 Showing eight corners**

Table 1 Cube Graphs

Table 2 shows the outlines of the projections shown in Figure 7 and Figure 8. Using these outline-projections the cubes in srichakra are explained.

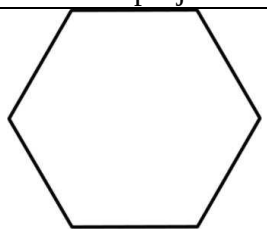	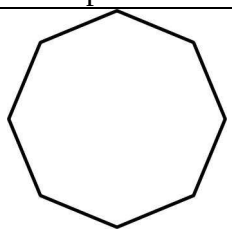
Figure 9 Hexagon	**Figure 10 Octagon**

Table 2 Cube Projection Outlines

4.2 Hexagons

The four inner cubes are arranged in hexagon projections.

			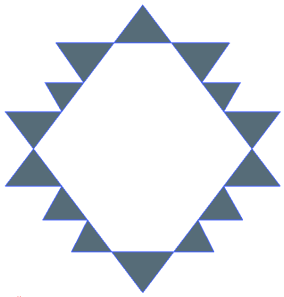
Figure 11 Cube 1	**Figure 12 Cube 2**	**Figure 13 Cube 3**	**Figure 14 Cube 4**

Table 3 Hexagon

4.3 Octagons

The three outer cubes are arranged in octagon projections.

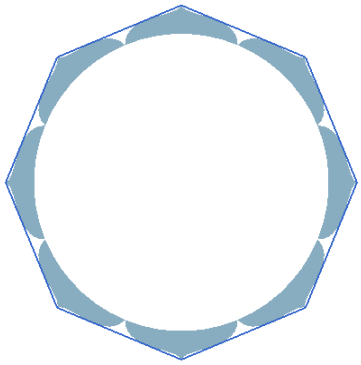	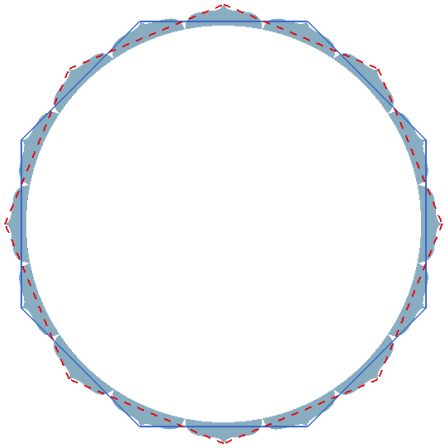
Figure 15 Cube 6	**Figure 16 Cube 7 & 8**

Table 4 Octagon Projections

4.4 The transition

In srichakra the cube arrangement starts with hexagon projections and moves to octagon projections as shown in Table 3 and Table 4. So far out of eight cubes seven cubes are covered and there is one more left. The eighth cube is arranged in such a way that transition is made between the hexagon and octagon projections i.e., from cube sides to corners.

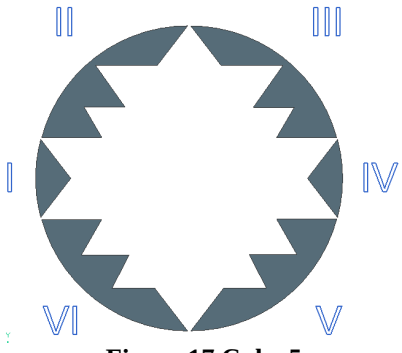

Figure 17 Cube 5

In Figure 17 there are six parts shown marked with roman numerals. Each segment is created by the intersection of Sarva Saubhagyadayaka (Figure 14) and Sarva Sankshobahana (Figure 15). Just like the hexagon projection has six sides, this projection has six segments and like the octagon projection shows the vertices this projection has vertices on each segment.

This way eight cubes embedded in sricharka, thereby representing parabrahma or the four dimensional continuum.

4.5 The Basis of the Design

So what is the basis of srichakra design? With the above interpretation an interesting new pattern emerged. The first four cubes are arranged in senary-projection, followed by the transition and last three cubes are arranged in octal-projection.
In the solar system, there are four inner planets - Mercury, Venus, Earth, Mars and the outer planets are Jupiter, Saturn, Uranus and Neptune. Separating them is the asteroid belt.
Similarly, in srichakra there are four inner cubes and three outer cubes separated by the fifth cube shown is Figure 17 and bindu in the center of the chakra which can be considered as sun. Also there are more similarities between these cube projection shapes in the srichakra and the planetary orbits in solar system.

4.5.1 Skewed Mercury

Mercury is the first planet in the solar system. Table 5 shows the orbit of mercury. Figure 18 shows the orbit of the planet around the sun. The dotted trajectory shows a perfect circle with sun as center. The Mercury orbit is shown by the solid line. There is a clear shift in the orbit from the circular trajectory in the upward direction. This is due to the eccentricity of the planet as it rotates around the sun. Mercury has largest eccentricity in the planetary system (0.20563069). Figure 20 shows the shape of first cube in srichakra. Instead of a regular hexagon, this cube projection shows a skewed shape with a clear upward shift just like the mercury planetary orbit as it rotates around the sun.

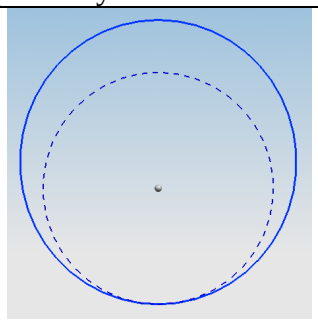

Figure 18 Mercury Orbit

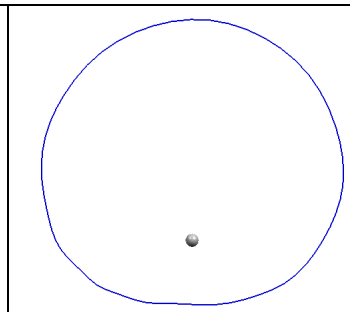

Figure 19 Orbit in Log Scale

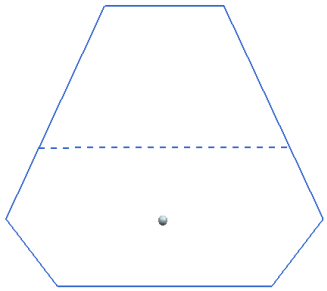

Figure 20 First cube

Table 5 Mercury Orbit

4.5.2 Symmetric Venus

Venus is second planet from the sun. The eccentricity of Venus is the smallest among the planetary system (0.00677323). Because of such a small deviation, the orbit of the planet is almost circular. The Table 6 shows the Venus orbit. In figure 21 the solid line shows the orbit and dashed line shows the circular trajectory. Figure 22 shows the second cube from srichakra. As the figure shows the hexagon is almost symmetric and very closely matches with the Venus orbit.

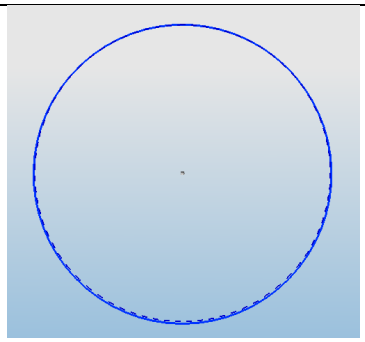

Figure 21 Venus

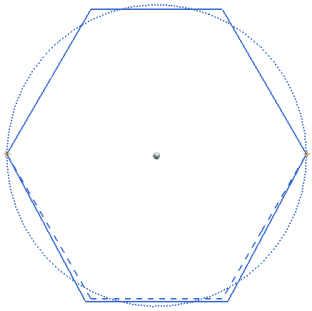

Figure 22 Second Cube

Table 6 Venus Orbit

4.5.3 Bulged Mars

Mars is fourth and the last one of the inner planets. The eccentricity of the planet is only next to that of mercury. Due to this Mars orbit also shaped like a bulged egg.

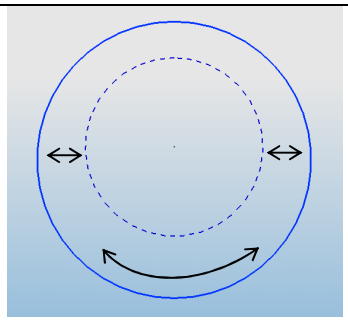

Figure 23 Mars Orbit

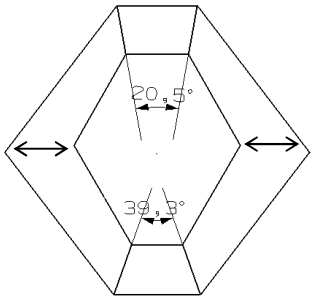

Figure 24 Third and Fourth Cubes

Table 7 Mars Orbit

Table 7 shows the Mars orbit when compared to the orbit of earth. The figure 23 shows the both planet orbits and figure 24 shows the third and fourth cubes in the srichakra. As shown by the arrow entities, the Mars orbit and the fourth cube are shaped in similar fashion, bulged on the sides and relatively wider at lower portion of the orbit, indicating the planet's orbit eccentricity.

4.5.4 Asteroid belt

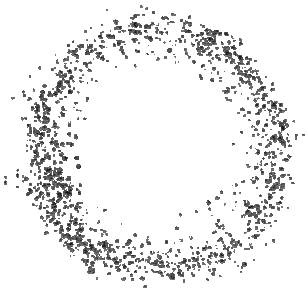

Figure 25 Asteroid Belt

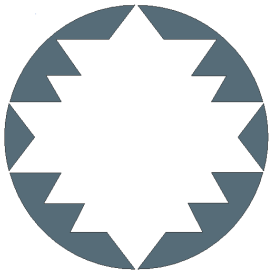

Figure 26 Fifth cube

Figure 27 Asteroid belt

Asteroid belt in solar system is located in between the planets Mars and Jupiter. Figure 25 shows the asteroid belt in solar system. Unlike the other planet orbits, asteroid belt is made up of countless number of small rocks and while rotating around sun they create a belt shaped trajectory, a trajectory with some width. Figure 27 shows the fifth cube in Srichakra and unlike the remaining seven cube projections in the chakra this cube is shown with some width on its six sides.

4.5.5 Bhupara or Solar system boundary

'**Para**' in sanskrit means boundary. Bhupara means Solar system boundary. The first sloka of canto 5, chapter 16 in Srimad bhagavatham (Bhaktivedanta 1997) explains the bhumandala as the region to which the light and heat of star sun reaches. This chapter also identifies seven planets in the solar system as seven islands.

By identifying the cube projections layout, the seven planets and asteroid belt are identified in the srichakra. And bhupara indicates the boundary of solar system as the word 'bhu' refers to the region covered by sun's heat and light.

5 Conclusion

This article clearly interpreted the universal symbols to prove that they represent the four-dimensional nature of Paramatma. The article also proved that the main basis of srichakra design is the solar system and srichakra illustrates the planetary orbits of terrestrial planets, outer planets and the asteroid belt.

The next part of the article will discuss the srichakra construction using 3-D CAD software, to prove that the charka can be drawn without any degrees of freedom and will prove that the triangles in srichakra are actually part of a net that is stretched to the ends to achieve the desired chakra shape.

References

Bhaktivedanta, Swami. 1987. Srimad-Bhagavatam: Bhagavata Purana (18 Vol. Set) (Hardcover). Bhaktivedanta Book Trust

Jatavallabhula, Ravi. 2008. Brahmajignasa: Scientific Interpretation of Sanathana Dharma

Sarvananda, Swami. 1985b. *Mandukya Upanishad*. Chennai: Sriramakrishna Math Printing Press

Toth, Gabor. 2002. *Glimpses of Algebra and Geometry*, 380-396. Second Edition. New York: Springer-Verlag NewYork,Inc.

Weisstein, Eric W. "Cubical Graph." From MathWorld--A Wolfram Web Resource. http://mathworld.wolfram.com/CubicalGraph.html