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Spiritual and scientific significance of the number 108

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Abstract

In this paper we explore some interesting features of the wonderful number '108'. We are often advised by our priests, elders or ancient scriptures to repeat a particular mantra 108 times. Even the rosary (*maala*) has 108 beads to help the chanter to keep track of the number of repetitions of a specific mantra. The number of flowers in a *vara maala* (wedding garland) is also 108. Ancient sages from the Vedic traditions recognised that 108 is a 'Harshad Number', which means that this number is a 'Joy-Giver'. The number 108 has a special spiritual place in many religions including Hinduism, Buddhism, Jainism, Christianity, and Sikhism. This number has got a great significance in science, architecture, astronomy and many other areas, which is described in this paper.

Keywords: Number 108, science, spirituality, significance

1. Introduction

Have you ever wondered why are we advised by our elders, priests, *pundits* or even the ancient scriptures, to chant a particular mantra (hymn) precisely 108 times to reap its targeted benefits? When we react back and point out that counting the number of chants consciously will distract our focus or our attention from our concentration or contemplation etc., and thus dilute the desired benefits of the mantra; we are given an alternative to take the help of a rosary (or *maala*) which contains 108 beads (besides a Guru bead at the beginning). Vedic sages devised a *Vyjanti maala* (rosary) with 108 beads/stones to keep count of mantras in their daily ritual of meditation. This *maala* is usually made of the materials like *rudraksha* (linked to Lord Shiva) or *tulsi* or whatever. By holding one bead at a time per mantra repetition (*japa* or chanting) we can concentrate our attention on the mantra and not on its counting. The number 108 is very auspicious for followers of Sanatana Dharma. Vedic sages used the term 'Shri 108' to represent yogis, preceptors, divine and highly learned gurus^[1]. The number of flowers in a *vara maala* (wedding garland) is also 108 and same is the number in *vrata* (fasting) *maala*^[2]. Ancient sages from the Vedic traditions recognised that 108 is a 'Harshad Number' in that it is divisible by the sum of its digits. In Sanskrit, Harshad means 'Joy-Giver'.

We describe here the spiritual and scientific significance of this wonderful number '108'.

2. Number 108 in Hinduism

- 2.1 According to yogic tradition, there are 108 pithas^[3], or sacred sites, throughout India.
- 2.2 There are 108 Upanishads and 108 Puranas. The Upanishads are a collection of Hindu texts, which contain some of the central philosophical concepts of Hinduism. There are 10 Upanishads associated with Rig Veda, 50 Upanishads associated with Yajurveda, 16 Upanishads associated with Sama veda, and 32 Upanishads associated with Atharva veda; thus making a total of 108 Upanishads. The Puranas are a vast genre of Hindu texts that encyclopedically cover a wide range of topics, particularly myths, legends and other traditional lore. Composed primarily in Sanskrit, but also in regional languages, several of these texts are named after major Hindu deities such as Vishnu, Shiva and Devi.
- 2.3 There are 54 letters in Sanskrit each can be mentioned as masculine (Shiva) and feminine (Shakti) aspect, thus totaling to 108.
- 2.4 Hindus have 108 forms of dance. Lord Shiva was fond of dancing (Nataraj). He danced in 108 mudras (poses) and thus making 108 as the unit of creation.

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- 2.5 **River Ganga:** The sacred River Ganga spans a longitude of 12 degrees (79 to 91), and latitude of 9 degrees (22 to 31). 12 times 9 equal 108^[4].
- 2.6 **Heart Chakra:** The chakras are the intersections of energy lines, and there are said to be a total of 108 energy lines converging to form the heart chakra. One of them, sushumna leads to the crown chakra, and is said to be the path to Self-realization.
- 2.7 **Sri Yantra:** On the Sri Yantra there are marmas where three lines intersect, and there are 54 such intersections. Each intersection has masculine and feminine, shiva and shakti qualities. 54 times 2 equal 108. Thus, there are 108 points that define the Sri Yantra as well as the human body.



Fig 1: Sri Yantra

- 2.8 There are 108 names for Lord Vishnu and 108 names for Lord Shiva.
- 2.9 In both Hindu and Tibetan traditions, there are 54 energies associated with Shiva and Shakti, male and female energies which manifest as reality. This makes the total (male and female) to 108.
- 2.10 There are 108 steps leading to many Hindu temples, signifying that there are 108 steps to reach God (*Paramatma*).
- 2.11 In Hindu tradition, the Mukhya Shivaganas (attendants of Shiva) are 108 in number and hence Shaiva religions, particularly Lingayats, use maalas of 108 beads for prayer and meditation.
- 2.12 **Gopis of Krishna:** There were said to be 108 gopis or maid servants of Krishna. Recital of their names, often accompanied by the counting of a 108-beaded mala, is often done during religious ceremonies.
- 2.13 Pranayama is often completed in cycles of 108.
- 2.14 Sun salutations (Surya Namaskar) are often performed in nine rounds of the 12 postures (totaling 108).
- 2.15 Parshurama, the sixth avatar of lord Vishnu, installed 108 Dhanwantari idols (god of Ayurveda) after the drying up of river Saraswati.

3. Number 108 in Buddhism

- 3.1 The Buddha has 108 names and 108 lamps devoted to him.
- 3.2 According to Samael Aun Woer (an author in Buddhism), we have 108 chances to eliminate our ego and transcend the material world.
- 3.3 Buddhism brings to conscious awareness of 108 defilements or delusions. They are sometimes called the 108 “lies” as opposed to the Truth of reality you experience when you raise your conscious awareness^[6].

- 3.4 Zen Buddhists in Japan typically ring a bell 108 times at the end of each year. Each ring is said to represent the 108 “earthly temptations” a person must overcome in order to achieve nirvana.
- 3.5 The doctrines preached by Buddha Gautama, the historical Buddha, is said to have been collected by his disciples and written down in 108 volumes known as the ‘Gandjour.’ These 108 texts deal exclusively with the metaphysical creation of the Universe and thus the perishable and frail nature of mankind. The Buddha describes the virtues you must adopt to emancipate the soul and transcend the “lies” of the material world.
- 3.6 The Chinese Buddhists and Taoists use a 108 bead mala, which is called su-chu. and has three dividing beads, so the mala is divided into three parts of 36 each. Chinese astrology says that there are 108 sacred stars.
- 3.7 Some Buddhists carve 108 small Buddhas on a walnut for good luck. Some ring a bell 108 times to celebrate a new year. There are said to be 108 virtues to cultivate and 108 defilements to avoid.
- 3.8 In Buddhism, this number is reached by multiplying the senses smell, touch, taste, hearing, sight, and consciousness by whether they are painful, pleasant or neutral, and then again by whether these are internally generated or externally occurring, and yet again by past, present and future, finally we get 108 feelings. $6 \times 3 \times 2 \times 3 = 108$.
- 3.9 The Tibetan guru, Buddha Padma-Sambhava, revealed 108 sacred writings he claimed were accessed from the akashic files in the celestial worlds. Tibetan folklore claims the Buddha hid these scripts on the border of Nepal and North Tibet.
- 3.10 Tibetan Buddhist maalas or rosaries are usually 108 beads reflecting the words of the Buddha called in Tibetan the Kangyur in 108 volumes. Zen priests wear juzu (a ring of prayer beads) around their wrists, which consists of 108 beads.
- 3.11 The Lankavatara Sutra has a section where the Bodhisattva Mahamati asks Buddha 108 questions and another section where Buddha lists 108 statements of negation in the form of "A statement concerning X is not statement concerning X".

4. Number 108 in Jainism

Jains respect and worship the qualities of five very worthy personalities and they are known as Pancha Paramesthi, namely, Arihanta, Siddha, Ächärya, Upädhyäy, and Sädhu and Sädhvis (all ascetics). Jains do not worship them by name, but they worship their qualities and virtues known as attributes.

- 4.1 There are a total of 108 attributes of the five supreme beings^[7, 8]. Both Shvetämbar and Digambar traditions define 108 attributes, but there are some differences. The Jain Mälä or rosary has 108 beads, which signify the 108 attributes of the five supreme beings. The 108 attributes are as follows:

Pancha Paramesthi	Number of Attributes
Arihanta or Tirthankar	12
Siddha	8
Ächärya	36
Upädhyäy	25
Sädhu	27
Total	108

Take for example, Arihanta or Tirthankar

Arihantas have 12 unique characteristics as follows:

1. The four main attributes are known as Atishaya.
2. The other eight attributes are endowed by heavenly beings at the time of Keval-jnän and are known as Pratihärya.

4.1.1 Vachanä Atishaya: A Tirthankar delivers an extraordinary sermon. (ii) Jnän Atishaya: The sermon delivered by a Tirthankar is well understood by all human beings, animals, and heavenly beings in their respective languages. (iii) Pujä Atishaya: A Tirthankar is worshipped by all mundane souls of the whole universe. (iv) Apäyāpgamä Atishaya: No calamities or diseases are present in the vicinity of a Tirthankar.

Note - Some Jain literature indicates that Infinite Knowledge, Infinite Perception, Perfect Conduct, and Infinite Energy (the four Anant Chatushtay) are the four main attributes rather than above mentioned four Atishaya.

4.1.2 Eight Pratihärya: (i) Endowed by Heavenly Gods: (ii) Simhäsän: A divine seat from where Arihanta delivers his sermon. (iii) Bhämāndal: A halo behind Arihanta's head is always present. Chämar. (iv) Heavenly beings wave diamond studded fans (Chämar) to honor Arihanta's greatness. (v) Chhatra Traya: A three tier divine umbrella over the head of an Arihanta is always present, which suggests that the Tirthankar is the king of the entire universe that consists of three regions – Heaven, Hell, and Earth. (vi) Ashok Vruksha: The Ashok tree under which Arihanta sits to deliver sermons. (vii) Pushpa Vristi: A continuous shower of fragrant flowers. (viii) Deva Dundubhi: A divine announcement declaring Arihanta's. And likewise one can list all the 108 attributes required to be present in Jun Minis.

4.2 In Jainism, the total number of ways of Karma influx (Aasrav). 4 Kashays (anger, pride, conceit, greed) x 3 karanas (mind, speech, bodily action) x 3 stages of planning (planning, procurement, commencement) x 3 ways of execution (own action, getting it done, supporting or approval of action).

5. Number 108 in Christianity

- 5.1** The epistle of Saint James, whose central message is that there is no authentic faith without charitable works, contains on the whole 108 verses. It is also in the epistle of James that the Catholic Church has recognized the sacramental anointing of the sick (Jm 5,14-15).
- 5.2** It is written in some exoteric texts that Jesus-Christ would have had 108 disciples, not including the apostles. Nicodemus would have been a part of these disciples.
- 5.3** According to the information furnished in the narration of Maria Valtorta, Lazarus would have remained 4 days and half in his grave, that is to say 108 hours, before to be resuscitated by Jesus-Christ.
- 5.4** During his passion, Our-Lord received a total of 6666 blows on his body, including 108 to his stomach.
- 5.5** The 108 years of cycles of the Rosicrucian brotherhood. That is to say the number of years characterizing the periods of activity and sleep in the Order Rosicrucian A.M.O.R.C. The White Cardinal underlined that at the beginning of the era of the Aquarius, in 1962, the Order of the Temple had disappeared from the external world 6

times 108 years.

6. Number 108 in Sikhism

- 6.1** The Sikh tradition has a mala of 108 knots tied in a string of wool, rather than beads.

7. Number 108 in Spirituality in General

- 7.1** Eastern religions reveal there are 108 sins or delusions of the mind, some of which are karmic energies from past lives.. It is considered that once the meditator has overcome these weaknesses, you complete your spiritual journey and reach Nirvana.
- 7.2** There are said to be 108 paths to God.
- 7.3** In Mitanni (Egypt) and Persian (Iraq) cultures which is an offshoot of Vedic culture, number 108 left its presence in various traditions, customs and beliefs such as use of rosaries having 108 beads or circumambulating around a rock 108 times.

8. Significance of Number 108 in other areas**8.1 In Astrology**

- 8.1.1** The Moon goes through the zodiac in approximately 27 days which creates the lunar zodiac called the nakshatras. The Moon is karaka (significator) for the 4th house. Each of these 27 lunar signs is divided into 4 amsas (divisions) called padas (feet/footsteps). The nakshatras (lunar signs) are 13-20 degrees and divided by four become 3-20 degrees. 27 nakshatras multiplied by 4 padas is 108. The four pada relate to the four ayana: karma (career), artha (sustenance), kama (pleasure/family), moksha (spirituality/liberation). Each pada has a tone, using which can activate a planet within the tone. The Moon has a 108 padas and 108 tones^[5].
- 8.1.2** In Indian astrology we have 12 houses and 9 planets. 12 times 9 equals to 108.
- 8.1.3** Chinese astrology has 36 beneficial stars and 72 malevolent stars constituting a total of 108 stars.

8.2 In Astronomy

- 8.2.1** The diameter of the Sun is 108 times the diameter of the Earth. Let us illustrate this:
 $D_{\text{sun}} = 1.392 \times 10^6 \text{ km.}$ (1)
 $D_{\text{earth}} = 12756.28 \text{ km.}$ (2)
 From Eqns. (1) & (2), we get
 $D_{\text{sun}} / D_{\text{earth}} = 109.12$, which is close to 108. (3)

8.2.2 Distance between the sun and is earth is 108 times the diameter of the sun.

Distance between the sun and is earth ($d_{\text{sun-ear}}$) = $149.597870691 \times 10^6 \text{ km}$ (4)

From Eqns. (1) & (4), we get

$d_{\text{sun-ear}} / D_{\text{sun}} = 149.597870691 \times 10^6 / 1.392 \times 10^6 = 107.47$, which is close to 108. (5)

8.2.3 Distance between the moon and is earth is 108 times the diameter of the moon.

Average distance between the moon and is earth ($d_{\text{moon-ear}}$) = 384403 km (6)

Diameter of moon (D_{moon}) = 384403 km. (7)

From Eqns. (6) & (7), we get

$(d_{\text{moon-ear}}) / (D_{\text{moon}}) = 384403 \text{ km} / 384403 \text{ km} = 109.12$, which is close to 108. (8)

The result of the sun and moon having the same ratio between distance and diameter is that they appear to be the nearly identical in size when viewed from the earth, when of course

they are not with the diameter of the sun being over 400 times that of the moon. This fascinating relationship also allows for the of total solar eclipses, where the moon obscures the sun entirely.

8.2.4 Astronomically, there are 27 constellations in our galaxy, and each one them has 4 directions, and $27 * 4 = 108$, In other words the number 108 covers the whole galaxy.

8.3 In Arithmetic

8.3.1 Powers of 1, 2, and 3 in math: 1 to 1st power = 1; 2 to 2nd power = 4 (= 2×2); to 3rd power = 27 (= $3 \times 3 \times 3$). $1 \times 4 \times 27 = 108$ (= $1^1 \times 2^2 \times 3^3$) (9)

8.3.2 Perhaps 108 was given special status because of its relationship to the number 9, which also has been considered an important number in Hinduism and other Asian cultures*. Some examples follow. When 108 is divided in half the result is 54; $5 + 4 = 9$. Half of 54 is 27, and $2 + 7 = 9$. When 108 is multiplied by 2, the result is 216; $2 + 1 + 6 = 9$. When 108 is multiplied by 3 the result is 324; $3 + 2 + 4 = 9$. And, of course the sum of $1 + 0 + 8$ is itself 9!

8.4 In Geometry

8.4.1 **Pentagon:** The angle formed by two adjacent lines in a pentagon equals 108 degrees.

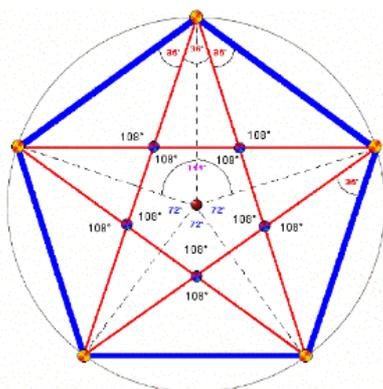


Fig 2: Pentagon

8.4.2 Were we to draw a five-pointed star (representing a human being) inside a circle (a planet) and we would find 108 degrees staring back at us from every angle.

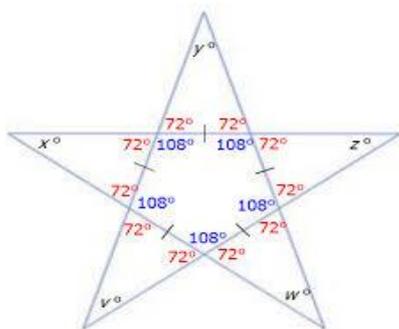


Fig 3: Five-pointed star

8.5 In Human Health

8.5.1 108 degrees Fahrenheit is the internal temperature at which the human body's vital organs begin to fail from overheating.

8.6 In Periodic Table

According to Vedic science, our universe is made up of 108 elements. Our modern periodic table has 108 elements. Rest of the elements after *Hassium* are too short-lived and exist only in laboratory for 1/1000 of a second or so. Hassium, the 108th and the heaviest element of periodic table has 108 protons.

8.6 In History of Religion

8.7.1 There is evidence that 108 was of special significance in Sumer, an ancient civilization seated along the Euphrates River in Mesopotamia over 5000 years ago.

8.7.2 **8.7.2** In ancient Dravidian and Aryan religions of India, 108 was tied to the lunar calendar, to computation of the length of the cosmic ages, and to worship of deities such as Shiva and Kali.

8.7.3 The Abhidharmapitaka, one of the main parts of the Pali Buddhist canon (i.e. the sacred literature of Buddhism, which is written in the language Pali), outlines 108 kinds of emotional desires known as klesas which are the afflictions of mind that taint our comprehension of realities.

8.8 In Martial Arts

Many East Asian martial arts trace their roots back to Buddhism, specifically, to the Buddhist Shaolin Temple. Because of their ties to Buddhism, 108 has become an important symbolic number in a number of martial arts styles. 108 number figures prominently in the symbolism associated with karate, particularly the Gōjū-ryū discipline. The 108 moves of the Yang Taijiquan long form and 108 moves in the Wing Chun wooden dummy form, taught by Yip Man, are noted in this regard. The Eagle Claw Kung Fu style has a form known as the 108 Locking Hand Techniques. This form is considered the essence of the style, consisting of an encyclopedia of Chin Na techniques, and is said to be passed down from the founder General Yue Fei. Paek Pal Ki Hyung, the 7th form taught in the art of Kuk Sool Won, translates literally to "108 technique" form. It is also frequently referred to as the "eliminate 108 torments" form. Each motion corresponds with one of the 108 Buddhist torments or defilements.

8.9 In Countries outside India

8.9.1 Figure below is that of Stonehenge is a prehistoric monument in Wiltshire, England, 2 miles (3 km) west of Amesbury [9]. It consists of a ring of standing stones, with each standing stone around 13 feet high, and 7 feet wide. There were 30 such standing stones, which were erected as a 108 ft diameter circle.



Fig 4

- 8.9.2** In Japan, there are 108 celebrity saints known as the Vajradhatu.
- 8.9.3** Tibetan legends count 108 great Initiates and 108 Masters
- 8.9.4** In Belize, during the era of the Mayans, the High Temple of Lamanai was erected at 108 feet tall—the same height as the funerary Tikal temple in Guatemala. This Temple of Lamanai is shown in the following picture.



Fig 5: Temple of Lamanai

- 8.9.5** Within the temple of Kukulkan at Chichen Itza in Mexico archeologists believe there to be a second pyramid inside measuring 108 feet wide. This temple is shown in the following picture.



Fig 6: Temple of Kukulkan at Chichen Itza

- 8.9.6** A famous bas-relief carving at the Angkor Wat temple in Cambodia relates the Hindu story of a serpent being pulled back and forth by 108 gods and asuras (demons), to churn the ocean of milk in order to produce the elixir of immortality. There are 5 monumental guardian gates to the fortified temple city of Angkor Thom which also represent the myth.



Fig 7: Angkor Wat temple in Cambodia

Conclusion

In this paper we have explored some very interesting characteristics of the wonder number '108' from the point of view of spirituality, astrology, astronomy, history, science, architecture and technology etc. This number has got great significance not only in Hinduism, but in Buddhism, Jainism and Sikhism as well. The number 108 is viewed significantly not only in India and eastern countries but also in other countries, including the western countries. The effort made and aim of this paper was to lift the veil of mystery and secrecy surrounding this number and make it more appreciable equally to the scientists, astronomers, technologists, architects, spiritualists, astrologers and mystics.

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