

## International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

# Unbalanced Wheel Driven by Magnetic Field: Insights from the Bhavishya Puranam, Stories, and the Figurative Sculptures of the Konark Sun Temple

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## ABSTRACT

The research paper delves into the intricate symbolism and functional principles of the erotic sculptures adorning the architecture of the Konark Sun Temple. Ancient folklore surrounding magnetic stones and floating iron idols intertwines with the Konark Sun Temple. Historically, sculptures were crafted with specific intentions. With this perspective, it is proposed that the erotic sculptures of men and women around the wheel in the architecture of the Konark Sun Temple were designed to convey knowledge about the functional principles of a 'Chakra' or 'Wheel,' propelled by magnetic fields.

The paper begins by contextualizing the symbolism of male and female entities in various fields. Detailed analyses of the sculptures around the Konark Sun Temple wheels reveal their symbolic significance and alignment with magnetic field dynamics. Through descriptions of the sculptures' positions and gestures, the paper explains how they represent the interaction between the sculptures and the functioning of a magnetic-powered unbalanced wheel. Furthermore, the research integrates textual references from ancient scriptures like the Bhavishya Purana, explaining the proportions and mathematical relations used in designing the unbalanced wheel.

Additionally, the paper presents a detailed breakdown of the magnetic principles of attraction and repulsion, the wheel's design and working methodology, and incorporates concepts of magnetic shielding, synchronization, and continuous rotation due to imbalance. Through this analysis, it explains how the sculptures and architectural elements of the temple embody the principles of an unbalanced wheel driven by magnetic fields, highlighting the ingenuity of ancient Indian architecture and scientific knowledge.

Keywords: Magnetic Wheel, Unbalanced Wheel, Magnetic Field Driven Unbalanced Wheel, Konark Sun Temple, Bhavishya Puranam.

## Introduction

Both men and women, though distinct, could symbolize broader concepts akin to complementary aspects found in electric currents, genetic structures, or magnetic fields—think plus and minus charges, X and Y chromosomes, or South and North pole of magnet also.

In Sanskrit, 'Kāma' signifies physical activity between sexes, primarily for procreation. However, its interpretation extends beyond mere sexual connotations. In languages like Marathi and Hindi, which stem from Sanskrit, 'Kāma' takes on broader meanings. For instance, expressions such as "Hē kasē Kāma Karatē?" mean "How does it work?" Generally, 'Kāma' is used to denote work, purpose, the working system, or workplace. And wheels surrounded by men and women, serve as inspiration for a magnetic-powered energy generator, as the temple is associated with stories of magnetic stone.

## Konark Sun Temple floor plan and reference sculptures' location

The Konark Sun Temple was designed in the form of a gorgeously decorated chariot mounted on 24 wheels, each approximately 12 feet in



diameter, and drawn by 7 mighty horses. Figure 1 depicts the plan of one of the main building structures of the Konark Sun Temple. The two dots shown in the image, one blue and the other red, indicate the locations of two wheels and the sculptures surrounding them. For clarity, we have labelled them Wheel-1 and Wheel-2, represented with borders of the same colour as those dots. A few areas around the wheels are marked with white borders and labelled for discussion, such as Area-A, Area-B etc. for Wheel- and Area-1, Area-2, ...etc for Wheel-2. (1) (2)

3. Sculptures around Konark Sun Temple Wheel and it's symbolic apperance



Figure 2: Wheel-1, classification of area

Figure 3: Wheel-2, classification of area

Description of Wheel-1 marked areas: Representing Male form, stated at Center of the wheel.

Area-A & Area-B: Centered. These areas depict both creatures looking towards the center of wheel. Area-C: Attraction. The men and two women entity are attracted to each other, indicating attraction. Area-D: Acceptance. The posture of the female entities resembles a bride with a garland, indicating acceptance. Area-E: Noninterest and Influenced at same time. The male entity is not interested in the female entity who previously appeared in Area-C. However, the male entity becomes involved with another female entity who is seated in Area-C and is comparatively larger in size. Area-F: The female entity is depicted as stepping upwards, in contrast to the male entity. This signifies the initiation of motion from the west to the north of the wheel.

Area-G: It guides us that the male entity is surrounded by snakes. Represented bonded, unmovable, stationary and stable.

#### Description of Wheel-2 marked areas: Representing Female form, stated around Rim of the wheel.

Area-1 & Area-2: In Area-1, a creature looks towards the center of the wheel, while in Area-2, another creature looks away from the center. Altogether, this represents the interaction between elements present at and around the periphery.

Area-3: Force. The sculptures in this area depict applied force.

Area-4: Load. The posture of the sculptures in this area suggests that they are experiencing load.

Area-5: Stepping Forward. The posture of the sculptures in this area suggests that the female entity steps forward, leaving the male entity behind. Area-6: Start. The posture of the sculptures in this area suggests the start of the journey.

Area-7: Destination. The posture of the sculptures in this area suggests reaching the destination.

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## A. Properties of Permanent Magnet

Here are some key properties of permanent magnets: (3) (4)

A magnet inherently possesses both North and South poles, which cannot be separated.



When two magnets are brought close to each other, they either attract or repel each other. Opposite poles attract, while similar poles repel. The attraction or repulsion depends on the orientation of the poles facing each other.

Figure 4: Magnetic attraction & reputation

#### Interpretation of Sculpture around Wheel 1 and Wheel 2

#### Taking upper half of the wheels in account:

In the architecture of the Konark Sun Temple, two wheels are depicted, with male and female forms placed around each wheel. When the wheel is divided horizontally from its center, these figures appear on the west, northwest, north, northeast, and east sides of the wheel. The research paper also focuses on the upper half of the wheel when discussing the workings of the magnetic-powered unbalanced wheel.

## Unbalanced In Wheel

In Area-C, the male entity is attracted to the female entities, while in Area-E, the male entity shows no interest in one of the two female entities. If we divide the wheel horizontally from the center and consider Area-C and Area-E, it represents the imbalance in the wheel.

#### Both wheels, Wheel-1 and Wheel-2 individually representants the male and female entity

Upon observing both sides of the wheel's sculptures, it is noticed that the male and female idols on the east and west sides are generally similar in appearance. However, from east to west, the appearance pattern of the sculptures slightly changes.

In the image of Wheel-1, specifically on the east and west sides in Area-F and Area-G, counting the combined male and female figure sculptures reveals 2 male figures and 1 female figure, indicating that Wheel-1's sculpture has a greater number of male entities. Similarly, in the image of Wheel-2, specifically on the east and west sides in Area-6 and Area-7, counting the combined male and female figure sculptures reveals a greater number of female entities. Thus, Wheel-1 represents the male entity, while Wheel-2 represents the female entity.

#### Stationary and Orbital (or RIM) part of the wheel:

Typically, in a wheel axle, the central part remains stationary while the rim rotates around it. As discussed earlier, Wheel-1 represents the male entity, and Wheel-2 represents the female entity.

In Area-F, Area-G, and Area-7, the male entity is depicted bound with a snake, symbolizing the unmovable function of the wheel's axle. In contrast, in Area-F, Area-6, and Area-7, the female entity is portrayed climbing and traversing, symbolizing the rim, the moving or revolving part of the wheel.

#### Relating male, female entity with magnetic pole

As discussed earlier, Wheel-1 represents the male entity, while Wheel-2 represents the female entity. The male entity is depicted bound with a snake, symbolizing the unmovable function of the wheel's axle, while the female entity is portrayed climbing and traversing, symbolizing the rim, the moving or revolving part of the wheel.

In standard mapping systems, the North Pole is commonly used to indicate direction and orientation. Considering '3. C.1. Taking the upper half of the wheels into account,' if we correlate the male entity with the North Pole of a magnet, fixed at the center as part of the axle, then the female entity corresponds to the South Pole of the magnet, representing the revolving part of the wheel's rim.

Since a magnet inherently possesses both North and South poles, which cannot be separated, in this wheel design, in the upper half of the wheel, a magnet is positioned at the center with its North Pole oriented towards the wheel's North direction. Meanwhile, another set of magnet orbits around it, with their South Poles attracted to the center magnet's North Pole.

#### Clockwise turn Direction:

As discussed earlier, Wheel-2 represents the female entity. In Wheel-2, the female entity in Area-6 marks the beginning of the journey, leaving the male entity behind in Area-5, suggesting a transition phase, while Area-7 denotes the destination. Taken together, these observations suggest that the rotation of the wheel occurs in a clockwise direction.

## Shield of Ferromagnetic Metal:

In almost every section, both male and female entities are depicted with some form of shelter over their heads, such as tree branches or a snake's head. In Area-C, the male and female entities are drawn towards each other, whereas in Area-E, the male entity shows disinterest or inertness towards a female entity.

A significant distinction between the backgrounds of Area-C and Area-E is that in Area-C, when they are not under the shelter of tree branches, the female entities succeed in attracting the male entity. Conversely, in Area-E, one of the females fails to continue attracting the male entity, or the male entity displays no inertness towards that female when they are sheltered by tree branches.

This behavior mirrors the interaction between two magnets with opposite poles attracting each other. However, when both magnets are covered or shielded by ferromagnetic metals, their attraction is also reduced. Metaphorically, the properties of ferromagnetic metals on magnets are likened to the sheltering of tree branches for the attraction between male and female entities. (4) (5) (6)

## Proportions of wheel diagram: Chapter number 149 in Bhavishya Puranam

#### Chapter number 149: Reference text for wheel diagram.

The Bhavishya Purana is an ancient scripture known as a solar book that venerates Suryanarayan (Lord Sun). Within its text, it emphasizes the Sun as the primary energy source, from which the entire creation emerges and eventually dissolves.

Chapter 149 of the Brahma Parva in the Bhavishya Purana features a conversation between Lord Krishna and his son Samba. After observing the glorious Sudarshan Chakra worn by Lord Krishna, Samba queries its origin and the symbolism of comparing it with a lotus flower. Samba also seeks guidance on the diagram of the Sun Wheel, expanding the size of the Padma (an imaginary golden lotus within the body), and making divisions of the Nemi (Axle), Aar (Spokes), and Nabhika (Navel).

In response, Lord Krishna advises that the wheel's size should be 64 Angul (where Angul is a measurement unit equivalent to the width of a thumb), while the Nemi (Axle) size and Nabhi (Navel) extension/width should both be 8 Angul. The Padma Nabhi (Inner Central Navel) should be three times larger, totalling 24 Angul. (7)

Although these proportions pose challenges in diagram drawing, they hint at discussions about an axle and an outer rim. Further exploration helps uncover hidden mathematical relations or hints in certain verses in chapters 8, 24, and 64, along with a numerical relationship with chapter number 149, where the dialogue between Lord Krishna and Samba takes place.

## Mathematical relations or hints between the verses in chapters 8, 24, 64, and chapter number 149:

#### Chapter 8, verse number 4 in Brahmaparva

Hētavō hi trivargasya vitrastastul manada, Arakṣaṇādbhavantyasamadmīṣa rakṣana matam.

Relation: Trivargasya means class, standard, grade, or the square of three entities. The numbers 1, 4, and 9 are squares of the numbers 1, 2, and 3 respectively.

## Text in Chapter 24, verse number 13 in Brahmaparva of Bhavishya Puranam

Jagan'yō navatih prōktō madhyamastu śatadgulāh, Astottaraśatam yasya uttama tasya laksam.

Relation: Ninety, one hundred, and one hundred and eight represent characteristics of the ideal men's height proportions. Remarkably, when these heights (90, 100, and 108) are summed, the total is 298, which is double the number 149.

#### Text in Chapter 64, verse number 5 in Brahmaparva of Bhavishya Puranam

Ēkatram dvirātram vā trirātram naktamēva cha, Upavāsī ravīņa yastu bhaktyā dhyāyati mānavah.

Relation: Fasting for one, two, or three nights corresponds to the square roots of 1, 4, and 9 respectively. However, this text emphasizes an alternate factor by being associated with Naktavrata.

## Correlating the proportions mentioned in Chapter 149 with numerical values from Chapters 8, 24, 64:

#### Proportion, Naktavrata & Fibonacci Sequence

A proportion is an equation that defines two given ratios as equivalent to each other. In other words, the proportion asserts the equality of two fractions or ratios.

As mentioned in Brahmaparva/Verse 5 of Chapter 64, it involves fasting for one full night after a day, continuing for a total of three complete days, representing an alternation between day and night fasting.

In mathematics, the Fibonacci sequence is a sequence in which each number is the sum of the two preceding ones. Numbers that are part of the Fibonacci sequence are known as Fibonacci numbers. The sequence begins 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...

## Imagination: Said Wheel Proportions & Verga

As discussed in '4. B', Lord Krishna instructed that the proportions for drawing the sun wheel (diagram) should be 8:24:64, which corresponds to the ratio of 1:3:8 in mathematics. Notably, in the Fibonacci series, 1, 3, and 8 are alternate numbers: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ... As mentioned in Brahmaparva/Verse 4 of Chapter 24, 'Verga' refers to class, grade, and square (n<sup>2</sup>). The square of a number is obtained by multiplying the number by itself. When the wheel should be of 64 units, this proportion can be expressed as follows:  $64 = 8 \times 8$  parts. By using each 8 as the sum of the two preceding Fibonacci numbers (8 = 3 + 5), 64 can be interpreted as follows:  $64 = (8 \times 8) = (3 + 5) \times 8 = (3 \times 8) + (5 \times 8) = 24 + 40 = 64$ .

## Finding:



It is obvious that a wheel should be round in shape. When four circles with diameters of 8, 24, 40, and 64 units are cantered at a single point, as shown in Figure-5, this proportion closely resembles the design carved on the wheels in the architecture of the Konark Sun Temple, as shown in Figures 2 and 3.

Additionally, the distance from any point on one circle to a point on another circle, located in the same direction from the centre of the circles, is found to be half of the difference in their diameters. This characteristic is explored in Chapter 24. Specifically, the difference between the diameters of the 40-unit and 64-unit circles is 24 units, with the circle of 64 units being offset by 12 units outside the 40-unit diameter circle, which would be the rim of the magnetic wheel. This characteristic is reminiscent of similar findings in Chapter 24, which are also relevant to Chapter 149. For instance, Chapter 24 mentions the association of 90, 100, and 108 units with ideal men's height proportions. Interestingly, it is found that (90 + 100 + 108) / 2 equals 149. (2

Figure 5

## **Proportion:**

According to the instructions in Brahmaparva, Chapter 149, the wheel's size should be 64 Angul (width of a thumb), while the Nemi (axle) and Nabhi (navel) should both be 8 Angul. The Padma Nabhi (inner central navel) should be three times larger, totalling 24 Angul. Therefore, to draw a sun wheel diagram, the numbers 8, 24, 40, and 64 are chosen, which are alternate numbers from the table of 8: 8, 16, 24, 32, 40, 48, 64, 72, 80. Here, 64 is the squared value of 8, aligning imagination and interpretation with the text from Chapters 8 and 64. Additionally, these proportions match those of the chariot of Lord Sun described in Brahmaparva, Chapter 52. (7)

## Wheel design

Part List

No Part Name Material Q'ty Position Characteristic Non 1 **Centre Axle** 1 Centre of wheel Static metal 2 **Fixed magnet** Magnetic 1 Centre of wheel Static mu-Set of 3 Shield on fixed magnet Around fixed magnet Static metal 2 Set of Non 4 **Retainer Frame** Centre of wheel **Clockwise Rotating** metal 2 **Axles for Orbiter** Non 5 8 **On Retainer frame** Fixed with retainer frame magnet metal **Orbiter magnet** 8 6 Magnetic On axle around **Anti-Clockwise Rotating** Shield on Orbiter mu-7 8 Set Around fixed magnet Anti-Clockwise Rotating with orbiter magnet metal magnet 8 Separator 8 **Clock wise rotation with Retainer Frame Between Orbital** mu-

		metal		Magnet	
9	Pully	Non metal	8	On every Axels	Anti-Clockwise Rotating with Orbiter magnets Axel
10	Timer belt	Non metal	1	Connecting	Moving Anti-Clockwise on Pully
11	Influencer magnet	Magnetic	2	Around fixed magnet	Static

## Methodology of measuring degrees.

In geometry, to measure degrees of a circle according to standards,  $0^{\circ}$  is always aligned with the positive x-axis of a 2-dimensional plane, while  $90^{\circ}$  is aligned with the positive y-axis.

In this exploration, it is considered that the wheel's center point is aligned to the point (0, 0, 0) in 3-dimensional space, and  $0^{\circ}$  of the wheels has aligned with the positive z-axis. It has been determined that the point which is aligned with the positive z-axis will be found at the positive x-axis of the wheel after a 90° turn, as per shown in Figure-6.

### Wheel Diagram with Parts



Figure 6: Main Parts of the wheel

#### Parts introduction and Logic

#### Part number 1: Centre Axle

The centre axle is a stationary part. A centre magnet is fitted on it, while the retainer frame can pivot on it.

## Part number 2: Fixed Magnet with 1:3 proportion

According to the Bhavishya Puranam, specifically in Parva 1, Brahmaparva, Chapter 149, it is stated that the extension or width of the Nabhi (Navel) should be 8 units in size. Furthermore, the Padma Nabhi (Inner Central Navel) should be three times larger than this, equating to 24 units. This text interprets that the centre magnet is a stationary magnet shaped like a capsule, with a smaller size ranging from 8 units to a maximum size of 24 units at the centre of the wheel.

Additionally, it asserts that the North Pole of this centre magnet is precisely directed towards the north direction of the wheel. This centre magnet is depicted as incredibly powerful, capable of attracting the orbital magnets present around it within the wheel assembly.

In the upper half of the wheel, representing the North Pole of the centre magnet symbolizes the male form, which remains stationary but can be influenced. Conversely, in the upper half of the wheel itself, the South Pole of the orbital magnets, symbolizing the South Pole, represents the female form, which orbits the centre magnet and attempts to influence or get attracted to the centre magnet.

## Part number 3: Shield on Centre Magnet (Ferromagnetic or mu-metal part)

According to the sculpture of Wheel-1, it illustrates that in the northwest direction (Area-C), the male entity is attracted to the female entity when there are no tree branches or leaf shelters surrounding them. However, when male and female entity appear to have that kind of refuge, the male entity loses interest in one of the female entities. Drawing inspiration from this observation, it has been interpreted that unbalanced characteristics can be introduced into the magnetic wheel by utilizing mu-metal materials as shields to create an imbalance in the magnetic region of the wheels.



It's worth noting that magnetic field do not require a medium to propagate; they can travel through a vacuum. However, if these waves encounter materials like mu-metal, their intensity can be reduced. When a superconductor is brought near the magnet. The magnetic field is repelled by the superconductor, preventing it from penetrating the surface. The magnetic field on the other side of the superconductor is almost non-existent. When, an iron box surrounding the magnet, causes the magnetic field to travel within the walls of the box, effectively preventing it from penetrating the nterior. (5) (6)

Figures 7-A and 7-B: Build upon the concept discussed earlier, which involved using a material similar to mu-metal to obstruct the naturally extending waves from the magnet. A shield part has been provided on the fixed magnet, as shown in Figure 7-C. This shield is depicted with a light, transparent badge cover surrounding the circumference of the centre magnet. By applying this shield to the centre, we can redirect the magnetic field, as indicated by the yellow arrow, and isolate the magnetic field to a specific area of the wheel. (5) (6)

## Part number 4: Retainer frame

As shown in the Figure-6, The retainer frame is a supportive structure consisting of two parts. It is installed on the centre axle from the centre and has the capacity to accommodate the fitting of 8 additional axles on its peripheral area.

## Part number 6: Orbital Magnet

As depicted in Figure 6, the eight magnets are positioned in the rim area of the wheel. Within the rim area, there are eight orbiter magnets situated on the frame at eight equidistant points, each with a diameter of 12 units. These magnets are arranged and connected with a timing belt in such a way that at any given time, their similar poles will always be directed in the same direction. While the centre magnet remains fixed in the centre, these eight orbiter magnets have the capability to rotate on their axles, which are positioned on the retainer frame. This represents a fundamental distinction between the centre magnet and the orbiter magnets.

#### Part number 7: Shield on Orbiter Magnet (Ferromagnetic or mu-metal part)

Similarly to the centre magnet, mu-metal shields have been provided on the 8 orbiter magnets, and these shields will rotate with their corresponding magnet's axle.

## Part number 8: Separator

The appearance of the separator parts in the wheel is inspired by the sub-spokes present in the wheels of the Konark Sun Temple. This part, also made of mu-metal, plays a key role in the functioning of the wheel. Just as the sub-spokes divide the entire wheel into eight parts, the separator part supports the cessation of interaction between two adjacent orbital magnets, isolating them from each other.

## Part number 9 & 10: Pully and Timer belt (identically orientation retainer)

Synchronization: Lunar phases - Why does the moon always appear on one side of the Earth? The answer is synchronous rotation! The Moon orbits Earth once every 27.3 days and spins on its axis once every 27.3 days. This means that although the Moon is rotating, it always keeps one face toward us. Known as 'synchronous rotation,' this is why we only ever see the Moon's nearside from Earth.



Figure 8: Samudra Manthan



Figure 9: Timer Pully and Belt

As per shown in Figure 8, a sculpture within the premises of the Konark Sun Temple depicts the ancient story of 'Samudra Manthan,' in which gods and demons extract poison, nectar, and other elements. Coiled snakes play a crucial role in facilitating the controlled rotation of the mountain by the gods and demons for churning the sea.

In the design of the wheel assembly, there is an arrangement at the centre of the orbiter magnets. Each of the eight orbiter magnets is connected to one another by a timing belt, ensuring synchronization. With this arrangement, all eight orbiter magnets revolve around their centre in the same direction and at the same speed, causing each orbiter magnet to appear identically oriented at any given time.

## Part number 11: Influencer Magnet



Figure 10: Section of Wheel-1



Figure 11: Redirecting magnetic field

Figure 10 showcases a part of Wheel-1, particularly focusing on Area-C and Area-E. The design of the influencer magnets in the wheel is inspired by the postures of a female entity present in these areas.

In Figure 10 Area-C, located in the northwest direction of the wheel, a smaller female entity, highlighted in orange, is positioned between a male and another female. She is seated on the floor in front of the male entity, appearing to attempt to influence him, while the male seems more attracted to the standing female.

Moving to Figure 10 Area-E, in the northeast direction of the wheel, we see the same female, highlighted in green, now positioned closer to the male's rear side. She is slightly taller and stands near the upper side of the male, exerting her influence. Interestingly, the male is now also looking in her direction, indicating his interest in her and disregard for the previous female positioned to his left. This observation prompts us to consider improvements in the design to better capture these dynamics

**Redirecting Magnetic Field:** As shown in Figure 11, we added two more fixed (influencer) magnets to the same wheel near the larger magnet (the retainer frame part has been kept hidden for better visualization). By using mu-metal material shields, we can redirect the magnetic field. By adding two influencer magnets to the wheel, we can now redirect the centre magnet's magnetic field in a specific direction, as indicated by the red and blue arrows in Figure 11. (5) (6) This mechanical arrangement metaphorically mirrors the interaction shown in Figure 10 between the male and both female entities at Area-C and Area-E. In Figure 11, as shown, in the northwest direction, the central magnet can directly interact with both the orbiter magnet and the influencer magnet, positioned at the bottom left side of the central magnet resembling a female entity, as highlighted in orange in Figure 10, Area C.

Conversely, in the northeast direction, the central magnet cannot interact with the orbiter magnet due to the shield provided on the orbiter magnet. However, within the shield, the central magnet can interact with the influencer magnet, positioned on the right side and upper side of the central magnet, resembling a female entity, as highlighted in green in Figure 10, Area E.

## Working

The wheel has 8 orbital magnets, and its operation is explained by dividing one full rotation into 8 intervals, each covering 45 degrees. The hypothesis is that an unbalanced condition will occur when the wheel completes one interval, prompting the orbital magnet to move to the position of the next interval. This process repeats for a full rotation, continuing as long as there is sufficient magnetism to keep the wheel turning.



## Figure 12: Random Start Position

## Initial Stage

- Starting from any random position, it is assumed that any two diagonally opposite orbital magnet poles aren't aligned with the center magnet's pole.
- The positions of all eight orbital magnets relative to the center magnet are defined by their placement on the retainer frame.
- All eight orbital magnets mounted on a frame can rotate around their axles. They are connected with pulleys and timing belts, ensuring they rotate at the same pace and in the same direction.
- Since the center magnet is immovable at the wheel's center, the orbiter magnets will collectively try to align their opposite poles with the center magnet's north and south poles.
- Due to the conditions discussed in '5.C.iii. Part 3: Shield (mu-metal part) on fixed magnet,' and '5.C.ix. Part 11: Influencer Magnet', the center magnet's magnetic field is not spreading as naturally as it should.
- As discussed in '4. WHEEL DESIGN. C.vii. Part 8: Separator,' any two adjacent orbital magnets will not influence each other during the wheel's rotation due to the Separator part. Thus, each orbital magnet interacts only with the center magnet or its shield.
- In the context of Area-C shown in Wheel-1 and discussed in section 3.A.2, when the magnetic field is stronger at the magnets' poles, any two diagonally opposite small orbital magnets between 315° to 360° and 135° to 180° will be attracted toward the central magnet's poles.
- Since the center magnet is immovable at the wheel's center, orbiter magnets between 315° to 360° and 135° to 180° will apply force to
  move closer to the center magnet.

#### Aligning with overcoming



Figure 13: Frame rotating clockwise direction

The centre magnet is fixed and has a stronger magnetic field at its poles. This is similar to Area-4 depicted in Wheel-2 and discussed in section '3.B.2 Area-4,' where the sculpture signifies maximum heaviness or load.

When the center magnet remains immovable at the center of the wheel, the orbiter magnets previously positioned near 315° and 135° will be attracted by both poles of the center magnet. They will endeavor to align their poles with the center magnet's poles, reducing their distance from the center magnet.

Their attraction force of center magnet and orbiter magnet near 315° and 135° will be utilized to revolve all the orbiter magnets counterclockwise simultaneously due to the timing belt and pulleys.

At the same time, when the orbiter magnets rotate counterclockwise simultaneously, the retainer frame will rotate clockwise to bring the orbiter magnets closed to center magnets stronger magnetic field area, as depicted in Figure 13. The two orbiter magnets previously at the 315° to 360° and 135° to 180° positions will settle at the 360° and 180° positions, aligning with the north and south poles of the center magnet.

Metaphorically, this phenomenon is akin to Area-D, illustrated in Wheel-1 and discussed in section '3.A. Area-D,' where the posture of a female entity denotes acceptance.

## Unbalance

In the attraction between a magnet and a ferromagnetic metal shield, the pull force from a magnet to steel is about the same as to a second, identical magnet. However, if there's a gap between the magnet and the object, the magnet-to-shield attraction might be weaker than the magnet-to-magnet attraction. The centre magnet is more powerful than any orbital magnet. After reaching the 0° position, the orbital magnet cannot be attracted to the centre magnet as before due to the geometric arrangement. Meanwhile, the centre magnet influences the orbital magnets at the 315° and 135° positions more compared to the 45° and 225° positions. Thus, the orbital magnets now at the 315° and 135° positions will be more strongly attracted to the centre magnet and will try to align their poles with it. All eight orbital magnets, connected via a timing belt, rotate counterclockwise from their own centres to reach the closest possible distance to the centre magnet. Consequently, the orbital magnets apply force to the frame, causing it to turn clockwise. Thus, all eight orbital magnets rotate counterclockwise on the frame, while the frame itself turns clockwise.

## Decay: Mid and step forward to completing the interval

- Figure 14 represents the half interval, or 22.5° rotation, of the wheel since the 'Aligning with Overcoming' stage discussed in section 6.D. For better visualization, the retainer frame part has been kept hidden in this figure.
- Additionally, the magnetic poles of the orbital magnets are present at 337.5° and 157.5°. Along with the other six orbital magnets, they are shown vertically aligned with the wheel to illustrate the use of the orbital magnet axle. This alignment highlights the two degrees, 292.5° and 112.5°, where the centre magnet and any two orbiter magnets start to interact with each other through their magnetic fields when the wheel is turning clockwise. This also shows that before any interval is completed, the design's characteristics and shield geometry establish the conditions for the next interval.

## Continued from '6.A. Initial Stage', '6. B. Aligning with overcoming', and '6. C. Unbalance',

When Due to imbalance, when the orbital magnet reaches the 22.5° position from the 0° position and the orbital magnet reaches the 202.5° position from the 180° position, they can no longer attract or get attracted by the centre magnet due to the magnetic shield.

However, the orbital magnet that was positioned at  $315^{\circ}$  and now reaches  $337.5^{\circ}$ , and the magnet that was positioned at  $135^{\circ}$  and now reaches  $157.5^{\circ}$ , are more attracted to the centre magnet due to the reduced distance from the centre magnets magnetic pole. In terms of a horizontal line from the wheel's centre, the orbital magnets at  $337.5^{\circ}$  and  $157.5^{\circ}$  will continue approaching the centre magnet until they reach the  $360^{\circ}$  or  $0^{\circ}$  position.



Figure 14: Mid of the Interval

## Continues Unbalanced & Application.

As discussed, the wheel will turn 45° clockwise and complete one of its 8 intervals. When the orbital magnets move to the next interval, a further unbalanced condition will occur, ensuring that the wheel always remains unbalanced. This phenomenon will continue until the magnetism of the magnets dissipates or a mechanical failure occurs.

The attraction force generated by both the center magnet and the orbital magnets will cause the wheel to turn. The additional force required to turn the wheel can be used to run the appropriate loads, such as a turbine. (3)

## REFERENCES

- 1. Konark Sun Temple. Wikipedia. [Online] Wikimedia Foundation, 18 May 2024. https://en.wikipedia.org/wiki/Konark Sun Temple.
- Stone wheel engraved in the 13th century built Konark Sun Temple in Orissa, India. Wikimedia. [Online] Wikimedia Foundation, 1 March 2024. https://commons.wikimedia.org/wiki/File:Stone wheel engraved in the 13th century built Konark Sun Temple in Orissa, India.jpg.
- Kindersley, UK Dorling. ULTIMATE FAMILY VISUAL dictionary. London : Dorling Kinderlsey limited (Penguin Group), 2016. pp. 316-317. ISBN 978-0-1434-1954-9.
- 4. Magnet. Wikipedia. [Online] Wikimedia Foundation, 7 May 2024. https://en.wikipedia.org/wiki/Magnet.
- 5. Mu-metal. Wikipedia. [Online] Wikimedia Foundation, 29 March 2024. https://en.wikipedia.org/wiki/Mu-metal.
- 6. Magnetic switchable device. *Wikipedia*. [Online] Wikimedia Foundation, 6 February 2024. https://en.wikipedia.org/wiki/Magnetic\_switchable\_device.
- 7. Bavishya Puran. VedPuran. [Online] November 2023. https://vedpuran.net/wp-content/uploads/2011/10/bavishya-puran.pdf.