Planetary System in Indian Mythology

Kamala Kanta Jena

Abstract

There exist lots of differences between science and Indian mythology. But many theories of Indian mythology have been proved scientifically sound. It is because the basic knowledge behind establishing some mythological theories is too logical to be accepted by the modern science. The knowledge and theorems described in our mythology should be extensively explored in order to modify if needed so that it will be easily accepted at the international level.

Key words: *Planetary system, Modern science, Indian mythology, Nava Graha, Rahu, Ketu.*

Introduction

Science and mythology are different in their methods of understanding nature and natural phenomena. Science believes in empirical evidences and experiments, whereas, mythology make use of symbolic and imaginative interpretations. However, both science and mythology share the common goal that is to explain the world. Both science and mythology can be seen as striving to understand and potentially control the world using different methods and approaches.

According the definition laid by the International Astronomical Union (IAU), our planetary systems in modern science has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. All of these eight planets revolve in their respective orbits around the Sun. But in traditional mythological culture, when people say planet, they mean ‘Navagraha’. The idols of ‘Navagraha’ are also worshipped in various Hindu temples or pavilions for public rituals. The ‘Navagraha’ referred to traditional culture are - Sun, Moon, Mars, Mercury, Jupiter, Venus, Saturn, Rahu and Ketu. In Sanskrit, the word '*Nava*' means '*nine*' and the word '*Graha*' means '*to hold*'. Therefore, planets are deities and celestial bodies that affect our lives. Nine such deities

and celestial bodies that affect our lives have been given names, which are called ‘Navagraha’. The present article discusses the planetary systems in science and mythology in detail. Further, it has been mentioned that the Indian researchers should give efforts to explore Indian knowledge system.

Illustration

As far as traditional mythological knowledge is considered, initially, only five planets were taken into consideration. In fact, the five planets which were visible to the naked eyes were taken into account. Those five visible planets were - Mars, Mercury, Jupiter, Venus and Saturn. These planets can be seen even today with the naked eyes at night. Later, two more very bright bodies that affect our lives were taken to the planetary system. Those two bodies were - the Sun and the Moon. So, the total number of planets became seven, namely - the Sun, the Moon, Mars, Mercury, Jupiter, Venus and Saturn. According to the names of these seven planets, there were seven days. That is: Sunday in the name of the Sun, Monday in the name of the Moon, Tuesday in the name of Mars, Wednesday in the name of Mercury, Thursday in the name of Jupiter, Friday in the name of Venus and Saturday in the name of Saturn. Accordingly, seven heavenly objects are worshipped in their respective days.

People were not satisfied with seven planets. They think of other two concepts which they thought affect their lives. After these seven planets, two more planets were taken into consideration. One is '*Tamograha*' or *Rahu* and the other is '*Chayagraha*' or *Ketu*. But the newly introduced planets are not visible to our eyes. In the eighth or ninth century, Rahu and Ketu were accepted as two planets. Rahu and Ketu are associated with the solar eclipse and the lunar eclipse respectively. In the Puranas, Rahu is the severed head of the demon Svarbhanu, who, disguised as a god, stole nectar and ate it to become immortal. When Svarbhanu was eating nectar in the guise of a god, Surya (Sun) and Chandra (Moon) informed Lord Vishnu about the theft of demon Svarbhanu. Lord Vishnu detached Svarbhanu's head from his body with the *Sudarshan Chakra*. Svarbhanu was transformed into two entities after being severed by Vishnu’s chakra. But the tail remained alive because it had eaten nectar. In the Puranas, the head is called Rahu and the rest part (tail) is called Ketu. Both of them roam in the sky. They

are angry with the Sun and the Moon. If found the opportunity, Rahu swallows the Sun and Ketu swallows the Moon. When the severed head Rahu swallows the Sun, the Sun disappears causing solar eclipse. But Rahu is a severed head, which has no throat or stomach. Therefore, Rahu cannot swallow the Sun forever. The Sun enters Rahu's mouth from one side and exits through the other side. The solar eclipse persists/continues as long as the Sun is hidden during the journey from entry to exit. Similarly, when the moon is consumed by the sun, a lunar eclipse occurs. In Hinduism, planetary science is an important part of Vedic astrology. It is strongly believed that by pronouncing or hearing the name of the nine planets, the ill effects expected on a person due to planetary movements are remedied. Bad thoughts are removed from the mind and positive vibes come into mind.

If we consider the matter of planets from the modern scientific perspective, there will be no harmony with Shastras and Puranas. According to science, we also had nine planets. They were - Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto. But after knowing the real size of Pluto, it was removed on August 24, 2006 from the list of planets. Therefore, the number of planets in our solar system has been reduced to eight today. In Puranas, the Sun and the Moon are considered planets, but in modern science, the Sun is a star which has own light and the Moon is a satellite revolving around the Sun. As many as eight planets revolve around the Sun. The Earth in Puranas is not considered a planet, but in science, the Earth is a planet, around which the satellite moon revolves. There are no physical bodies named Rahu and Ketu.

Between the orbits of Mars and Jupiter, countless small bodies orbit the Sun. They are called the members of ‘Asteroid Belt'. Our solar system does not end there. After the orbit of the farthest planet Neptune, many small and large cold bodies orbit the Sun. That region is called the 'Kuiper Belt'. Our 'solar system' consists of planets, satellites, asteroids, Kuiper Belt and countless other bodies orbiting the Sun. Apart from the satellites of the solar system, other bodies are divided into three categories. They are – (a) *planets*, (b) *dwarf planets* and (c) *minor planets*. The real reason for Pluto's delisting from the list of planets in 2006 is that the bodies considered planets in the 'solar system' are much larger than other bodies, they are almost spherical due their own gravity and their orbits are not intersected by the orbits of other celestial bodies.

Even though Pluto is large, other celestial bodies intersect its orbit. Pluto does not clear the neighbourhood around its orbit. Therefore, according to the definition, Pluto cannot be called a 'planet'. Now Pluto is called a 'dwarf planet'. Including Pluto, there are 5 dwarf planets in our solar system. They are - Ceres, Pluto, Haumea, Makemake and Eris. Apart from the planets, satellites and dwarf planets, the other bodies are grouped in the 'minor planet' category.

Especially in relation to lunar eclipses and solar eclipses, the scientific explanation is completely different from the mythological explanation. Science says that the Earth revolves around the Sun and the Moon revolves around the Earth. During the revolutions, on the day of full moon, the Earth comes between the Moon and the Sun. Similarly, on the day of new moon, the Moon comes between the Earth and the Sun. If the Sun, the Earth and the Moon are situated exactly in a straight line, then a lunar eclipse occurs on the full moon night and a solar eclipse occurs on the new moon day. The Sun has its own light, but the Moon does not have light. We can see the Moon when the Sun's rays fall on the Moon. On the day of full moon, if the Earth is placed in a straight line between the Moon and the Sun, the shadow of Earth falls on the Moon. If the Sun's rays do not fall on the surface of the Moon, we cannot see the Moon from Earth. This phenomenon is known as the lunar eclipse. However, it is said in the Puranas that a lunar eclipse occurs for the planet Ketu.

Similarly, on the new moon day, when the moon is placed in a straight line between the Earth and the Sun, the Sun is hidden behind the moon. So we cannot see the sun, which is called solar eclipse. Thus, both the eclipses are simply the game of light and shadow. Therefore, there is no reason to be scared of the lunar eclipse and the solar eclipse. Scientists always suggest the public to watch with proper precaution and enjoy these astronomical phenomena without fear.

Conclusion

There are lot of differences between science and mythology. But, both science and mythology attempt to make sense of phenomena that are not easily explained. Such phenomena include the origins of the universe, the nature of existence, the workings of the nature and many more. Science and mythology play a crucial role in

shaping cultural identities, values, and beliefs as well. Further, science and mythology reflect the evolution of human thought and our attempts to understand the world, with science building upon and refining earlier mythological explanations. Both science and mythology can be seen as striving to understand and potentially control the world, though their methods and approaches differ.

Modern scientific research is much more advanced in comparison to Indian mythology. But at the same time, modern science has accepted many of the theories described in the mythology as correct. Two such very popular examples are: (i) lunar eclipse and (ii) solar eclipse. Indian astrologers can accurately calculate the time of lunar eclipse and solar eclipse even today by dint of traditional knowledge. Thus, there are some basic theorems in mythology which help astrologers to calculate the timings of heavenly phenomena accurately. Scientists of our country should think more in this aspect. The Indian knowledge system and the theorems described in our mythology should be explored. The results found from such research will further refine the knowledge of our mythology, which will be easily accepted at the international level.

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