

CHAPTER XX

FALSE NOTIONS

[Need for removing false notions]

1. Different situations have been ascribed (by different people) to the matters contained in the universe. When one hears the different statements made by (mutual) opponents, doubt, as it were, will assail one's mind.

2. For this reason, I shall first enumerate the irrational views ; and then I shall put forward the truths together with proofs. That will make things clear and steady the mind.

[False notions]

3. Some say that the day of the demons (at the south pole) starts when the Sun goes (from the northern to) the southern solstice ; and, that of the gods (at the north pole) starts, when the Sun goes from there towards the northern solstice.

Again, others say that the solar eclipse and the lunar eclipse are caused by Rāhu.

1-7. In this chapter Lalla mentions some of the beliefs prevailing then with regard to astronomical phenomena and refutes them. Most of these beliefs occur in the Purāṇas.

The views are as follows :

1. The day of the observers at the north pole begins when the Sun starts *for* the summer solstitial point and that of the observers at the south pole begins, when it starts *for* the winter solstitial point.

2. The night comes when the mountain Meru covers the Sun.

3. Directions can be determined at Meru.

4. Some say that the Moon is above and the Sun is below. Again, some say that the night is caused by the darkness due to the mountain *Meru*. Again, others say that the disc of the Moon daily decreases because it is being drunk by the gods.

5. Some say that the mountain *Meru* has directions. Others think that there are two Suns and two Moons. Again, some say that the day of the manes commences with the dark half of the lunar month, and the night, with the bright half.

6. Some think that the earth is infinite ; others, that it is plane as a mirror. Again, others say that it extends to many *yojanas* and floats on water like a boat.

7. Some say that the earth is supported by a tortoise, a serpent a boar, an elephant or by mountain ranges. Again, others say that the earth goes up and down ; and some say that it goes round and round like the wheel of a chariot.

[Doubts on Solstice clarified]

8. If the Sun is always visible to the gods when near the end of Gemini, then, for what reason, pray, it is not visible when in Cancer ?

4. The dark half of the lunar month is the day of the manes and the light half is their night.

5. *Rāhu*, a mythical demon or a snake is the cause of eclipses.

6. The Moon's orbit is above that of the Sun.

7. The illuminated portion of the Moon decreases because it is being sucked by the gods.

8. The earth is infinite.

9. The earth is plane like a mirror.

10. The earth is supported in various ways.

11. The earth moves.

12. There are two Suns and two Moons.

9. If the Sun is visible to the gods while ascending due to (the increase) in the declination, why should it not be visible to them while descending through the same declination.

[Doubts on night clarified]

10. How is it that the gods see the same Sun, even when the wheel of darkness (approaches the world), just as one sees a horse attached to a rope going round and round, sometimes near and sometimes at a distance.

11. If the night of the men in this world is caused by the *Meru* covering the Sun, tell me how the night of the gods, (who live on the *Meru*) and feed on nectar, is caused. (Therefore the statement) is irrational.

12-13. When the Sun goes to the southern part (of the ecliptic beginning with) *Libra*, it is always night for the dwellers of *Meru*. When it moves along the north (of the ecliptic beginning with) *Aries*, (it is continuous night) for the demons. When the Sun is hidden by a part of the earth, it is night for the men also.

Just as the shadow of a tree is longer when it is directly opposite to the Sun than at other times, so is the shadow of the part of the earth (directly) opposite to the Sun. (That shadow causes night

8-9. These verses refute the first belief. According to this belief, the observers at the north pole can see the Sun travelling from *Capricorn* to *Cancer* and not from *Aries* to *Libra*. Lalla's argument is that if the observers at the north pole can see the Sun ascending from *Aries* to *Gemini*, they should also see it descending from *Cancer* to *Virgo* when the Sun travels exactly along the same diurnal circles. So the current belief cannot be correct. See, *SŚe*, xv. 59 cd-60 and *SŚi*, II. vii. 11-12.

10-13. These refute the second belief. Lalla maintains that the night is not caused by *Meru* but by the shadow of the earth. See *SŚi*, II. iii. 12.

in the part away from the Sun). (I have now explained how) the nights of the gods, demons and men come about.

[Doubts on Meru clarified]

14. How can *Meru*, the dwelling of the gods, have directions when the Sun rises all round it. If the point where the Sun rises first is called the east point, what will it be called, when the Sun sets there.

15. The Sun is simultaneously to the north of some and to the south of others. It is again in front of some and behind others. Thus, in reality, there are no directions (for the *Meru*).

[Visibility of the Moon to the manes]

16. The manes, living in the upper part of the Moon, see the Sun on their zenith on the day of the New Moon. That being so, how is it that they do not see it from the middle of the light half of the lunar month.

[Doubts on the eclipses cleared]

17. Men see a solar eclipse either at Sunrise or at sunset, when the Moon is a little to the north. But the gods cannot see it then.

14-15. These refute the third belief. Lalla says that no direction can be determined at Meru, because there the observer's horizon coincides with the celestial equator and hence there is no east point. See *SŚe*, xvi. 63-64.

16. This refutes the fourth belief. Lalla states that the whole of the light half of the lunar month cannot be the day of the manes, because they do not see the Sun after the eighth day. (See v. 15-18)

17-27. These refute the fifth belief. The *Paurāṇika* story goes that a demon in disguise was drinking the nectar churned by the gods from the milky ocean. The Sun and Moon pointed him out to Hari

18. It is known that when a demon, an enemy of the gods, was drinking the nectar, his head was chopped off by his enemy Hari. But the head did not die. Some say this is Rāhu. The Sun (and the Moon) are devoured by it.

19. (Some say that) the Rāhu is round like the discs of the Sun and Moon, and being dark cannot (always) be seen in the sky. It is seen only on the New and Full Moon days and that too due to the boon of Brahma.

20. Some say that the cause (of an eclipse) is a snake with head and tail. Others say it is only darkness. Again, some say that it is a moving demon, and others that there is a pair of them. And some say it goes wherever it wishes.

21. If the Rāhu has a body or is a disc, or a head or is a planet in the sky, and if it is always moving, why should it swallow (the Moon) only at a distance of 6 signs (from the Sun).

22. If you are of the opinion that an artful demon is always the cause of an eclipse by swallowing (the Sun or Moon), then how is it that an eclipse can be determined by means of calculation. Moreover, why is there not an eclipse on a day other than the day of New or Full Moon.

23. If a lunar eclipse takes place on the western horizon and is caused by Rāhu, then why does not the Sun's disc appear to be swallowed by the second Rāhu of the same speed.

who severed his head from his body. But the head did not die. It remained immortal since it had drunk the nectar. Out of spite this head swallows the Sun and the Moon and thus causes an eclipse. Another belief is that a snake causes an eclipse.

Lalla refutes them both by pointing out that since there are differences with regard to the duration, obscured portion, etc., between a solar and a lunar eclipse, the obscuring body in both the cases cannot be the same. Moreover, why should Rāhu choose only the

24. If the opponents say that it is a snake which causes an eclipse by its head and its tail, then why does it not cover half of the circle between the head and the tail.

25. An eclipse cannot be caused by Rāhu, because the sides of the discs of the Sun and Moon, which are first to be eclipsed, are not the same ; nor are the portions eclipsed the same ; and nor even are the durations the same.

26. In a solar eclipse, people at different parts (of the earth) see different portions of the Sun eclipsed. Some do not see (the eclipse) at all. Knowing this, who can maintain that an eclipse is caused by Rahu.

27. Because of the great authority of Brahmā, at the time of eclipse the Sun is near Rāhu. So, in the Vedas, Smṛtis and Saṃhitās it has come to be known that Rāhu is the cause of eclipses.

[Assertion that the Moon is below the Sun]

28. If the Moon is above the Sun, why does it not always appear illuminated like a star. (If the Moon were above the Sun) there

New and Full Moon days for eclipsing the Sun and the Moon, respectively. Again, if Rāhu were the cause, calculation would be of no use in determining an eclipse.

However, since the scriptures consider Rāhu as the cause of an eclipse, Lalla, not willing to show any disrespect towards their statement, justifies it by saying that as in a solar eclipse, Rāhu (Moon's node) is near the Sun, the former is considered by the sacred books as the cause of an eclipse.

Śrīpati has also given the beliefs and has refuted them in *SŚe.*, xvii. See also *SŚi*, II. viii. 7-10.

28. This refutes the sixth belief. Lalla says that if the Moon were above the Sun, it would always be illuminated like a star.

would not be a solar eclipse ; there would not even be a lunar eclipse, as the Moon would then be (further) away from the extremity of the earth's shadow.

[Doubts about the Moon clarified]

29. If the Moon decreases because of some curse or because it is being sucked by the gods, how can the increase and decrease (in the illuminated portion) be determined by calculation. (And, moreover, if it is being sucked), it would appear completely dark when fully sucked.

[Doubts on the size and shape of the Earth clarified]

30. If the earth is infinite (in size) or if it extends up to innumerable *yojanas*, how can the celestial sphere go round it once a day.

Moreover, Avanti could not then be at a distance of $1/16$ of the circumference (of the earth) from the meridian of Laṅkā.

31. The eclipse, the conjunction and rising (and setting) of planets, the cusps of the Moon and the length of the shadow (of the gnomon) at any time—the calculation of all these five (phenomena) depends upon the measurement of the earth. (And the calculated result) agrees with the observed result. So how can the earth be (infinitely) large.

32. By using the *grahaphala* (*grahagati*) and the above circumference of the earth in *yojanas*, it is found by means of simple

Moreover, then it could neither cause a solar eclipse nor could it be obscured by the earth's shadow.

29. This refutes the seventh belief. If the Moon's daily decrease were due to its being sucked by the gods, mathematics would be of no use in computing its light and dark portions.

30-33. These refute the eighth belief. Lalla says that the earth could not be infinitely large, as then the sphere of the fixed stars could not go round it in one day. Moreover, the measurements of

proportion that the circumference of the circle of one revolution of a planet consists of 21600 minutes. Then how can the earth be of infinite size.

33. The earth may appear to be of infinite size or extending up to innumerable *yojanas* because of its being spherical. But its circumference and diameter are the same as given before and in no way different.

34. If the earth is plane as a mirror, why does not the water falling from the sky remain static, instead of, alas, flowing with a great speed in one direction.

35. Mathematicians say that one hundredth of the circumference of the earth appears to be plane. So, that portion of the earth *appears* to be plane to an observer.

36. If the earth is level, why cannot tall trees, like *tala* (date palm) alas, be seen by man, though at a very great distance from the observer.

37. To men the sky appears to meet (the earth) all round the horizon. So, the earth thus surrounded appears to be plane like a mirror.

[Doubts on the Earth's motion clarified]

38. If the earth goes downwards, (anything) thrown towards

the earth, as given in i. 43 are correct, because the calculated results relating to the various phenomena, based on these measurements, tally with the observed results. See also *SŚe.*, xv. 24-25 and *SŚi.*, II. iii. 14-16.

34-37. These refute the ninth belief. Lalla maintains that the earth is spherical and not a plane. But as only a small portion of it is visible at a time, that may be the reason for its appearing as level as a mirror. If it were level, the tops of high trees could be seen even from a great distance. See *SŚe.*, xv. 8-10 and *SŚi.*, II, iii. 11.

38. 42-43. These refute the eleventh belief. The Bauddhas maintained that the earth was falling down in space. So Lalla says

the sky will not fall on the earth. If the earth is (continually) moving upwards, why does not the sphere of constellations come nearer.

[Doubts on the Earth's situation clarified]

39. Clay is destroyed by water. So it is not possible for the earth to remain in water. Again, (the statement) that the earth (floats on water) like a boat, cannot be correct, as the earth is itself made of clay.

40. Supposing that the earth is on water, the water like the sky is also unsupported. If the heavy sphere of earth can remain on water, (which is unsupported), why can it not remain in space ?

41. If the earth is supported by tortoise and other things, by whom are they supported in space ? If these can remain in space (unsupported), what prevents the earth from remaining thus (*i.e.* unsupported).

42. If the earth rotates, how could birds come back to their nests. Moreover, arrows shot towards the sky, would fall towards the west.

43. If the earth rotates to the east, the clouds would move to the west. If (it is said) that the earth moves slowly, then how can it go round (the universe) in one day ?

that if it were so, how could a thing when thrown up come down again on the same piece of a ground. Again, if the earth were continuously moving up, the constellations would be nearer every moment. Neither could the earth be moving from east to west nor from west to east. If it did, the birds would not be able to find their nests. Lalla tries to refute Āryabhaṭa's theory that the earth rotates from west to east. See *SŚe.*, xv. 11-13, 15-19 and *SŚi.*, II. iii. 7-9.

39-41, 45-46. These refute the tenth belief that the earth is supported by an external agency. Lalla says that the earth remains unsupported, suspended in space. If it were supported by something, the latter, in its turn, would have to be supported by something else and

[Doubt about double Sun and Moon clarified]

44. If there are two Suns and two Moons, which rise alternately, how can the circumpolar constellations complete their revolution in one day.

[Situation of the Earth in space]

45-46. Just as the branch of a tree struck by lightning, can be replaced by means of medicines; just as a (plucked) lotus (can live in water) by means of chemical applications (made of juices and roots plants); just as the astronomical instrument *Svayambhava* is made of mercury, oil or water, though the construction appears inconceivable; in the same manner, (the earth) stays in space by the will of God. (Again, by His will) the universe moves.

[Creation of the Earth]

47. At first there was darkness. Then there came into existence an egg in the water in its natural form. Brahmā was the first to come out of the egg. His eyes were the Sun and the Moon. He created the universe.

The followers of Kaṇāda say that the *padārthas* are the cause of creation; the Sāṃkhya says that the *Puruṣa* and *Prakṛti* are the cause; some say that it is Nature ; while others say that it may be *Karma*, *Artha* or *Kala*.

so on. Then, there would be no end of supporters, and that is not possible. Many wonderful things happen in this world ; so there is nothing to be surprised at if the earth hangs in space. See *SŚe.*, xv. 7, 20-22 and *SŚi.*, II. iii. 4-6.

44. This refutes the twelfth belief held by the Jainas. See *SŚe.*, xv. 14 and *SŚi.*, II. iii. 8-10.

47. The first explanation for the cause of creation is found in the *Rgveda*. Kaṇāda, author of the *Vaiśeṣikasūtra*, is the propounder of the Vaiśeṣika system of philosophy or doctrine of atoms. *Dravya* or

48. When Brahmā is fully active, living creatures are born of Him. Lord Hari protects them with His quality of goodness. Hara, entering the state of darkness, destroys them. Others say that Brahmā alone takes all the three (steps) by His will.

49. I bow to Him, who has created this whole universe which has plains, mountains, oceans, gods, demons who are exorcised by means of oblations, men, horses, donkeys, elephants, goats, aquatic birds, lions, deer, cows, buffaloes, monkeys, bulls, camels, birds, serpents, mongees, jackals, cats, alligators, hares, tigers, rhinoceros, aquatic animals, insects, plants, precious stones, silver, gold, copper, etc. etc., this world where are childhood, old age and desires, etc.

Thus ends chapter Twenty

on

FALSE NOTIONS

elementary substance is one of the categories in this system, the knowledge of which brings salvation. There are nine *dravyas*, earth, water, fire, air, ether, time, space, soul and mind.

According to the Sāṃkhya system of philosophy, the *Puruṣa* or Soul and the *Prakṛti* or Root principle of nature, are the cause of creation.

Various philosophical views were maintained with regard to the cause of the creation. Some attributed it to the *Svabhāva* or nature ; some to *Karman* or action ; some to *Artha* or desire ; and some to *Kāla* or time.