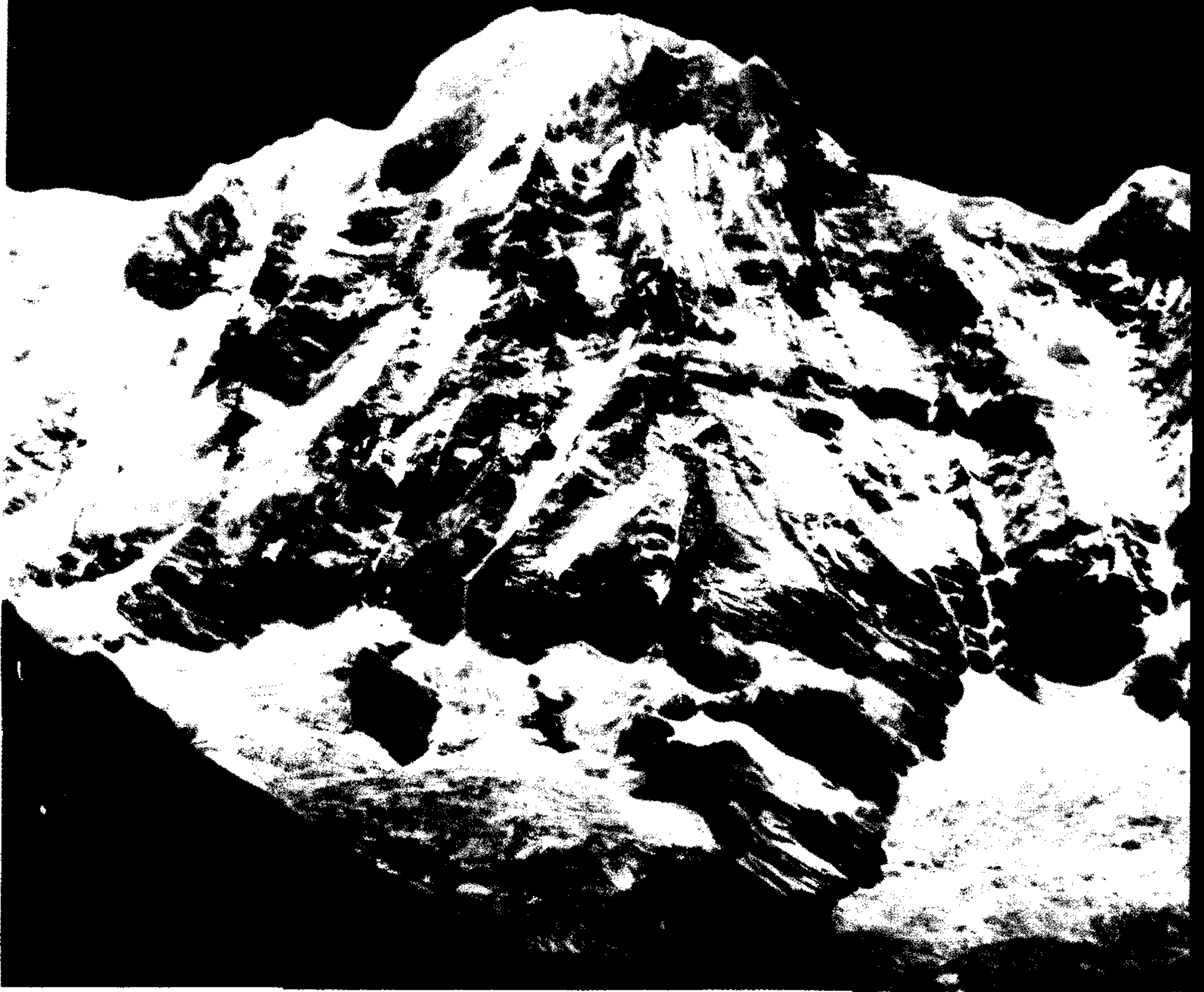


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Prabuddha Bharata

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Divine Wisdom

चित्तमेव हि संसारस्तत्प्रयत्नेन शोधयेत् ।
यच्चित्तस्तन्मयो मर्त्यो गुह्यमेतत्सनातनम् ॥

The mind is indeed the world. It should be purified with great effort. It is an ancient truth that the mind assumes the forms of the objects to which it is applied.

चित्तस्य हि प्रसादेन हन्ति कर्म शुभाशुभम् । ।
प्रसन्नात्माऽत्मनि स्थित्वा सुखमक्षय्यमश्नुते ॥

Through the purification of his mind a man destroys the impressions of his good and evil Karma, and the purified mind abiding in Atman enjoys undiminishing bliss.

समासक्तं यथा चित्तं जन्तोर्विषयगोचरे ।
यद्येवं ब्रह्मणि स्यात्तत्को न मुच्येत बन्धनात् ॥

If a man were to focus his mind on Brahman, as he commonly does on the

objects of senses, what bondage would he not be free from ?

मनो हि द्विविधं प्रोक्तं शुद्धं चाशुद्धमेव च ।
अशुद्धं कामसम्पर्कच्छुद्धं कामविवर्जितम् ॥

Mind has been described as of two types, pure and impure. The impure is that which is tainted by desires, the pure is that which is free from desires.

मन एव मनुष्याणां कारणं बन्धमोक्षयोः ।
बन्धाय विषयासक्तं मुक्त्यौ निर्विषयं स्मृतम् ॥

The mind alone is the cause of bondage and release. Attachment to objects leads to bondage, and freedom from attachment to them leads to release.

from The Pañcadaśī

Why Do We Suffer—II

Sorrow is like a slow burning in the mind. However we try to rid our mind of it, it always lurks, biding its time. Wealth, position, power or knowledge bring some temporary pleasures and distraction, but nothing is able to wipe out the existence of sorrow. Some have heavy burdens of it. All know its pangs. If momentary respite comes one feels the prick of emptiness and lack of fulfilment in the heart. The truth is that life is largely a painful experience.

Misery comes into existence when the non-dual Awareness that is the Real Self of man splits Itself into the dualism of 'subject' and 'object'. As Swami Vivekananda pointed out, ... "When the mind is studying the external objects, it gets identified with it, loses itself. To use the simile of the old Indian philosopher: the soul of man is like a piece of crystal...it takes the colour of whatever is near it. Whatever the soul touches...it has to take its colour. That constitutes the bondage. The colour is so strong, the crystal forgets itself and identifies with the colour... We have taken the colour of the body and have forgotten what we are. All the difficulties that follow come from that one dead body. All our fears, all worries, anxieties, troubles, mistakes, weakness, evil, are from that one great blunder—that we are bodies. This is the ordinary person. It is the person taking the colour of the flower near to it. We are no more bodies than the crystal is the red flower."¹

1. *The Complete Works of Swami Vivekananda* (Calcutta: Advaita Ashrama, 1989) vol. IV, p. 227.

Thinking himself as a separate entity the man, the Absolute Seer, identifies himself with all modifications or thoughts of the changing panorama of the world. For one moment he thinks he is angry, the next moment he is afraid, and another moment, miserable. All these fluctuations go on in the mind, depending on the external circumstances surrounding us and the very identification with them opens the gates of misery. The great irritant is the appearance of the ego. When ego 'I-sense' appears it divides itself into two—the perceiver and the external world. This dualistic play is the beginning of everything. The existence of the ego itself is painful and as long as it is there, there cannot be freedom from suffering. Sri Ramakrishna says, "The worldly man's ego, the 'ignorant ego', the 'unripe ego' is like a thick stick. It divides, as it were, the water of the ocean of Satchidananda. But the 'servant ego', 'the child ego', 'the ego of knowledge' is like a line on the water. One clearly sees that there is only one expanse of water. The dividing line makes it appear that the water has two parts, but one clearly sees that in reality there is only one expanse of water."²

Therefore Patanjali calls the presence of ego as the source of 'misery', and defines the nature of it: *dr̥gdarśanaśaktyor'ekātmatevāsmitā*—"Egoism is the identification of the seer with the instrument of seeing."³

2. *The Gospel of Sri Ramakrishna* (Calcutta: Advaita Ashrama, 1985) p. 480.

3. (Sūtra-6) दृग्दर्शनशक्त्योरेकात्मतेवास्मिता ।

The Self of man is undifferentiated Consciousness, or pure subjectivity, without any trace of objectivity. Intellect, mind, and senses are the instruments through which one comes in contact with the world. But these instruments are objects, and the knower or seer is separate and independent of them. Intellect and mind vacillate and undergo changes. They experience elation and depression, pleasure and pain, but the unchanging Witness that watches them is in no way contaminated or influenced by these experiences. We, by mistake, think we are the mind and place our implicit trust in its vagaries, and are tossed to and fro as on the waves of the ocean. This personal 'I-sense', or the ego, is the source of all troubles. Sri Ramakrishna said, "Maya is nothing but the egotism of the embodied soul. This egotism has covered everything like a veil. All troubles come to an end when the ego dies."⁴

Vyāsa, the Sage was once walking through a field of Kurukshetra, when he found a little worm crawling away as fast as it could at the sound of his feet, fearing that it must get crushed under them. The sage smiled and said to himself, "We regard that creature as worthless and despicable, but look at its anxiety to preserve its life! Ah, what a wonder!" Then, by virtue of his yogic powers ... giving it the power of speech, he asked: "How is it that having got into this wretched worm-life, you are so anxious to preserve it?"

The worm replied: "All praise be to you, O Vyāsa; by a sinful act I was reduced to this condition, but this is the fatal illusion, that even in this worm life, I think sufficiently well of myself and have enough to do with my own pleasure and pains. Though mean and despicable in your eyes,

I am not so to myself and that is why I am anxious to preserve my life."

Thus while even the worm thinks so highly of itself, what wonder that we look so big in our own eyes. Indeed, from the atom to the star, every particle in the universe rings with this egoism, and it is this that makes up what we call our world. If by some magic this egoism is purged out of the world, the unconditioned universal Self or God alone will remain. Few of us are able to look beyond ourselves to rise above this foolish 'I'.⁵ Śaṅkara also warned, "So long as one has any relation to this wicked ego, there should not be the least talk about liberation, which is extraordinary."⁶

There is pure existence—the knowledge of 'being-ness'. This sense of existence expresses itself in the feeling 'I am'. Around this harmless feeling of being-ness a lot of information or knowledge is accumulated about oneself through interaction with the world. A person not only knows that he exists, but he defines the states of his existence. In other words, he says he exists as a tall or short person, a happy or unhappy one, or one wealthy or poor, important or neglected. How does he come to know all these things? These feelings stem from the knowledge that he has collected about himself, either directly from others or through his own instinctive reactions and comparisons. This bundle of definitions he has formed about himself is his ego. Very young children have only the sense of their simple existence. They do not know much about

5. Rajaram Aiyar, *Rambles in Vedanta* (Triplicane, Madras: S. Ganesan Publ., 1925)

6. यावत्स्यात्स्वस्य सम्बन्धोऽहंकारेण दुरात्मना ।
तावन्न लेशमात्रपि मुक्तिवार्ता विलक्षणा ॥

4. *The Gospel of Sri Ramakrishna*, p. 168.

Vivekacudamani Verse-288.

whether they are rich or poor, miserable or happy. It is in the grown-up persons that the ego is fully developed with a lot of rock-hard information about itself. What happens if we can remove all these accretions, the descriptions about ourselves? We would remain as 'pure awareness', the Witness, without any self-imposed binding limitations. As Vivekananda says: ...“the crystal knows what it is, takes its own colour. It is meditation that brings us nearer to truth than anything else.”⁷

To watch the objects without a desire to possess them, is spiritual practice. Self-absorption in thoughts has become a strong habit with us and we take it as a natural phenomenon. Every thought that arises in the mind usurps all our attention; we get swallowed up by it—and we lose our awareness. We believe and behave according to the dictates of our errant thoughts. A thought bursts forth on the surface and disturbs the mind, then disappears quietly giving place to another. Like an endless stream, thoughts flow causing ripples and a lot of waves. The natural stillness of the mind is disturbed by the noise of these thoughts. In life we pursue those thoughts and try to grasp on to those things which the mind tells us will give pleasure. Unfortunately, the whole of one's life gets centred around that infatuation with the pleasure principle. The exclusive 'racing after' objects of pleasure becomes an obsession and that obsession is called attachment.

Raja Yoga describes attachment as *sukhānuśayī rāgaḥ*—“Attachment is that which follows remembrance of pleasure.”⁸ Vyāsa in his commentary says: “The desire to possess, the thirst for and hankering after pleasure, or the means thereof, preceded by

a remembrance of the pleasure in one who has enjoyed it, is called attachment.” The word '*anuśayī*' (following), implies that the pleasure enjoyed exists as latency or remembrance in the mind. From this remembrance a desire is born to enjoy or repeat the same pleasure again and again. A person becomes greedy when his hankering after a pleasure takes its upperhand. In greed the sense of right and wrong is thrown overboard and any means to secure pleasure appear justifiable to that person. Addiction is formed because of this desire to have the same pleasure repeated. Smokers, drug addicts and others become victims of their habits. Habit is nothing but an involuntary act of repetition. It is certainly a kind of slavery and this slavery to pleasure is attachment. In attachment the intelligence to discriminate between good and evil is absent. A person's freedom is lost when he depends helplessly upon things for the fulfilment of his petty desires.

Another source of pain is aversion. Raja Yoga says: *duḥkhānuśayī dveṣaḥ*—“Aversion is that which dwells on misery.”⁹ Vyāsa expounds, “Aversion is the feeling of resistance, mental disinclination, propensity to hurt, and anger towards misery or objects producing misery, arising out of a recollection of the pain by one who has experienced it before.” In the pursuit of pleasure many obstacles thwart one's efforts, giving rise to frustration, anger, and hatred. Remembrance of pleasure or pain is there in all beings. We dislike those things which have brought us pain, or persons who have caused us suffering. Attachment and hatred are but the two sides of the same coin. When anything is agreeable and pleasant we get attached to it. The disagreeable and painful give us the opposite feeling, revulsion. Both these feelings depend on our previous mental

7. *Complete Works*, vol. IV, p. 227.

8. (Sutra-7) सुखानुशयी रागः ।

9. (Sutra-8) दुःखानुशयी द्वेषः ।

impressions or experience. This is the reason why certain things give pleasure to some people and the same things create emotions of antipathy in others. To some, non-vegetarian food is a matter of pleasure, to others it is repulsive. To those whose ears are educated to enjoy Indian classical music, to them western music may sound like nothing but noise. Perhaps the obverse for a man of the West. So ideas of pleasure and pain differ from person to person. What is pleasure to one may be unpleasant experience to another. Attachment to these feelings are the fetters and chains of sorrow. The penalty we pay for attachment is hatred. "One cannot succeed in religious life," said Sri Ramakrishna, "if one has shame, hatred, or fear. These are fetters."¹⁰

The last feeling of agony, according to Patanjali, is the fear of death, the same as the thirst for life. He says: *Svarasavāhī viduṣo'pi tathārūḍho'abhiniveśaḥ*—"As in the ignorant, so in the learned is the firmly established inborn fear of annihilation, or love of life."¹¹ *Abhinivesa* means 'clinging to life'. This love of life is strong in all living beings. Even a small insect tries desperately to preserve its life from all threats to wipe out its existence. Commentator Vyāsa explains: "In all living beings there is this desire—'Let me never be non-existent; may I live on.' One who has not felt the dread of death before cannot have this kind of craving. This demonstrates the experience of previous births. The afflictive anxiety to preserve life is seen even in the little worm from its origin. The instinctive fear of death characteristic of all living creatures cannot be explained on the basis of our ordinary perceptivity. But we are

led to infer that the pain of death must have been experienced before in our former existences. This affliction, the fear of death is found in the extremely ignorant as well as in the wise, who have come to know both the previous life and the future one. Why? The *vasana*, or subtle latent impression having been brought about by previous experience of the pain of death, is common to all, the intellectually powerful as well as the ignorant."

The pain of death is deeply embedded in the memory of living beings. This remembrance or instinct, though hidden, drives a living being to cling to his life as something precious. Vivekananda remarked that we cannot simply explain it away by using the word instinct. Continuing his argument he says, "If you say it is instinct, it means nothing—it is simply giving a word, but is no explanation. What is this instinct? ...In the language of the Yogi, instinct is involved reason. ...A reason cannot come without experience, all instinct is, therefore, the result of past experience."¹²

To man's eternal question: "Why do we suffer?", Patanjali gives a rational explanation. His anatomy of pains covers a large canvas and illumines all subtle points. We, circumscribed by our limited vision, get trapped again and again in the web of grief and agony. *Avidyā, asmitā, rāga, dveṣa,* and *abhinivesa* (ignorance, egoism or attachment, anger, aversion or hatred, and clinging to life) are the fivefold miseries that a deluded human being experiences in this life.

Is there any means to come out of this suffering? Is there any way? Patanjali affirms that there is and he suggests the means.

10. *Gospel of Sri Ramakrishna*, p. 689.

11. (Sūtra-9) स्वरसवाही विदुषोऽपि तथारूढोऽभि-

निवेशः !

12. *Complete Works*, vol. I, p. 240.

Memoirs of Swami Brahmananda

SWAMI SARADESHANANDA

(Continued from the previous issue)

I came to learn of an interesting incident about Maharaj from Kalyan Maharaj (Swami Kalyanananda) of Kankhal. I am relating it here as I heard it from him:

“Revered Maharaj was residing at the new Seva Ashrama at Kankhal. According to his directions, the land for the Seva Ashrama had just been purchased from the Nirvani Akhara. The shelter for the sadhus (monks) then was in the room that is now used for the flower-nursery, standing just to the north of the present library hall. Maharaj used to sleep on a cot placed on one side of that room. On the other side were packing boxes containing medicines and other articles of the dispensary, stacked one above another. We slept on mats spread in the middle of the room beside the cot of Maharaj. In the north-eastern corner of this room there was a small hut-like enclosure fenced with Kansgrass (*Kusa*), which served as the kitchen, dining room and storeroom, and also as sleeping quarters for the cook. While cooking he was a cook, at other times a gardener—or he would work in the dispensary if he was needed there. One wonderful thing we observed in Swami Brahmananda was that he used to accept all the food, whether well-cooked or not. Whatever was served he would relish and would spend his time happily at ease. The cook used to prepare thick chapaties (which could hardly be well cooked) and curry with radish during the winter months. Maharaj used to take his meal with those things ungrudgingly. In those early days all kinds of good vegetables could not be procured. One rainy day that winter, it was very cloudy and dark outside. As it was severely cold, people were not going out of their houses and only a few

turned up to get medicine from the dispensary. We retired to rest early after finishing our midday meal. The cook went either to grind wheat for flour or to attend other jobs. Maharaj did not have much sleep either at night or in the day. He used only to lie down or sit on the cot. The cook had sown some seeds of mustard for greens on a little plot of ground near the kitchen. Through the window Maharaj could see that a wild jungle elephant with big tusks was browsing on some of those mustard greens. Very cautiously Maharaj awakened us and showed us the elephant. Looking at it we shrank with fear. Wild elephant are very ill-tempered and get easily angered. We were afraid that it might pull down our hut. Maharaj reassured us though, and asked us to sit quietly just as we were after shutting the doors and windows so that the elephant would not get the scent of any human beings inside. Accordingly we sat motionless like wooden dolls. But we were feeling very shaky all the while out of fear. Through the openings of the Kansgrass, Maharaj kept vigil on the elephant’s movements. After a little while it looked around turning its head this way and that and straightway left through the back. Soon assured of our safety we opened the door and came out.”

The early Kankhal Ashrama did not have any fruit trees of good variety, and it was due to the efforts of Maharaj that Mango, Beal (Wood apple), Litchies and other good fruit and flowering trees were planted. In later days grafts of good quality mangoes were brought from different parts of India. They yielded good harvests and thus Kalyan Maharaj became interested in gardening. We saw a beautiful creeper there bearing red flowers, planted by Maharaj. It spread over

a big mango tree and added beauty to the Ashrama. Another bushy flowering plant we saw too, with many small fragrant white flowers, that was a charming sight. Maharaj brought many saplings from South India to the North, and took many from the North to the South.

An old devotee of Dhaka (who had been instrumental in taking Swamiji and Swami Brahmananda to East Bengal), Jatindra Mohan Dutta, had shown us a few letters written by Swamiji and Maharaj. In one of them, Maharaj had specially requested him to collect seeds of Padmakosh, a rare variety of jackfruit grown in the garden of the Nawab of Dhaka, to plant at Belur Math. Jatin Babu sent the seeds and from them a tree grew up which we saw yielding fruits in Belur Math. It was growing near the temple of Holy Mother on the Math grounds. The fruits were small and round-shaped. How many fruits that tree used to bear!

We also learnt that Maharaj took active interest in planting trees at the Seva Ashrama in Kashi (Benares). About this one senior Swami told us, "Once Maharaj was staying in Kashi Sevashrama. The garden supervisor expressed his chagrin over the poor yield of flowers in the flower garden. Maharaj told him to collect two empty drums and fill them up with food wastes near the kitchen. After some days the drums were filled and there was the foul smell due to fermentation. The drums were then covered and shifted to the garden. There, after some more time, when the stuff was completely decomposed, the gardener was asked to use it as manure for the flowers. As a result of this fertilizer, that year there was an abundance of dahlias and chrysanthemums which made a lively impression on everyone.

Seeing the present orchard and so many kinds of flowering and fruit trees at Bhuvan-

eswar, one will not be able to comprehend that the same tract of land was at one time an eyesore and practically a desert. Bhuvan-
eswar Math is a shining example of the result of Maharaj's unique foresight and extraordinary power. Many people had not considered it a wise decision to acquire such an extensive piece of ruined and desolate land infested by wild carnivores and other creatures, and spend so much money and physical labour to improve it. Nobody could ever imagine that Bhuvan-
eswar was one day going to turn into the beautiful state capital.

There was no doubt that Maharaj used to remain most of the time in a high ecstatic state while he stayed in Kashi, Vrindavan and Kankhal. Despite such high spiritual condition he used to keep a watchful eye on the activities going on in the mundane world. About this many things and incidents can be recalled. The earnest wishes of Maharaj were amazingly fulfilled in the past and are being fulfilled even now in the present. We have heard that Maharaj felt very sad when he observed the difficulties faced by the ascetic and devoted Vaisnava monks in getting alms in Vrindavan when he was himself practising austerities near Kusum Sarovar. And he felt the need of establishing one Chatra (free kitchen) to help the Babajis in getting their alms. Soon after his departure from Vrindavan his solemn derive was materialized. The brother of the Raja of Gwalior established a big temple in between Kusum Sarovar and Radhakunda and created a permanent fund for the monks depending on alms at the Vraja. From its interest many monks get help regularly. Due to the endeavour of Maharaj in Vrindavan, the Seva Ashrama and hospital were established, and this also became a source of shelter and medical help for ailing monks in the locality.

(to be continued)

The Astronomical Significance of Rahu and Ketu*

AVINASH W. JOSHI

Astronomy and celestial mechanics become easy of understanding when explained by a good teacher. The physicist-author is the writer of many learned books and articles and is a professor at the University of Poona, Pune, Maharashtra.

Rahu and *Ketu* are not merely mythological demons which occasionally gobble up the sun or the moon, nor just the eighth and ninth '*Graha*' of astrology, but are important astronomical entities. Both of them are well-defined points in space, and their positions, directions from the earth, and motion can be calculated very accurately. They play a significant role in the occurrence of solar and lunar eclipses.

Most people are aware of the elementary concept of why eclipses occur. During the motion of the earth around the sun and that of the moon around the earth, when the earth comes between the sun and the moon, it casts a shadow on the moon, causing a lunar eclipse. A lunar eclipse can, therefore, occur only on a full moon day. On the other hand, when the moon comes between the sun and the earth, it causes a solar eclipse. This can take place only on a new moon day.

But how many people know why solar and lunar eclipses do not occur at every new moon or full moon, respectively.

Orbits of the Earth and the Moon

The plane in which the earth moves around the sun is called the *plane of the*

ecliptic. If the moon's orbit around the earth were exactly in this plane, we would have seen an eclipse at every new moon and full moon.

But the moon's orbit around the earth is inclined to the plane of the ecliptic by an angle of $5^{\circ} 8' 33''$ (5 degrees, 8 minutes and 33 seconds of arc, or $5^{\circ}.14$). The moon completes one revolution around the earth in this orbit in 27.32 days (27 days, 7 hours, 43 minutes and 12 seconds) with respect to the stars. (See Figure 1.)

Naturally the orbit of the moon intersects the plane of the ecliptic at two points, shown by N and N' in Figure 1. These two points are called nodes. The point at which the moon crosses the plane of the ecliptic from the south to the north is called the *ascending node* (*Rahu*, N) and the other point at which it crosses the plane of the ecliptic from the north to the south is called the *descending node* (*Ketu*, N').

Rahu and *Ketu* are thus astronomically well-defined entities. They are mathematical points, though not physical bodies like planets and satellites. They are the opposite ends of a diameter of the orbit of the moon around the earth.

A Model for the Orbits

One can make a simple model for understanding the motions of the earth and the

* This article is based on the book *Our Solar System*, by Avinash W. Joshi and Narayan C. Rana (New Delhi, Wiley Eastern Ltd., 1991).

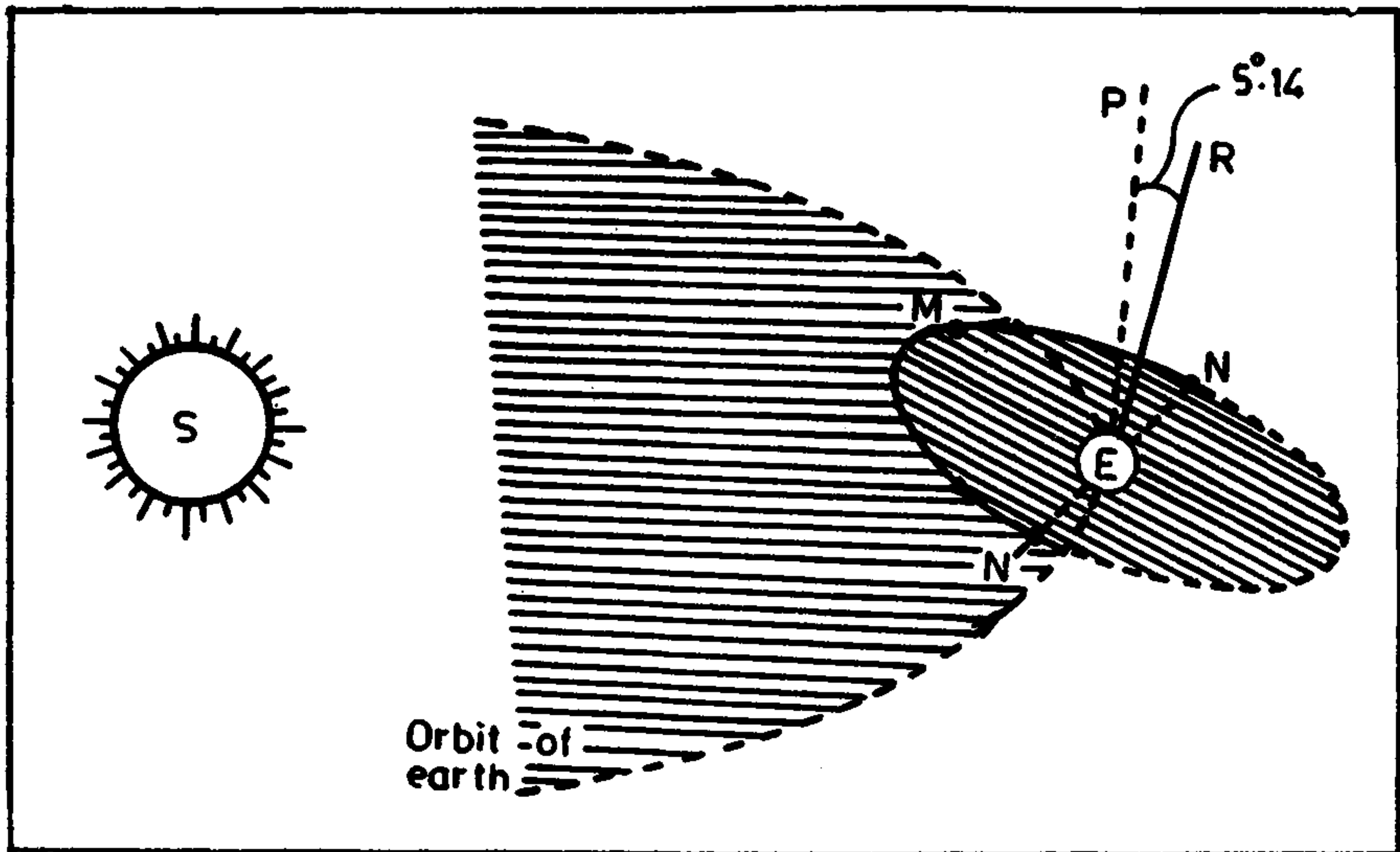


Fig. 1

The sun S, the orbit of the earth E around the sun, and of the moon M around the earth. N is the ascending node and N' the descending node of the moon's orbit. EP is perpendicular to the plane of the ecliptic while ER is perpendicular to the moon's orbit.

moon. All one requires is: a tub, a piece of cardboard, a nail or a piece of thick wire, and water.

Cut a circular disc from the cardboard (size about five centimetres). Fix the nail or the piece of thick wire at the centre of the disc, perpendicular to it, as shown in Figure 2 (a) Fill the tub with water. Holding the nail with your hand, dip half the disc in water in a slightly tilted manner, as in Fig. 2 (b) The plane of the disc should make an angle of about 5° with the surface of the water.

Now imagine that there is sun at the centre of the water surface and earth at the centre of the disc. The water surface thus becomes the plane of the ecliptic. The periphery of the disc becomes the orbit of the moon around the earth. The two points of the

periphery of the disc which lie on the water surface are *Rahu* and *Ketu*.

The earth revolves around the sun (along the periphery in the tub in the model) once a year. If one observes from the north pole of the sun, the earth moves around it in an *anticlockwise* manner. Similarly the moon goes around the earth once in 27.32 days with respect to the stars, and if one sees from the north pole of the earth, the moon's motion is also anticlockwise.

The Motion of Rahu and Ketu

In Figure 1, ER is the axis of revolution of the moon around the earth. If this axis always pointed in a fixed direction, *Rahu* and *Ketu* would also have maintained fixed directions as seen from the earth. But this is not the case.

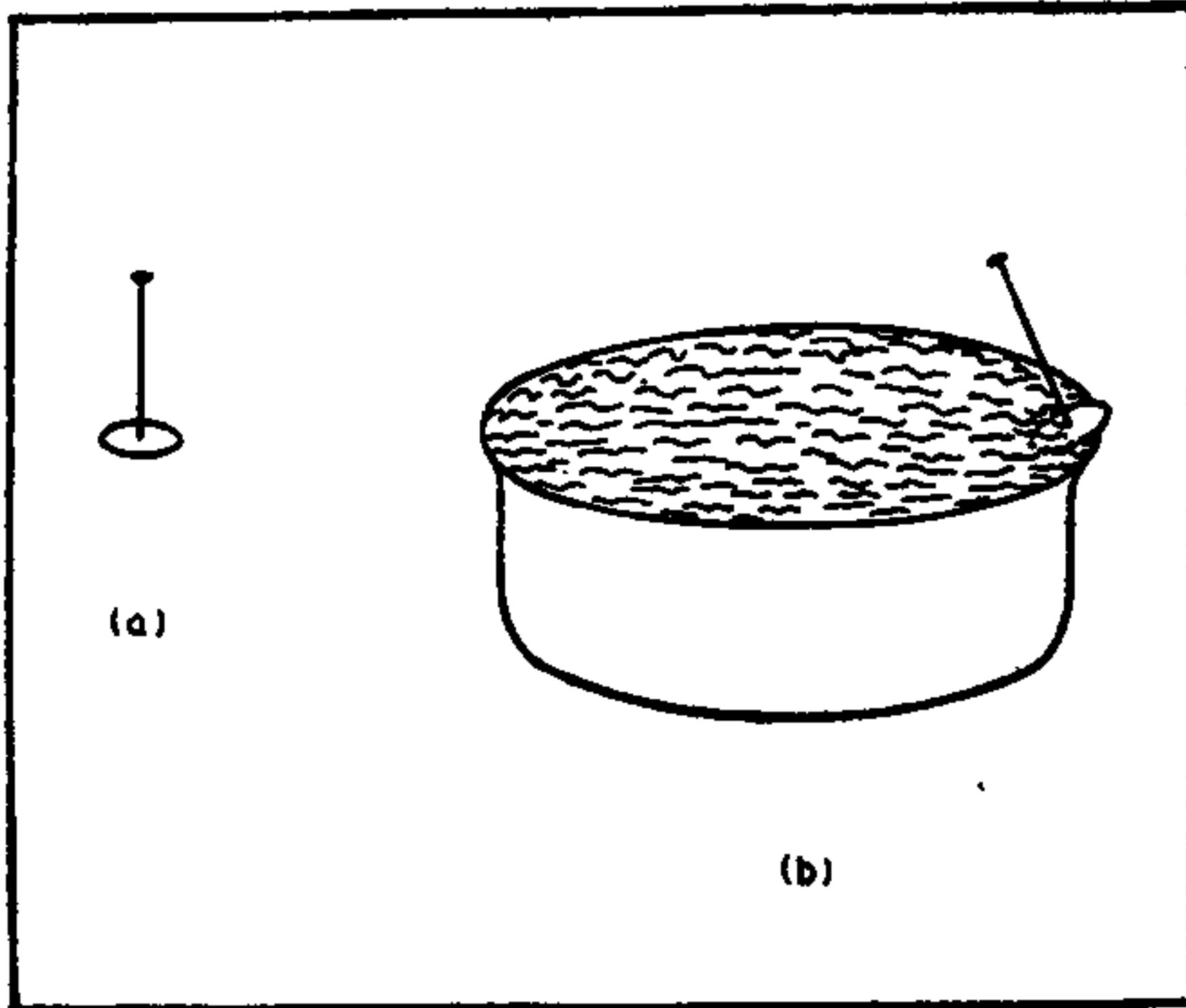


Fig. 2

A model to simulate the moon's motion around the earth. (a) A nail fixed to a circular disc, normal to its plane; (b) The disc half-dipped in water, with the nail slightly inclined to the vertical.

In the same diagram, EP is the perpendicular to the plane of the ecliptic, and the angle between ER and EP is a little over 5° . The axis ER of moon's revolution *itself rotates about EP once in 18.6 years*, always maintaining an angle of about 5° . This motion can easily be simulated in our model by making the nail rotate slowly about the vertical. This is further illustrated in Figure 3 which shows a spinning top whose axis rotates about the vertical. This rotation of the axis is known as its *precession*. This precession is always in a sense opposite to the revolution. Since the moon revolves around the earth in an anticlockwise sense, its axis ER precesses about EP in a clockwise sense.

Let us look at the model once again and give the nail such a slow precessing motion in a clockwise sense, always keeping the disc half-dipped in water. What will we observe?

The two points *Rahu* and *Ketu* will be seen to revolve around the earth in the

plane of the ecliptic (water surface) once in 18.6 years. While the moon revolves around the earth in an anticlockwise sense (*forward motion*), the two nodes will appear to revolve around it in a clockwise sense (*retrograde motion*).

Now take up any Indian almanac (*Panchang*). The positions of the sun, the moon, the planets, and *Rahu* among the constellations are given in such almanacs either every week or every new moon and full moon day. *Ketu*, being diametrically opposite to *Rahu* as seen from the earth, is in a constellation six places away from that of *Rahu*, and is positioned at the same degrees and minutes in that constellation. For example, on the full moon day on

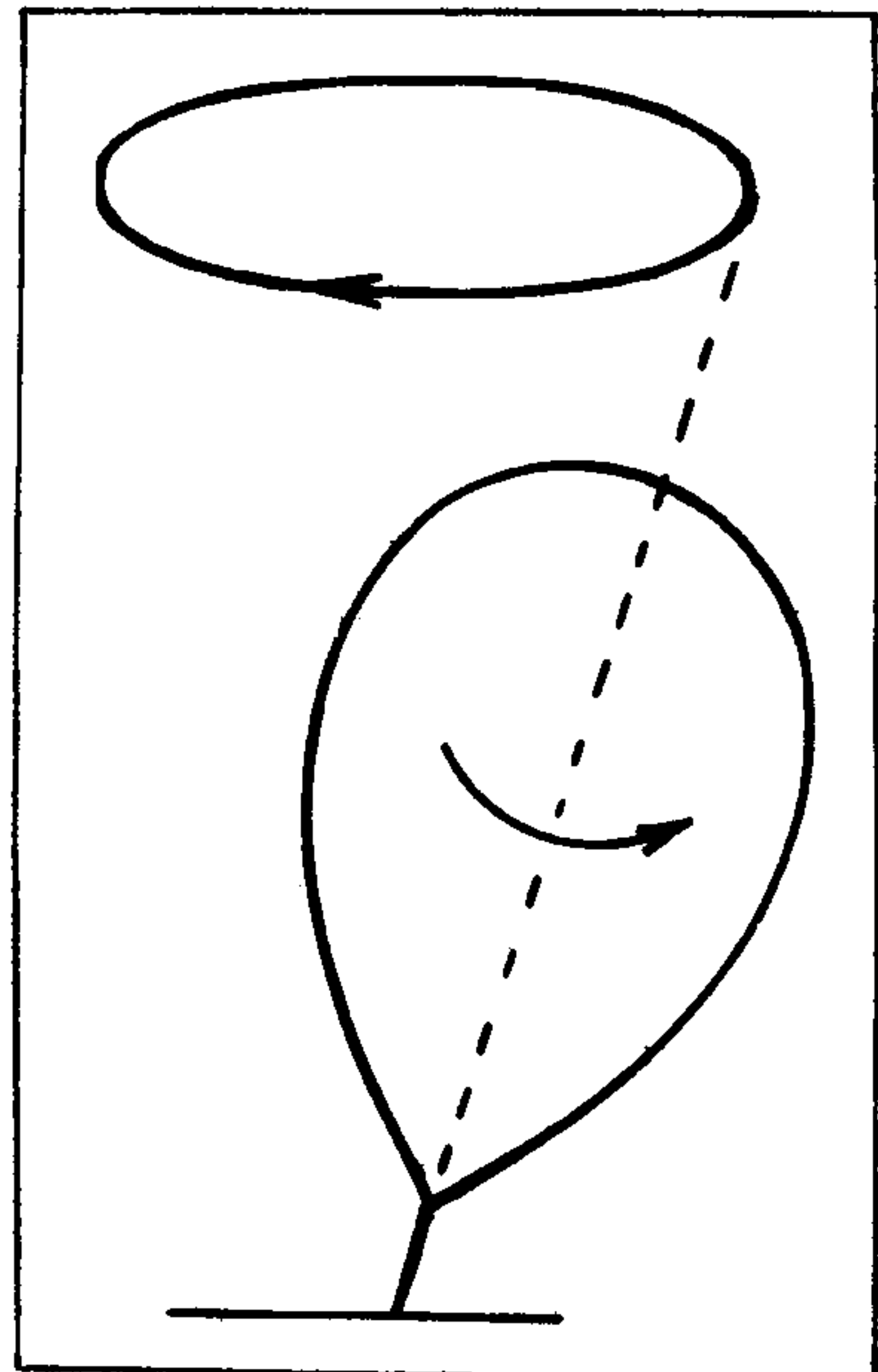


Fig. 3

A spinning top. The axis of the top precesses about the vertical in a sense opposite to the spin of the top.

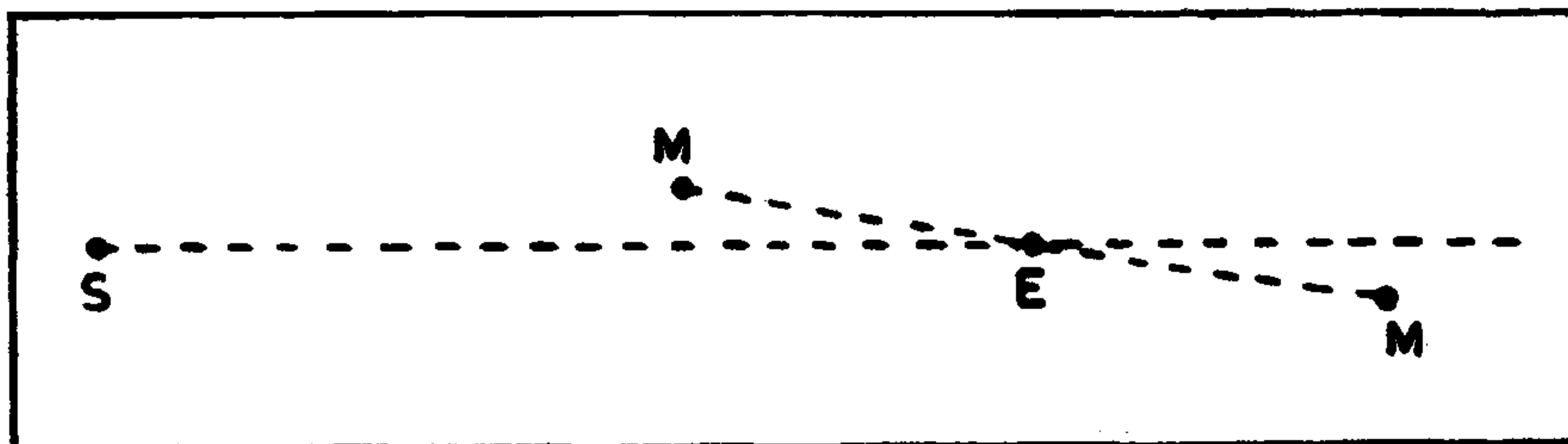


Fig. 4

The sun-earth line SE, and two positions of the moon at new moon and full moon. The angle between EM and ES is the biggest (about 5°) when *Rahu* and *Ketu* are in quadrature with the sun.

September 5, 1990, the sun's position was 04/22/27. This means that it had crossed four zodiacal constellations and was in the fifth one (*Leo*, *Simha*) and had moved 22 degrees and 27 minutes in it. At the same time, *Rahu*'s position is given as 09/15/38 ($15^\circ 33'$ in the 10th constellation). Therefore *Ketu*'s position at this time would be 03/15/38 (the same degrees and minutes in the 4th constellation).

You will also observe that, with time, the sun advances in the zodiac (about one constellation per month) while *Rahu* goes retrograde (about one constellation in one-and-a-half years).

Eclipses

When *Rahu* and *Ketu* are 90° away from the sun in the sky (in *quadrature* with the sun, *Kendrayoga*), the moon does not come in line with the sun and the earth. Even at full moon or new moon on such an occasion, the earth-moon line makes an angle of 5° with the earth-sun line, and the moon is to the north or the south of this line; see Figure 4. Therefore the earth's shadow does not fall on the moon on a full moon day, or the moon's shadow does not fall

on the earth on a new moon day, and there is no eclipse.

But when either *Rahu* or *Ketu* is close to the sun in the sky, the moon comes close to the sun-earth line at new moon or full moon, and we observe an eclipse. This is the importance of *Rahu* and *Ketu* in bringing about eclipses.

Look at the model (Figure 2) again, and giving proper motions to the nail and the disc, watch the position of the moon relative to the sun and the earth at new moon or full moon in every situation. It will be clear that having a new moon or a full moon is not enough for an eclipse to occur. In addition, it is necessary to have either *Rahu* or *Ketu* close to the sun-earth line.

But the earth is not a point object; it has a diameter of about 12,700 kilometres. Therefore *Rahu* or *Ketu* can be slightly away from the sun-earth line for an eclipse to occur. A simple calculation based on high-school geometry shows that *Rahu* or *Ketu* can be 20° away from the sun-earth line in order that a solar eclipse may occur *somewhere* on the earth. In such cases, the moon's shadow touches regions near the

north or the south pole of the earth. In other words, a solar eclipse can be seen from the Arctic or the Antarctic regions.

But, in order that an eclipse may occur or be seen at places near the earth's equator, *Rahu* or *Ketu* must be within 5° from the sun in the sky for a solar eclipse and within 4° for a lunar eclipse. Since India is close to the equator, we can see a solar eclipse if either of the 'demons' is within 7° of the sun in the sky.

Look at the Indian almanac of any year again and watch the constellations and degrees of the sun and *Rahu* (or *Ketu*). You will find that there will be an eclipse on the new moon or full moon day when these two objects are near each other in the sky, not otherwise.

The moon goes around the earth (with respect to the stars) once in 27.32 days. Thus it covers the entire circle of 360° in the sky in this time. This means that it moves by about 13.2 degrees in the sky everyday. Therefore as seen from a position near the equator, the moon *must actually pass through* either of the two points, *Rahu* or *Ketu*, on the day of the eclipse.

This can be put in an easy language known to the common man in the following manner. *An eclipse will occur on that new moon or full moon day on which the moon passes through either Rahu or Ketu.*

Good Science and Bad Science.

In India, there are many so-called theories commonly known as 'grandmother's theories'. According to the well-known such 'theory' of eclipses, *Rahu* and *Ketu* are demons in the sky and eclipses take place when they gobble up the sun or the moon.

It is possible to advocate several theories to explain a past occurrence of an event. There is a simple and effective criterion in science to decide which of these 'theories' is the best, and it is this: Can that theory predict a *future* occurrence of a similar event?

In the context of this article, it is possible to explain a past eclipse by either theory: It could have taken place because of the particular orbits of the moon and the earth, or it could have been because *Rahu* or *Ketu* gobbled up the sun or the moon. Now which of these theories can predict a future eclipse, say, during the next year or the next ten years? The answer is clear.

There has been a tradition in India of bathing in holy rivers and lakes on the day of an eclipse, for a long time. This is an indication of the fact that our ancestors *did* have a prior knowledge of future eclipses. People used to travel far and arrive at the holy place for a holy bath on the day of an eclipse.

The conclusion from this is that our ancestors had a knowledge of the moon's orbit around the earth, its angle with the plane of the ecliptic, the precession of the axis of the moon (the 18.6-year cycle of *Rahu* and *Ketu*), and they could make accurate calculations of the eclipses. The granny's theory of two demons worrying the sun and moon can certainly not be said to be a good theory.

But then it would be wrong to presume that our ancestors had only that theory.

When science and technology percolate from the experts and knowledgeable people to the common man, it is likely to be distorted.

(Continued on page 217)

Solar Yoga

GEORG FEUERSTEIN

From ancient times the Sun (Surya) has been deified in the Indian scriptures. Mikhael Aivanov of Bulgaria, in recent times, made the Sun the focus of his life and teachings. George Feuerstein of the USA is a well known author, having to his credit about sixteen books, most of them on yoga.

Yoga is a richly textured tradition, which comprises a great many different approaches. It also happens to be one of the oldest continuous spiritual traditions in the world, reaching back into the Vedic antiquity and possibly even into the era of the Indus Valley civilization. The great historian of religion Mircea Eliade has rightly called Yoga a "living fossil," for yogic teachings continue to be refined and adapted to suit the needs of contemporary seekers.

This creative process of elaboration and innovation is not confined to India, however. Since the missionary activity of great Hindu leaders like Swami Vivekananda, millions of Westerners have become attracted to the various branches of Yoga. Most men and women in Western countries turn to *hatha-yoga*, but a good many practice *mantra-yoga* (largely in the form of Transcendental Meditation), and a respectable number are adherents of *kriya-yoga*, and *siddha-yoga*. There are even those who dabble in *tantra-yoga* and other more obscure forms of the yogic tradition. The West has even spawned its own hybrid schools that mix Yoga with Taoism, Zen Buddhism, and Paganism.

These developments notwithstanding, the Euroamerican world has produced few genuinely great adepts with original teachings that are informed by their personal realization. One of these rare exceptions is the late Mikhael Aivanhov. This essay is a brief introduction to his spiritual legacy.

Aivanhov was born in 1900 in the small Bulgarian village of Serbzy. Early in his life, he became fascinated with spiritual matters. At the age of sixteen, he was plunged into a state of ecstasy in which he experienced everything bathed in, and suffused with, light—an experience that left a lasting mark on his understanding of the nature of existence.

In 1917, a year later, he met the great Bulgarian gnostic Peter Deunov, who is said to have had a following of tens of thousands of men and women prior to the Communist Revolution. Deunov accepted Aivanhov as his disciple, testing him fiercely for many years. At Deunov's behest, the young Aivanhov enrolled at the University of Sofia where he studied for many years a variety of disciplines, acquiring degrees in psychology, and education.

Aivanhov was not only an intelligent and deeply thoughtful youth, he also had that rare capacity for respect and obedience that marks all great spiritual seekers. More than any other of Deunov's close disciples, Aivanhov assimilated his master's teaching and essence until they were part of his own being. In 1937, anticipating Communist persecution, Deunov entrusted Aivanhov with bringing his teaching to Western Europe. For nearly half a century, until his death in 1986, Aivanhov tirelessly taught in France, winning a growing number of people for spiritual life.

He never wrote anything, but his countless talks were recorded and collected by his disciples. Today many of these impromptu talks are available in various languages. Thus, over forty volumes of talks are in print in the English language, with hundreds more being planned for publication over the coming years.

In 1959-60, Aivanhov travelled in India for almost an entire year. He was welcomed by several renowned Hindu sages as a master from Europe, and one adept hailed him as a "solar ṛṣi." Although that man was not familiar with Aivanhov's teaching, he could not have characterized him better. For, Aivanhov has made the life-giving sun the focus of his life and teaching.

In ancient Vedic times, the sun was venerated as a great being worthy of human adoration. Invoked as Surya, Savitri, or puṣan, the golden-bodied sun served the Vedic people as a guiding symbol to the Divine. He was for them "God among Gods."

To this day, pious Hindus recite daily the ancient *gayatri-mantra* dedicated to Savitri, the quickening aspect of the solar being, which is found in the *Rig-Veda* (III. 62.10): *tat savitur vareṇyam bhargo devasya dhīmahi dhiyo yo naḥ pracodayāt*, "May we contemplate that most excellent splendour of Savitri, the God, so that He may inspire our contemplations." In this famous stanza, the Vedic ṛṣis advisedly used the word *dhi*, which is often flatly rendered as "thought," but which suggests so much more. I have translated it as "contemplation," because what the ṛṣis most desired was not mere speculative thought but a visual encounter with the Divine, for which the way was prepared by contemplation.

The ṛṣis were visionaries, spiritual seers, before they were thinkers. As the *Bṛhadāranyaka-Upaniṣad* (V. 14.4) affirmed: "Verily,

truth is sight" (*caḥsur vai satyam*). In a dispute, the *Upaniṣad* continues, we should trust the one who says "I have seen" rather than the one who states "I have heard."

Aivanhov, too, was such a seer. It was on the basis of his own spiritual realization, and of his reading of what he called the "Book of Nature," that he, like the ṛṣis before him, discovered in the sun a great secret. In one of his talks he observed:

As soon as the sun gets up he pours forth his light, his warmth and his life, and it is that light, warmth and life that encourage men and women to get up, too, and go to work... The daily rhythm of human life is patterned on the rhythm of the sun's movement. And it is the sun, too, who is at the origin of all culture and civilisation.¹

Aivanhov reproached us moderns for taking the sun's existence for granted, ignoring the fact that without it, there would be no life on earth. Indeed, without the sun, there would be no planets in our solar system. All animate and inanimate things are, Aivanhov noted, nothing but condensed sunlight. By this he meant that they are made of energy—a lesson that, despite Einstein's influential equation few of us have as yet imbibed.

The sun is the origin of life. More than that, the sun is the primordial teacher. For, without the sun there would be no human society, religion, morality, arts, philosophy, and technology. In one of his earliest talks, given in 1938, Aivanhov remarked:

Everything good comes from the sun. It is God's highest manifestation and through it, He sends His blessings.²

1. Omraam Mikhael Aivanhov, *Toward a Solar Civilisation* (Frejus, France: Prosveta, 1982), p. 11. Spelling in the quotes follow British convention, while the main text of this essay conforms to American custom.

2. Omraam Mikhael Aivandov, *Complete Works*, vol. 1 *The Second Birth* (Frejus, France: Prosveta, 1976), p. 72.

Elsewhere Aivanhov observed:

Deprived of sunshine men could never have existed. They could never have moved or worked. Without the warmth of the sun they could never have experienced feeling. Without his light they could never have had the faculty of sight, and not only on the physical level but also on the intellectual level: they could never have had understanding, for understanding is a higher form of sight.³

This view coincides with the ancient Hindu teachings. Thus, in the *Bhagavad-Gita* (IV. 1), the God-man Krishna explains to his disciple Prince Arjuna that he, Krishna, proclaimed his "immutable Yoga" to Vivasvat who then taught it to Manu, the progenitor of the human race. Vivasvat ("He Who Shines Brightly") is none other than the solar being, more specifically the creator aspect of the sun.

Vivasvat is functionally analogous to Hiranyagarbha ("Golden Germ"), who, in the *Mahabharata* (XII. 337.60), is hailed as the first teacher of Yoga. The reference to the golden colour in his name provides a firm link to the sun, which, as Surya, has anciently been described as having golden limbs. In yogic symbolism, Hiranyagarbha stands for the higher mind (*buddhi*), the seat of yogic intuitions and the receptacle of transcendental truth.

Aivanhov' seriously regarded the sun not merely as a giant star, a massive conglomeration of atoms whose internal combustion produces the phenomenon of light, but as an intelligent entity. He believed that everything harbours a great intelligence, which (or who) manifests in beings and things and is apparent to the degree that their structures permit.

The visible solar orb is merely the physical body of the being we call "sun." It tabernacles a vast intelligent being, whose

only purpose is to generously irradiate the cosmos with life-giving energies, by an act of incomparable compassion and love.

Aivanhov saw in light the first emanation of the Divine, retaining the Divine's qualities more than any other manifestation. As he insisted:

... light is a living spirit which comes from the sun and which establishes a direct relationship with our own spirit.⁴

Aivanhov further claimed that, as a supremely intelligent being, the sun is completely responsive to our spiritual intentions and aspirations. He viewed the sun as an "open door to Heaven."⁵ Aivanhov also stated that the sun has been his principal teacher and that "the sun's replies are given in a flash, like an electronic machine."⁶

Aivanhov gave the name *surya-yoga*, "Solar Yoga," to the conscious cultivation of that solar umbilical cord to the Divine. As he observed:

By the practice of Surya yoga you establish a link between yourself and the power that governs and gives life to the whole Universe: the sun. That is why you must necessarily get results! ... No book can give you what the sun gives you if you learn to have the proper relationship with him ... If you want to create a bond between you [and the sun], you have to look at him in all consciousness. If you do that there will be a communication of vibrations between the sun and you in which forms and colours, a whole new world, will be born.⁷

An important part of *surya-yoga* is to contact the sun at dawn, which requires proper mental preparation. In order to be able to approach the rising sun in a meditative disposition, the *surya-yogin* should live a balanced life, involving dieting, perhaps

4. Omraam Mikhael Aivanhov, *Light is a living Spirit* (Frejus, France: Prosveta, 1987), p. 27.

5. *Toward a Solar Civilisation*, p. 28.

6. *Ibid.*, p. 35.

7. *Ibid.*, p. 30.

3. *Toward a Solar Civilisation*, p. 19.

even fasting, adequate sleep, and, above all, an uncluttered mind. Making peace in his own heart, the *surya-yogin* is able to gather his energies and project himself into the sun.

This projection is made possible by the fact that, on subtler planes of existence, we are already fully in touch with the solar being. Aivanhov put this fact more succinctly when he said that the human being already dwells in the sun. In his own words:

That part of ourselves, that entity which lives in the sun, is our Higher Self.⁸

This statement has its striking counterpart in the *Bṛhadāraṇyaka-Upaniṣad* (II. 3.3ff.), which speaks of the "person" (*puruṣa*), or spiritual essence, in the sun. The exact wording of this remarkable passage is as follows:

Now, formless is the breath and the mid-space (*antarikṣa*), and this is immortal; this is infinite; this is the beyond. The essence of that which is formless, immortal, infinite, and beyond is this Person who is in the world-circle (*maṇḍala*). He indeed is the essence of that. Thus is the divine revelation. (3)

The form of this Person is indeed like a deep saffron-coloured cloth, [or] like white wool, [or] like the *indragopa* insect, [or] like a fire's flame, [or] like the lotus flower, [or] like a sudden flash of lightning. Verily, the glory of him who knows this [secret teaching] is like a sudden lightning-flash. (6)

In the same scripture (V. 15.), we also find the following uplifting prayer to the sun:

With a golden vessel
Truth's face is covered.
O Pusan, uncover it
So that he who abides by the Truth may see.

O Pushan, sole Seer, Controller, Sun, offspring of the Creator, gather your rays, your brilliance! May I behold your most beautiful form. He who is yonder, yonder Person—I am he!

8. Ibid., p. 33.

Esoterically, the human being is modelled after the sun. We participate in the sun's splendour, though we are habitually unaware of this fact. Our "Higher Self," the *atman* or *puruṣa*, is one with the Divine. This is the key message of the *Upaniṣads* and the Vedānta metaphysics built upon them. It is also the central message of Aivanhov, whose liberal Gnosticism has numerous points of contact with Hindu teachings. Aivanhov's unique contribution is that he has made that esoteric knowledge accessible to modern students.

Aivanhov affirmed many times that by focusing on the sun, and by attuning ourselves to the solar "wavelengths," we are made whole. He spoke of "eating" and "drinking" light, the primordial food of the universe. As he put it:

We go to the sunrise in order to nourish ourselves with light ... Man needs to feed on light in order to nourish his brain ... Light awakens those faculties that enable man to penetrate the spiritual world.⁹

Aivanhov, who was a very practical man, recommended this exercise:

... in your thought, with your imagination, try to draw some of these divine particles [of the sun] into yourself. In this way, little by little, you will completely regenerate all the materials of your being. Thanks to the sun you will think and act as a child of God.¹⁰

Aivanhov's *surya-yoga* furnishes us with a vision of our solar system that is truly magnificent. It replaces our egocentric view, which sees everything revolving around the human individual. Simultaneously it relieves us of the burden of having to be play God, instead facilitating our native ability to transcend the self (*ahamkāra*) and to find the bliss of the Divine in our life. The ego is the ultimate black hole. It sucks in light but emits none.

9. *Light is a Living Spirit*, p. 75.

10. Ibid., p. 72.

The sun is the exact opposite of the ego. Surya ceaselessly bestows life upon the world. His life is a true sacrifice (*yajña*). This secret message was clearly understood by the ancient *ṛṣis*. Perhaps our civilization has gone so astray because we have forgotten their subtle understandings and intuitions.

Aivanhov reminded us of the fact that we inhabit a far more wondrous universe than science would have us believe—a universe that is patiently waiting for our conscious, mature collaboration. It is tragic that we are looking for intelligent life in far-distant galaxies when there is supreme intelligence so close to our home planet and so inextricably interwoven with our own

lives. We need not even construct multi-billion-dollar spaceships, but merely open ourselves up to the ever-present spiritual dimension.

Aivanhov's message is very simple, perhaps too simple for our complicated times. Hence it remains to be seen whether the seeds sown by this great European sage have fallen on fertile soil and whether, now that he has joined the sun's splendour, his teaching will be a strong-enough influence in the spiritual reconstruction of the Western world.

There is no more worthy, more glorious or more potent work than this work with light.¹¹

11. Ibid., p. 64

THE ASTRONOMICAL SIGNIFICANCE OF RAHU AND KETU

(Continued from page 212)

Imagine the following scenario. Intelligent beings from some other star have landed on the earth. They wish to find out what progress man on the earth has made, and what he knows, about atomic energy, biotechnology, or space technology. Can they rely on the reports of men on the street in such matters? Certainly not. They will have to approach proper experts in each field for getting the desired information.

Similarly, it would be wrong to base our judgements of the treasures of science and technology our ancestors had on granny's stories. We will have to approach the experts (*Rishi, Muni!*) for this.

My own Karma is sufficient explanation of my present state.... So what is the use of going to stars for explanation? They may have a little influence; but it is our duty to ignore them rather than hearken to them and make ourselves nervous. This I lay down as the first essential in all I teach: anything that brings spiritual, mental, or physical weakness, touch it not with the toes of your feet. Religion is the manifestation of the natural strength that is in man.

You will find that astrology and all these mystical things are generally signs of a weak mind; therefore as soon as they are becoming prominent in our minds, we should see a physician, take good food and rest.

—Swami Vivekananda
(from *Complete Works*, VIII. 184-5)

Nature of Man in Gandhi's Philosophy

A. USHA RANI

Divinity of man was a living reality to Gandhiji. His noble life was a commentary on what he stood for and preached. The writer, a project assistant in Visakhapatnam in Andhra Pradesh, discusses the salient points of the teachings of the saint.

Mahatma Gandhi considered man not just as a mere physico-chemical agglomerate, but as a spiritual entity. According to him, man is a complex being evolved far from the brute. Even though man has similarities with the brute in physical functions, he is differentiated on the moral plane. Man has the power of reason, discrimination, and free-will. Therefore, he is far superior to the brute. He is able to distinguish between virtue and vice, and good and evil. He does not live by bread alone, but uses his reason, worships God, and regards the attainment of Knowledge as the *summum bonum* of life. The aim of man in worshipping God is to know Him and find Him.

Life according to Gandhi is a spark of the Divine and religion helps man to have a glimpse of the Divine Essence. This glimpse is impossible without a full development of the moral sense. Therefore, necessarily, for a better life a man should follow the principles of morality. In order to develop his ethical personality, he should embrace some moral principles which his ancestors followed. Gandhi prescribed certain moral principles for the development of the ethical personality. Five cardinal virtues he mentioned were non-violence, truthfulness, chastity, non-possession, and non-stealing. Out of these virtues, Gandhi laid much emphasis on Truth and Non-violence, which can be said to be at the core of his teachings. However, they are not new, but the emphasis he laid on them is new and morally expedient.

The literal meaning of the word non-violence (*ahimsā*) is non-injury or non-killing. This idea which is very old, had its strong impetus in Buddhism, Jainism and Vaiṣṇava Philosophy. Right from the ancient period, prophets and *avatara*-s of all religions taught *ahimsā*. Gandhi is distinguished from others for his saying, "Man as animal is violent, but as spirit is non-violent." As soon as the spirit awakens, he becomes non-violent and progresses towards *ahimsā*. Non violence, according to Gandhi, is not only attainable by *Rṣi*-s and Saints, but it is the law of human spiritual development. It distinguishes man from the brute. *Great Rṣi*-s who discovered the law of non-violence in the midst of violence, taught the world that salvation is possible only through non-violence.

Generally by *ahimsā* is understood not hurting any living being. However, Gandhi expanded this idea in his thought: "*Ahimsā* is not the crude thing it has been made to appear. Not to hurt any living thing is no doubt a part of *ahimsā*. But it is its least expression. The principle of *ahimsā* is hurt by every evil thought, by undue haste, by lying, by hatred, by wishing ill to anybody."¹

In its positive form, says Gandhi, *ahimsā* means 'largest love', 'greatest charity'. A follower of *ahimsā* must love his enemy, or a friend, or a stranger, as he does in the case

1. Gandhi, M. K., *From Yeravda Mandir: Ashram Observances*, (Ahmedabad: Navajivan Publishing House, 1957) p. 7.

of his son or brother. He further described *ahimsā* as a 'soul-force'. A physical force such as an atom bomb must be used in the stipulated period; otherwise it will become useless. But a soul-force, once it starts functioning, never degenerates. This non-violence cannot be taught by force, but it must penetrate into every pore of the human being. Likewise, no institution can be made non-violent by compulsion. Truth and non-violence cannot be written into a constitution, but have to be adopted by one's own free will. If one achieves real non-violence he can automatically achieve truth. Now, what is Truth?

The literal meaning of the word truth is 'conformity to fact or reality'. In the logical sense truth is considered to be a property of judgement. In metaphysics it is conceived as right knowledge, which corresponds to reality; whereas in Indian Philosophy it is conceived as self-illuminating and self-revealing. Taking all these meanings into consideration, Gandhi gave a new meaning to truth, and identified it with God. As truth is identified with God, who is Omnipresent, Truth is not found in books, but resides in every human heart. To him, truth is knowledge, and life. Truth has no form. Therefore, everyone forms an image which he likes and there will be as many images of truth as there are men.

Truth is eternal. Hence the word is also used to mean God. Truth governs the entire universe. The nearest word to truth in Sanskrit is *Sat*. *Sat* means Existence—is-ness. God alone 'is', and everything else is illusion. Thus Gandhi gave clarification to his claim that 'Truth is God'. He further added that truth is not as ambiguous as the word God. Nobody can specify the word God with anything in the world. But in the case of truth, it is clear in its significance. Truth gives perennial joy. It cannot be

robbed. Even the atheists will not demur the necessity of power of truth even though they deny the very existence of God. Hence, Gandhi said that 'Truth is God', rather than 'God is Truth'.

As the human being is the highest of all creatures, he has the capacity to realize truth. Realization of truth is not limited to seers and saints who dwell in caves and forests, but to all common people who live in society. The practice of *ahimsā* and Truth are so intertwined that it is practically impossible to disentangle and separate them. They are like the two sides of a coin, or rather of a smooth unstamped metallic disc. ...*Ahimsā* is the means; Truth is the end. Means must always be within our reach, and so *ahimsā* is our supreme duty. If we take care of the means, we are bound to reach the end sooner or later."²

In the view of Gandhi, realization of truth is possible to all. A seeker after truth should be humbler than the dust. The people in this world crush the dust under their feet, but the seeker after truth should be so humble as to believe that even the dust would crush him. Then only he will have a glimpse of truth. The quest for truth is the *summum bonum* of life. To be truthful in one's life there should be Truth in thought, Truth in speech, and Truth in action. To the man who has realized this Truth in its fullness, nothing else remains to be known. It is the path that leads to God.³

Truth should be the very breath of everyone's life and all our activities should be centred in truth. If once man reaches this

(Continued on page 230)

2. Gandhi, M. K., *Truth is God*, (Ahmedabad: Navajivan Publishing House, 1955) p. 33.

3. Gandhi, M. K., *From Yeravda Mandir: Ashram Observances*, p. 14.

The Unique Space-Time and Historical Sense of The Hindus

SWAMI MUKHYANANDA

(Continued from the previous issue)

6. The Role of the Purāṇas and Itihāsas in Integrating the Cosmic History with That of the World.

'Purana' means 'the past', 'the ancient'; and Purāṇa-s as literature speak of the ancient happenings, cosmic as well as earthly. Even before being written down, the Purāṇa lore had been recited during *Sattra*-s (Year-long *Yajñas*) from the early Vedic times, and as time went on they have been added on to and grown enormously incorporating different aspects of cultural life as well. The Vedas and the Purāṇas etc. are not mere literature; they are the records of national life from the ancient past.¹⁹

19. Dr. Sita Nath Pradhan in his book '*Chronology of Ancient India*' (p. 76) (Pub. by Calcutta University in 1927) writes:

"Now there is absolutely nothing to impeach the Puranic statement (the original verse is quoted) that a compendium of Purana or ancient history was, for the first time, culled from various sources by Pārāsharya Vyāsa and that he entrusted this original collection of ancient history to his Sūta disciple named Lomaharshana. This story of past events began to be related to assemblies of Rishis from *Satra* to *Satra* and thus the propagation of Puranic knowledge went on throughout the country. One of that original collection which comprised of descriptions of various dynasties, have been evolved the different Puranas such as the *Vūyu*, the *Matsya*, the *Viṣṇu*, etc. which we now possess."

Dr. R. C. Majumdar writes in '*The Vedic Age*': "...the fact remains that the only concrete result of historical study in the most ancient period is to be found in long lists of kings preserved in the Puranas and the epics. These lists profess to trace the unbroken royal lines from the first

In the cosmic aspect, the Purāṇas describe the Creation (*Sṛṣṭi* or Projection) of the *Brahmāṇḍa* from the Supreme Reality or Being, and of the progenitors of gods, angels, demons, human beings, and other creatures. Within this world, the noteworthy happenings in the religio-cultural life, and the lives of great persons and kings are given in a way to inspire the life and conduct of the

human king that ruled (in India) down to about the third or fourth century A.D. ...The traditions preserved in ancient Indian literature, notably the Puranas, thus form the main source of information for the history of the earliest period, and for the period before the sixth century B.C., they constitute our only source. The Buddhist and Jain literatures of the succeeding period form a valuable supplement and corrective to the evidence of the Puranas..." (pp. 48-48).

One has to look at the development of the Purāṇas and Itihāsās in the historical perspective to fulfil a felt need, and not as mere mythical literature. The mythical genre was deliberately adopted to suit a particular purpose as explained by us. Dr. Pradhan has pointed out (pp. 15-16), "In fact mythologies, it appears to me, cannot stand in the way of reconstructing our ancient history." He, then, elaborately explains that well known historical persons like Pānini, Padmapāda, Shivaji, Raja Pratāpāditya and several others were all associated with mythological aspects, but that does not come in the way of their historical personality. We may add, even such great personages as the Buddha, Jesus Christ, Mohammad, Nanak, and others are surrounded with mythological aspects. Similarly, the Bible, the Koran, and other scriptures too have mythological aspects. But, there is the kernel of truth within the mythological descriptions also. For the purpose of 'history' we have to remove the husk and take the grain.

people. Often dynastic lists of rulers with brief accounts of their doings are also incorporated. Hence, 'Purāna' is defined as having five characteristics:²⁰ They are: (1) Primary Creation of the Principles (*Tattva*-s) and the five elements of the subtle *Brahmāṇḍa* in thought-form with all the potentialities of evolution, by the Trans-Personal *Brahman/Īśvara*, by virtue of Its inherent Power designated *Māyā*, out of Itself. (2) Secondary Creation through the Creator-God *Brahmā* of the comprehensible *Brahmāṇḍa* with all the fourteen planes or *Loka*-s with its denizens, within the framework of Space-Time-Causation (*Deśa Kāla-Nimitta*) and the cosmic laws relating to them; and also dissolution of the manifested *Brahmāṇḍa* into its causal state or subtle seed form at the end of a vast period called *Kalpa*. (3) Description of the *Prajāpati*-s (Cosmic Progenitors), whom *Brahmā* created from his mind, and the lineage of gods, angels, and other heavenly beings and demons, and of the seven great celestial sages (*Sapta-Rsis*) and Patriarchs of mankind, and of all the other creatures, who descended from the *Prajāpatis*. (4) Description of the fourteen *Manvantara*-s or Ages of the *Manu*-s—the vast cosmic periods presided over by the different Manus from the beginning of this cycle of creation (*Kalpa*) and important happenings in those periods (A *Manvantara* runs to 30, 67, 20, 000 years). (5) The lists of kings and rulers of various dynasties in Bharatavarsa (India) with the presidentship of the seventh *Manu*, the *Vaivasvata Manu*, who is considered the progenitor of mankind after the Great Deluge, and their doings from ancient times.

Though these five are said to be the characteristics of a *Purāna* in early times,

20. Cf. *Sargascha prati-sargascha vamsa manvantarāṇi ca, vamsa-anucaritam caiva purānam pañca-lakṣanam.*

in due course the volume and number of *Purānas* grew with the growth of population and the widening of the territory of Hindu culture and the immense development of the different aspects of the cultural and intellectual life. More than eighteen *Mahā-Purāna*-s (Great *Purānas*) with over 400,000 verses, and over eighteen *Upa-Purāna*-s (Subsidiary *Purānas*) came into being to record the life and culture of the people in harmony with the cosmic aspect. They incorporated an account of the different arts and sciences of the time. Some of them became like encyclopaedias dealing with topics such as *Śilpa* (arts and crafts), *Vaidya* (Medicine and Surgery), *Sāhitya* (Literature), *Alamkāra* (Poetics and Rhetoric), *Gāndharvavidyā* (Music, Dance, Drama); *Citrakalā* (Painting), *Mūrti-vijñāna* (Sculpture), *Vāstu-śilpa* (Architecture and temple building), *Jyotiṣa Nyāya* (Logic), *Gaṇita* (Mathematics), *Nīti-śāstra* (Political and Moral Science), and various other useful subjects, besides religiophilosophical matters. To give a cosmic context, they conceived of cosmic presiding deities for the different arts, crafts, and sciences, who manifest them on earth through mankind. The eighteen *Purānas* are compared to the eighteen limbs of the Cosmic Person. Of course, there were specialized works on all these and other topics. But here they were put in a simple way for popular understanding. It has been laid down that the Vedic knowledge must be elaborated through the *Itihāsas* and the *Purānas* (*Itihāsa-purānā-bhyām vedam samupabṛhmeyet*).

Besides the above *Purānas*, there are also what are called *Sthala-Purānās*, which describe the various holy places of pilgrimage, their origin and all that is associated with them. The guides at these places, called *Paṇḍa*-s, even maintain voluminous records of the past pilgrims to those places who took their guidance or stayed with

them, and easily trace out the names of relatives and important persons who visited there a few generations ago.

The two Itihāsās, the *Rāmāyaṇa* and the *Mahābhārata*, deal specially with socio-political matters in the context of the current historical happenings of those times as well as those of ancient times. The *Rāmāyaṇa* sets up in a historical background ideal interpersonal relations at different levels of life in society and state, and inculcates moral and spiritual virtues with illustrations of the lives of great personages of the past. The *Rāmāyaṇa* has 24,000 verses. The *Mahābhārata*, with over 100,000 verses, is specially encyclopaedic, dealing with national history and culture of those times. There is hardly any topic which is not discussed in it relating to national life and thought up to the time of its composition and with some later additions. The boast was that what is not found there cannot be found anywhere else.

There is no nation on earth which has such a vast fund of literature giving its past history, covering every aspect of national life and culture, all presented in a wide universal context to inspire and shape the lives and minds of the people. Moreover, it is integrated to the cosmic history from the very origin of Creation of this cycle. Further, it is not mere dead literature of the past for the dry research of scholars, but is very much alive and current in the life of the people to the present day, influencing their life and thought and conduct. Yet the scholars declare in their own wisdom, 'the Hindus have no sense of history', because it does not fit into their mental mould and system of chronology.

Both the Purāṇas and Itihāsās often resort to mythical or symbolical language,²¹

21. In the Puranic times it was the practice

rather it seems deliberately, to couch historical facts. The purpose was twofold. Firstly, to relate all events on the earth in a cosmic background to widen the vision of man and elevate the mind, and to inspire people to strive for the highest goal of mankind in national life; and secondly, to eliminate the growth of animosities between different sections of people based on past historical events and build up an integrated nation owing allegiance to common religio-spiritual ideals and cosmic concepts.

Though such concepts may be mythical and symbolic, they have a spiritual and experiential basis in cosmic verities and give a rational, systematic, and integrated picture of the entire framework or stage for the drama of national life and historical events. What is required to guide and inspire individual and national life is an ideal model, whether it be based on sensible so-called physical facts or on mentally comprehensible idealistic verities.

For that matter, even in empirical history, every historian describes the so-called facts in his own way, often contradictory to others. The so-called documents also are not trustworthy.²² The nationality of the

to use various animal or totem designations for the different tribes, perhaps to hide their identity, *Sarpa* or *Nāga* (Serpent), *Garuḍa* (Eagle), *Rikṣa* (Bear), *Vānara* (Monkey or Ape), *Rāksasa* (Demon), etc. We also use these days such designations as 'Black Panthers', 'Liberation Tigers', 'Black Cats', 'Russian Bear', 'British Bulldog', 'American Eagle', etc. to describe the activities of groups and nations.

22. We can see from the following excerpt from a review how big authors make great mistakes even these days. In reviewing the book '*A Survey of Hinduism*' by Klaus K. Klostermaier, published by the State University of New York Press, 1989, the reviewer points out:

"Though carefully researched and cogently argued on the whole, the book has some factual

historian, his prejudices and preconceptions, motivations, etc. play a great part in the delineation of history. The same facts and events and persons are looked upon quite differently after some time, as we see in the case of Karl Marx, Stalin, Mao Dze Dong, etc. in our times. As it is said, "History is a mystery; and every historian's history is

errors. On page 87, Hanuman is described as the 'monkey king' which is only metaphorically true. On page 97, instead of Yudhis-thira, Arjuni is described as the leader of the rightful claimants. Similarly, on pages 186 and 196, Vachaknavi Gārgi is shown as one of the wives of sage Yājñavalka. In fact, Gargi was a daughter of sage Vachaknu and was one of the greatest of the Upanishadic seers (who took part in the debate with Yājñavalkya in King Janaka's court). Balarāma was not Krishna's younger brother (p. 280) but his elder brother. Finally, the years of birth of Sant Tukaram and Ramdas Swāmī should be 1608 A.D." (*Prabuddha Bharata* Monthly, Calcutta, June 1991).

Here is another interesting piece from *The Statesman* newspaper Calcutta, dated Monday, June 24, 1991, from a write-up by Manohar Mulgaonkar on the great historian Sir Jadunāth Sarkar:

"We were seven and, deservedly or otherwise, we thought of ourselves as scholars or, at any rate, serious students of history. Needless to say, there were differences among us, and some of these differences were irreconcilable. Looking back on the experience, I am both thankful and surprised that we should have had no serious quarrels. ...While we belonged to it (the circle), we tended to think of ourselves as a club, and spiritedly opposed any conflicting views or interpretations put forward by some visiting Pundit, no matter how highly rated. I still remember how I and our only full-time historian, Sadāshiv Garge, contradicted a view of Shivaji's Rajput ancestry put forward by one of the most eminent historians of our time, Raghubir Singh, who used to attend our meetings about twice a year."

He further points out how personal jealousies played a great part in the opinions of different great historians like D. V. Potdar, and Sir Jadunath Sarkar.

only 'his' story." All these histories mostly serve to augment conflicts, blur the vision, and make the minds of the people parochial. One may get some bare information as to a few so-called facts, but they neither inspire nor lead to higher goals. Merely learning the dates and doings of kings and rulers and their battle and wars and other events have no bearing on the higher purposes of life or goal of mankind. They only bloat the ego of stronger nations and depress and humiliate the weaker ones.

A review of the history of science, which is supposed to be matter-of-fact, shows that the so-called scientific theories and facts have been subject to continuous change and subsequent refutation. As it has been said, "The corridors of science are littered with the skeletons of discarded theories." Further, most of the theories with regard to the micro-world and macro-world are only speculations. They keep on changing. Still, they give a wide background and framework to human life and thought so far as the physical universe is concerned. We do not, therefore, reject them even though they are speculative, afflicted with errors, and do not really represent the real facts or truth. However, we have to work within human limitations in all fields of life and knowledge and strive to approach the real truth.

Hence the criterion of judgement must be whether or not a system gives a consistent, rational, and integrated structure as a framework for human life and thought, and not its method of presentation. From such a point of view, the Hindu concepts have greater advantage as they put life and history in the cosmic context. Nor is it antagonistic to the concepts of modern science.²³ It can

²³. In regard to the number of species, the Purānas, giving a rough estimate in round

easily integrate the modern view into its system, for it accepts the laws of time-space-causation relevant to this plane of existence, though it does not confine itself to the limits of that plane as the whole of existence as modern science does. On that plane, it is prepared to modify its ideas in the light of new discoveries, even as science does. But it also holds that the modern scientists' view is only one of the several scientific ways in which even this physical universe and its evolution can be thought of and analysed consistent with facts and empirical experience, and not the sole and only way. There are several viewpoints and explanations even in modern science for a particular pheno-

numbers, state that there are 84 lakhs of them, and their evolution and number is mentioned in the following order in the *Bṛhad-Viṣṇu-Purāna*:

Sthāvaram (1) *Vimsater-lakṣam Jalajam* (2) *nava-laksakam Kūrmāscha* (3) *nava-laksam ca dasa-laksam ca pakṣiṇah* (4) *Trimasat-laksam pasūnām* (5) *ca catur-lakṣam ca vānarah* (6) *Tato manusyatām prāpya tatah karmani sādhayet.*

[There are—(1) Stationary and non-mobile 20,00,000; (2) Aquatic 9,00,000; (3) Amphibious 9,00,000; (4) Birds 10,00,000; (5) animals 30,00,000; (6) Anthropoids 4,00,000; (7) Humans 2,00,000;—after passing through all the species, a Soul attains a human body at last, and there performing purposeful actions, it attains to perfection.]

Even the ten *Avatāras* (Incarnations) of God Viṣṇu given in the *Purāṇas* reflect the order of evolution, beginning from the *Tāmasika* (Dense), passing through the *Rājasika* (Energetic), and culminating in the *Sāttvika* (Serene), the perfected ones. They are: (1) *Matsya* (Fish—aquatic); (2) *Kūrma* (Tortoise—Amphibious); (3) *Varāha* (Boar—more on land, but fond of water, slush, etc.) (4) *Narahari* (Man-lion—half animal, half-man) (5) *Vāmana* (Dwarf Man); (6) *Parasurāma* (Man with the Axe); (7) *Srī Rāma* (Embodiment of Social Dharma, protecting the good and punishing the wicked); (8) *Srī Kṛṣṇa* (preacher of Self-Knowledge and Detached Action); (9) *Buddha* (Preacher of Spiritual Dharma and Compassion); and (10) *Kalki* (To come in future to establish Spirituality and destroy Materialism).

menon, just as there are differences in the Hindu systems of thought which try to substantiate their viewpoints with reason and appeal to empirical experience. Without contradicting the modern scientists' view, which is applicable and useful from a particular objective or external point of view, the Hindu view gives an evolutionary theory from the Supreme Reality relating it to our modes of sensual and intellectual knowledge and experience, based on the constitution of man, the investigator and the agent of knowledge, and his faculties of knowledge and experience. It relates the individual and the universal in an integrated harmony, for these are the two poles of the knowledge of facts and experience.

The importance of the recording of history is not merely as information of some events, but as a guide to inspire and mould the life of people to progressively strive towards higher mental, moral, and spiritual evolution. For one thing, after all, we can have no true history,²⁴ and the so-called historical persons appear on the stage of the earth from the unseen, go on continuously changing while living, and disappear for ever into the unseen. Even the person himself knows very little about himself or his environment. All the accounts about him are coloured by the mind of the writer. Everyone forms his own mental picture of persons and events and evaluates them accordingly, as we find even in current affairs in the different editorials and comments of persons in their letters to the Editor. Then what is the criterion of a historical fact? Even written constitutions are understood and interpreted differently. Everything in the universe also is subject to constant change. We can only have some general broad ideas of conspicuous events and changes here and there for the time being; but the evaluation of the changes

²⁴. See Footnote No. 2.

and the conspicuous events is entirely dependent on the individual, which also changes from time to time. Hence, the dividing line between the so-called facts of history and myth is tenuous and shifting and may be it is in itself a myth. We may get the husk of so-called 'facts', but the kernel of truth escapes us.²⁵

In a letter to the Raja of Khetri, Swami Vivekananda wrote from Chicago:

Each man calls that alone real which helps him to realize his ideal. To the worldly-minded, everything that can be converted into money is real, that which cannot be so converted is unreal. To the man of domineering spirit, anything that will conduce to his ambition of ruling over his fellow men is real—the rest is naught; and man finds nothing in that which does not echo back the heartbeats of his special love in life.

The majority of mankind can only understand the power when it is presented to them in a

25. When we study several books on history of a people, we find conflicting views. It was very interesting to see that for working out the period of the Mahābhārata War based on the dynastic lists in the Purāṇas, F. E. Pargiter took 18 years as average for a ruler; V. G. Aiyar put it at 22 years on the basis of the average of the known periods of several Indian and foreign dynasties; Dr. S. N. Pradhan, on a similar basis, taking the periods of some other Indian and foreign dynasties, arrived at 28 years, and he thought it very reasonable; Dr. P. V. Vartak worked it out at 36 years. The dates for the Mahābhārata War arrived at by them is, respectively, 950 B.C., 1193 B.C., 1150 B.C., and 5,561 B.C. (using also astronomical factors), Dr. A. D. Pusalkar, though accepting the 18 years average of Pargiter, arrived at 1,400 B.C., calculating it from the pre-war generations and also by coordinating the dynastic lists with the Vamsāvali lists of sages. All these are mostly intelligent speculations, and to arrive at a particular date, the rulers are all cut to a standard size. If we are thus to willy-nilly accept these modern speculations, which we have to take on mere faith, why should objections be raised to what is given in the Purāṇas, and replace the Purāṇic mythology by this 'historical' mythology?

concrete form, fitted to their perceptions. To them, the rush and excitement of war, with its power and spell, is something very tangible, and any manifestation of life that does not come like a whirlwind, bearing down everything before it, is to them as death. ...Those whose only aim is to barter the energies of life for gold, or name, or any other enjoyment; those to whom the tramp of embattled cohorts is the only manifestation of power; those to whom the enjoyments of the senses are the only bliss that life can give—to these, India will ever appear as an immense desert whose every blast is deadly to the development of life, as it is known to them.

But to those whose thirst for life has been quenched forever by drinking from the stream of immortality that flows from far away beyond the world of the senses, whose souls have cast away—as a serpent its slough—the threefold bondages of lust, gold, and fame, who, from their height of calmness, look with love and compassion upon the petty quarrels and jealousies and fights for little gilded puff-balls, filled with dust, called 'enjoyment' by those under a sense-bondage, to those whose accumulated force of past good deeds has caused the scales of ignorance to fall off from their eyes, making them see through the vanity of name and form—to such wherever they be, India, the motherland and eternal mine of spirituality, stands transfigured, a beacon of hope to everyone in search of Him who is the only real Existence in a universe of vanishing shadows.²⁶

7. Hindu Historical Achievements.

It is a tremendous mistake to think that the great Hindu achievements were only in the realm of religion and philosophy, though they were their highest gifts to mankind, and that they confined themselves to India.²⁷

26. Reply to the Address dated 4th March 1895 by the Raja of Khetri—*Complete Works*, IV. pp. 322 ff.

27. As Swami Vivekananda pointed out, "Those of you who think that the Hindus have always been confined within the four walls of their country are entirely mistaken; you have not studied the old books, you have not studied the history of the race if you think so. Each nation must give in order to live. When you give life, you will have life. ...and that we have been living for so many thousands of years is a fact

Without a parallel all-round high development and enlightenment and elevation of the mind, greatness in religion and philosophy cannot be achieved, though material and intellectual development in itself cannot lead to the great conceptions in religion and philosophy, unless the mind is so oriented. As pointed out earlier, the Hindus had a broad cosmic vision and all aspects of life and effort were included in their purview. A review of the Vedas, Vedāngas, the Upanishads, the Itihāsās and Purāṇās, and other Sanskrit and ancient Tamil literature will make this clear. It included every type of science, arts, and industry mentioned before while dealing with the topic on the Role of the Purāṇas and Itihāsās.

The Hindus divided all knowledge into three classes—*Ādhibhautika* (the physical and natural); *Ādhi-daivika* (the theological and mythical); and *Ādhyātmika* (the philosophical and spiritual). Under the first class, they tried to investigate and cultivate different types of empirical arts and sciences progressively. They formulated profound socio-political ideas and developed vastly trade and industry. Until the past few centuries, India was considered the richest and wisest country in the world, and all nations looked up to India. While its intellectual and spiritual wealth drew scholars and seekers of spiritual wisdom, its immense material wealth drew the foreign invaders who despoiled the country. The Hindus spread their culture all over the world known to them with the motto, "*Kṛṇvanto viśvam*

that stares us in the face, and the solution that remains is that we have always been giving to the outside world, whatever the ignorant may think. But the gift of India is the gift of religion and philosophy, of wisdom and spirituality." (Vol. III, page 273)... "There are evidences accumulating every day to show that Indian thought penetrated into China, into Persia, and the Islands of the Eastern Archipelago." (pp. 274-75).

āryam" (*R̥g-Veda*), that is, "making the whole world noble." "With a blessing behind and peace in front," they spread their ideas, and not with the march of embattled cohorts. As Swami Vivekananda has pointed out:

Here activity prevailed when even Greece did not exist, when Rome was not thought of, when the very fathers of the modern Europeans lived in the forests and painted themselves blue. Even earlier, when history has no record, and tradition dares not peer into the gloom of that intense past, even from then until now, ideas after ideas have marched out from her, *but every word has been spoken with a blessing behind it and peace before it.* (italics ours) We, of all nations of the world have never been a conquering race, and that blessing is on our head, and therefore, we live. (*Complete Works*, Vol. III, p. 106).

Amongst all the races of the world, from the earliest time in history, Vivekananda points out:

India has been called the land of wisdom. (Vol. IV, p. 196) When the real history of India will be unearthed, it will be proved that, as in matters of religion, so in fine arts and sciences too, India is the Primal Guru of the whole world. (Vol. V, p. 421).

The cultural ideas of the Hindus spread practically over the whole of Asia and parts of Africa. Besides philosophy, Hindu mathematics, medicine, and other sciences spread to the West either directly or through the Arabs. As it has now clearly come to light, the Hindus had their cultural empire in the entire South-East Asian region, including the Philippine Islands, and it spread even to the Easter Islands and South and Central America (Mexico) (Cf. *Hindu America* by Bhikshu Chaman Lal).

No regular modern-type, strictly chronological, histories were written by the Hindus of these achievements, parading their superiority, for their idea of history was

different.²⁸ They did not develop a nation-state idea, but of one mankind spread over the earth with different languages, manners, and customs. The human spirit was one in all. Hence they did not boast of their political or cultural conquests, nor did they expatiate on them. They tried to elevate, and not to exploit. They spread their beneficial ideas quietly without fanfare for the uplift of mankind.²⁹ In the words of Vivekananda:

28. C. Kuban Raja in his 'Survey of Sanskrit Literature' (page 45) states, "Chronology claims a greater share in history at present than the facts of history themselves. But in ancient India they gave greater importance to the facts of history than to the chronology relating to the facts." K. N. Kapoor, quoting the above (Op. Cit., p. 71), states further, "Chronology has, however, been often found to be defective." Basham is of opinion that... "no historical proposition, not even the universally accepted as, say, 'the battle of Waterloo occurred in 1815', has absolutely mathematical certainty." (A. L. Basham, 'Studies of Indian History and Culture', page 235).

Quoting several other views which give conflicting dates of events, Kapoor concludes: "It follows from the foregoing discussion that chronology is not as important a factor in history as is considered by the modern historians and that absence of chronology in ancient history of India (according to them) is no ground for rejecting outright the events and accounts stated therein." (p. 73).

29. In the *Śukla Yajur Veda* (XXVI. 2), it is urged to spread the beneficent words (*vācam kalyāṇīm*) of the Vedas to all the people without distinction of caste, creed, or sex, even to the aliens:

*Yathā-imām vācam kalyāṇīm āvadāni
janebhyah,
Brahma-rājanyābhyam sūdrāya ca
āryāya ca
Svāya ca arāṇāya ca.*

"Just as I am uttering these blessed words to the people (without distinction), in the same manner you also spread these words among all men and women—Brāhmanas, Kṣatriyas, Vaisyas, Śūdras, and all others, whether they be our own people or aliens".

Like the gentle dew that falls unseen and unheard and yet brings into blossom the fairest of roses, has been the contribution of India to the thought of the world. Silent, unperceived, yet omnipotent in its effect, it has revolutionized the thought of the world; yet, nobody knows when it did so. (Vol. III, p. 274).

We can gather these facts from the vast Sanskrit, Prakrit, and ancient Tamil literature of the Hindus as well as by other evidences which have been coming forth.

However, it is not that the rules of kings, which is very dear to most modern historians and lines of great personages were not recorded. The Itihāsas and the Purāṇas give lists of various dynasties and their kings in the Kali-Yuga, after the Mahābhārata War, and also some account of the pre-Kali-Yuga ancient rulers, both after the Great Deluge in the time of Manu Vaivasvata³⁰ and before that.

30. Manu Vaivasvata was at the beginning of the Kṛta-Yuga. He was the first Patriarchal King after the Great Deluge and all the early royal dynasties in India, divided mainly into the Solar and Lunar, are traced to him. As already stated, before the Mahābhārata War a Maha-Yuga or Chatur-Yuga (a set of 4 Yugas) consisted of 10,000 divided perhaps equally into 4 parts of 2,500 years. Even if we take the beginning of the Kali-Yuga, according to the old system at 1,176 B.C. (Cf. footnote No. 10), Manu Vaivasvata must have flourished around 8,676 B.C. (1,176 plus 7,500 years for the previous Dvapara, Treta, and Kṛta Yugas). Swami Sakhyānanda gives his date at 8,576 B.C. on astronomical calculations from the Purāṇic records (*Glimpses from Our Glorious Past*, page 21). The Great Deluge may have taken place some 50 years earlier when Manu was a young prince, for there were also pre-Deluge rulers whose record is there in the Purāṇas, starting with one Ananda and the Swāyambhuva Manu. Vaivasvata Manu was the seventh Manu in the line, Manu being the title of great rulers in those times, for there were other rulers before him who were not termed Manus.

The dates arrived at for the Deluge and Manu

It seems, the Hindus adopted, in course of time, two types of chronology—(1) The earlier matter-of-fact one, based on astronomy, for practical purposes of recording past history with regard to personages on this earth known through traditional history which was current from the earliest times; and (2) the symbolical and mythological one, introduced later, to give a vast and eternal cosmic background. The Yuga and Mahā-Yuga conceptions (about this we shall deal in detail later on) in both the systems

Vaivasvata on the basis of average of 18 years given by Pargiter (Per ruler in the dynastic list) is most unreliable because, firstly, it is a mere guess (as pointed out earlier, others have taken the average at 22, 28, and 36 years). In ancient times people used to live long with plenty of pure food, air, and water available, and life also was active and simple based on Dharma. Secondly, the dynastic lists are not complete. Only prominent ones may have been included. Sometimes republics intervened also. Hence we have to co-ordinate the dynastic period with the date provided by astronomical records. It is also a matter for research whether the Vaivasvata Manu in whose time the Deluge occurred, and the Vaivasvata Manu, the First King who established the Solar and Lunar dynasties, are the same, since Manu was a title and on this later one also may have been conferred the title Vaivasvata Mann, whose name probably was Satyavrata. Such confusion is there with regard to the identities of the Janakas, Asvapatis, and other rulers, as well as in the case of Acārya Śankara, since Śankarācārya has been used as a title by later ones also.

However, we may draw attention (1) to the Biblical persons who had very long spans of life. (2) Zoroaster is said to have lived some 6,000 years before Plato by Aristotle and Eudoxus. (3) Pliny (41 A.D.) mentions that 154 kings ruled in India for 6,451 years and 3 months from Father Bacchus (Ikṣvāku?, son or descendent of Manu) to Alexander the Great, on the authority of Megasthenes. Father Bacchus must be much later than Manu Vaivasvata who established his capital at Ayodhya. We have already referred to the unconscious attempts of Western historians to squeeze all ancient history in terms of Biblical chronology.

are akin but different in value. In the former, before the Mahābhārata Age, a Mahā-Yuga of 10,000 years consisted of four Yugas, probably each of equal duration of 2,500 years. A Mahā-Yuga was also called a Chatur-Yuga (4-Yugas) or often simply Yuga.³¹ But, with the further development of astronomy, and philosophical ideas about the nature of the universe, and of very vast conceptions of Space and Time commensurate with them in the Itihāsas and Purāṇas, the 10,000 years of the Mahā-Yuga were turned into divine years, 360 human years making one year of the gods. Also the four Yugas, Krita, Treta, Dwapara, and Kali, were allotted 4,000, 3,000, 2,000, 1,000 divine years respectively; still further, 1/10 of these periods were considered as intervening conjunction (*Sandhi*) periods on either side of a Yuga, comparable to the morning dawn and evening twilight of a day. Thus a Mahā-Yuga or Chatur-Yuga consisted of 12,000 divine years, the four Yugas consisting of 4,800, 3,600, 2,400, and 1,200 years respectively. According to this new system, the present Kali-Yuga, said to begin in 3,102 B.C. (See F.N. No. 10) for all calculations, will consist of 4,32,000 years. We have given later on a table of this latter chronology.

The Manus were popular patriarchal rulers of the Vedic people and there were several Manus before the Deluge, which seems to have occurred c. 8,700 B.C. The names of these historical earthly Manus were included in the list of mythological Manus presiding over the different Manvantaras (vast cosmic periods)³², including that

31. See B. G. Tilak, 'Arctic Home in the Vedas' (p. 346 ff) and V. G. Aiyar, 'The Chronology of Ancient India' (p. 105 ff) for a discussion of the evolution of the Yuga conception with its different connotations and values.

32. There are 14 Manvantaras in a Kalpa, or manifested period of the Cosmic Universe

of the historical Vaivasvata Manu of the present Age; who is considered as the patriarch or progenitor of all the ruling dynasties in Bhārata-varṣa (India) after the Great Deluge which occurred during his time. He is also considered as the father of mankind, and the words 'Manava', 'Man', etc. derive from him.

By understanding the introduction and significance of these two types of chronology (See F.N. No. 10) and applying them to the relevant periods, we can reconcile the astronomical/historical and cosmic/mythological points of view. The new chronology is applicable only in the Kali-Yuga after the Mahābhārata War, when it was established as an era. It does not affect historical dating. But if it is applied to the events in the previous ages or Yugas, it becomes incongruous.

The Hindu sages introduced the new time-scales for cosmic purposes and the micro-world, when knowledge grew vastly, just as modern science has introduced light years and very minute fractions of a second, viz, *micro*, *nano*, *pico*, and *femto*. It is also remarkable that the Hindus conceived of Space-Time-Causation as integral and inseparable, and similarly of Proto Matter-Energy-Mind (*Ākāśa-Prāṇa-Mahat*)—transformable one into another like Ice-Water-Vapour—which are the original counterparts of Space-Time-Causation; they are

(Brahmāṇḍa), running into 1,000 Mahā-Yugas. Each Manvantara consists of 71 Mahā-Yugas. There are 15 conjunction periods (*Sandhi*) between the 14 Manvantaras, made up of 15 Kṛta-Yuga periods of 4,800 celestial years ($4,800 \times 360$), which total up to the balance of 6 Mahā-Yugas to make up the 1,000 Mahā-Yugas. A Manvantara in itself will comprise 306,720,000 (30 Crores, 67 Lakhs, 20 thousand) years, and each Sandhi period will be 1,728,000 years. One Kalpa will be 432 Crores of years. (See the table given later on).

again traced to the inseparable but interchangeable *Tamas-Rajas-Sattva*, the three aspects of Proto-Nature (*Prakṛti*) or the Creation-oriented *Māyā*-Power of Brahman, who is *Sat-Cit-Ānanda* (Absolute Infinite Existence-Consciousness-Bliss).

The Vedas and the Upaniṣads give lists of long line of sageteachers, just as the Itihāsa-Purāṇas give lists of dynasties. Monier Williams says, "The *Vamśa Brāhmaṇa*, belonging to the *Sāma-Veda*, contains a chronological list of ancient teachers." Generally, all systems of disciplines such as Āyurveda (medicine and surgery), fine arts, sculpture, grammar, etc., besides religious and philosophical texts mention the previous teachers. It is also noteworthy that the earliest history in the world on ultra-modern lines with evidences and documents was written by Kalhaṇa, a Hindu of Kashmir, in the early 12th century A.D. His work "*Rāja-taranginī*" (*The River of Kings*)—a chronicle of the Kings of Kashmir, has drawn the encomiums of modern historians. Moreover, most of the rulers and builders of temples and public works and institutions left dated inscriptions in the Kali-Yuga era or that of Samvat and Saka eras. The rulers generally had court scribes to record the important event of the rule. Even sometimes *Vākyaṭ* or *Dinachari* (political diary) also was maintained. Most of these, preserved in the libraries and archives of the rulers, have been destroyed by the vandalism of fanatical invaders and conquerors over several centuries, and time too has played its own destructive part, for most of these were written on palm and other broad leaves, or on birchbark (*Tālapatra*, *Bhūrjapatra*). Still, is it not a great and remarkable historical fact, and a marvellous feat of memory and sustained effort, that the vast Vedic literature has been preserved intact with commendable fidelity and absolute accuracy for many thousands

of years in spite of all the ravages and disturbed political conditions?³³ The age

33. Max Mueller has paid very high tributes to the Brahmins who have preserved such vast Vedic literature for several thousand years with absolute fidelity. Tilak writes in the '*Arctic Home in the Vedas*'; "In the case of Vedic traditions, we have the further advantage that they were collected thousands of years ago, and handed down unchanged from that remote time." (p. 35) "There is no reason to doubt either the competency or the trustworthiness of the Vedic bards to execute what they considered to be their sacred task or duty, viz. that of preserving and transmitting, for the benefit of future generations, the religious knowledge they had inherited from their anti-diluvian forefathers. It was by an agency similar to this that the hymns have been preserved, *accent for accent*, according to the lowest estimate for the last 3,000 or 4,000 years; and what is achieved in more recent times can certainly be held to have been done by the older bards in times when the traditions about the Arctic Home and religion were still fresh in their mind." (p. 375) "We have simply followed the spirit of the time in seeking to bring about the coordination of the latest scientific results with the traditions contained in the oldest books of the Aryan race,—books which have been deservedly held in the highest esteem and preserved by our ancestors, amidst insurmountable difficulties, with religious enthusiasm ever since the beginning of the present age." (p. 382).

of the Vedas, in its different stages, are are estimated with astronomical and other internal evidences by different competent scholars from 6,000 B.C. to 10,000 B.C., and even beyond, based on the allusions to the geographical and geological conditions in India found mentioned in the *R̥g-Veda*. Whatever it be, it is a very long past age; of this there can be no doubt. What is more, we find even in the ancient *R̥g-Veda* itself references to what were considered ancient traditions at that time.

In view of all the above facts, what is needed at present is to put all this scattered material available in Indian literature, monuments, inscriptions, etc. in a well-coordinated and integrated manner on modern lines for the understanding of the modern mind, but without sacrificing the vast canvas and the ethos of Hindu cosmic perspective, to inspire and mould the nation to advance towards its goal. Indian history need not have to conform to the Western conceptions and perspective of history, for the outlook on life and its goal and the understanding of cosmic Existence is different in them.

(to be continued)

NATURE OF MAN IN GANDHI'S PHILOSOPHY

(Continued from page 219)

stage all other rules of correct living will come out of it. And without truth it is impossible to observe any rules or principles in life.

Thus Gandhi gave prime importance to the ethical nature of man—Truth and Non-violence, which are necessary for the well-being and prosperity of the individual as well as society. Where truth and nonviolence

reign there is peace and bliss. It emancipates man and reawakens his inner self. Right understanding and correct following of these ideals resist both internal and external disorders, regenerates the individual as well as society and thus brings a new social order. If every man in society follows these virtues as his utmost and reverential duty there will be no scope for disorders like injustice, war, etc.

Unpublished Letters

Most Beloved Swamiji,

Here you find three hearts beating in unison. We can subscribe to each other's sentiments regarding you and in the faith we have in you and to the Lord who is guiding you. Not having been able to devote much time to my Law Studies till now, I am just busy reading for an exam I have to undergo the day after tomorrow. I request your pardon for not giving you in this letter a lot of information which I want to communicate to you. In your letter you want information on two points. One, about the money that was sent to you. The Maharaja of Khetri sent Rs. 500 first and sent Rs. 300 afterwards. So far as the money sent from here is concerned, we learn that about Rs. 200 was sent to you, the remainder having been devoured by Messers Cook & Sons for the trouble they took in forwarding to you. What with exchange and what with their charges, the sum must have dwindled down to nothingness before it reached you. We are very sorry. We wished that some money should be put into your hands as early as possible as we were terribly afraid you might be very badly off pecuniarily. Your present position in a strange land is only another proof that the Lord is with you.

Second, as regards P. Narasimhacharyar, Esq. B.A., a former letter of mine contained some information about him. His father was a deputy collector at Cuddalore, drawing Rs. 600 or so, and bequeathed to his family a decent sum. His brother, one P. Rajagopalacharyar, M.A., B.L., is Head Assistant Collectorate at Palghaat. Narasimhacharyar was studying with me in the B.A. classes. Then it was that he began to think of worldly pleasures but did not go far astray. He got plucked in the exam in

physical science in spite of his intelligence. He continued his studies next year in physical science and got through. Mr. Kidi was our asst. professor in science. On the advice of an England returned friend of his, who had sown his wild oats, he made up his mind to go to England. He is married and has a young wife pining away here. I am told he squandered in England about Rs. 30,000 not even completing his law studies. He wrote for money again which was sent thro' a missionary gentleman of the Christian College here who wanted to send him back to India. Somehow he would not return but managed to go to America. Ever since his people have not heard from him. His mother is very sorry on his account. She lost some money deposited in the New Oriental Bank now in liquidation. Whatever she has now—this will not be less than Rs. 10 or 15,000 she is willing to give him if he returns and lives quietly here turning a fresh leaf in his life. He is a nice intelligent young fellow. I liked him very much as a classmate. The above information will I hope suffice. His people want me to request you on their behalf to bring him to India with you if you can't prevail upon him to return earlier. They are prepared to send you the money for his passage. They find it difficult to place trust in him.

Mr. Kidi has raised some questions in his letter for which he is very anxious to get answers. With every line in the first part of his letter I concur. Later on, when he is not for improving or doing away with old social institutions, I have to join issue with him. If we are for reducing to a minimum all inequalities in religion why not also in social matters? ...Should not love of our country, of the whole mankind as you would have it (in the Parliament) banish all

domestic love? These are only a few of the doubts that have cropped up in my mind after going through his letter. Mr. Kidi has raised these questions only to get certain definite answers from you. He is anxious to have them for more reasons than one. He can only form some hazy ideas of them from the jottings in our notebooks. More in my next.

Most lovingly yours,

M. C. Alasinga

Beloved Swamiji,

Being too deeply immersed in college work I allowed myself the privilege of not writing my lengthy letter this week for which I have no doubt you will excuse me as it has been much better done this week by G.G. However much we may strive to believe that in the present religious revival we have [at] hand, we find that the conviction won't grow in us. We have done absolutely nothing. The credit is all due to the spiritual fire that is within you. You want us to move on. Much as we feel for the very exhausting work you have been doing, we feel we are helpless to do anything to relieve you even for a time. Your

return to India will serve a double advantage. It will perhaps enable you to take rest as well as continue your work in your mother country. I send you herewith a letter that appeared in an European Daily here reviewing a missionary's criticism on your exposition of Hinduism referred to by G.G. Please don't fail to inform us before you leave America for England, and give directions to our letters being directed to you in England. Time forbids me writing more. Dr., Kidi, and all other friends send their pranams to you.

Very affly yours,

Alasinga

I am sorry to inform you that there is a rumour here that Bhattacharji has been transferred to Calcutta. The gap in Madras society cannot at all be filled up. Perhaps he has done his work in Madras—that of introducing you to Madras.

Alasinga

Accept my adoration of your love.

Kidi

Environment: Forest and People

DR. CHETANA MANDAVIA

Owing to lack of thoughtfulness and in many cases irresponsible management of our natural environment, Earth continues to suffer more every day. The perceptive writer of this article draws a dismal picture, but points out that there is a ray of hope. She is a plant physiologist and research guide at the Agricultural Research Institute at Rajkot, in Gujarat.

Environment can be viewed as an active complex of factors that supports, shapes and incorporates life. It is characterized by perfect integration, interdependence and rhythm. The concept of *ṛta* (moral order) of the Vedic *Samhitās* also conveys the sense of unity and harmony amidst everything of the earth. The desire for universal harmony is invoked at many places in the *Vedas*. For instance, in the *R̥g Veda* it is stated:

May the sky and earth give us blessedness; may the atmosphere be a blessing to us. May herbs and forest trees be a blessing to us. May the victorious Lord of heaven bring us blessedness! (7.35.5)

The Chinese also believed in an 'universal order'. The term analogous to *ṛta*—'Li', denotes the perfect harmony and order in the universe.¹

A bold new theory, the *Gaia Hypothesis* (*Gaia* = Greek goddess of earth), put forward recently by James Lovelock, suggests that the Earth is in fact a living, self-regulating organism, that has created us. The theory emphasizes the connectedness and the interdependence that exists, not only among the creatures, but also with Earth itself. Nearly a century ago Swami Viveka-

nanda said: "Interdependence is the law of the whole universe." (*Vol. II Complete Works, page 132*) These ancient truths, known to our forebears, indicate that all life on earth is connected with man, and man is only a strand in the delicate web of relationships. If a species becomes extinct, a strand is snapped and man himself unwittingly moves closer to the doom of the whole life-system. This is what is actually happening. With the progress of our civilization, with its uncurbed industrialization and urbanization, man has not only disturbed the harmony, but is on the point of destroying the life-sustaining eco-system itself. Denuding the land of forests and polluting rivers, seas and atmosphere has put us in this delicate situation.

The relationship of Man and Plant can possibly be traced as far back as the early period of the geological pleistocene (1.8 million years ago) age. The world's forests cradled our ancestors and nurtured them with natural foods and clothing. The forests also provided fuel that warmed the cave dwellings of early man and provided the materials with which he made tools and weapons for agriculture, hunting and defence. From trees also he built huts and cabins. He cultivated the plants for sustenance and always held them in respect, considering them sacred and living. Early man's dependence on and reverence for plants led him to accord them due worship on occa-

1. Gary Zukav, *The Dancing Wu Li Masters*, (New York: Bantam Books, 1980) p. 5.

sion. In the *Manu Samhitā* (1.49) it is stated that plants have consciousness and they are sensitive to pleasure and pain—*Antahsamjñā bhavantyete sukha-dukha samanvitāḥ*²—an observation that has won support in modern scientific research.³ Science has rejected the old belief in a watertight division between the plant and animal kingdoms. Our ancestors must have had profound knowledge about the interdependence of living beings. It appears that they had insight into the importance of plants and forests for maintaining balance throughout the whole of nature.

But, unfortunately, we have failed to retain memory of how our ancestors lived—how they derived the utmost benefit from natural resources and caused minimal destruction. We are “*making a slum of our native planet*,” is an expression used by the famous conservationist, Mark Nicholson. Many environmental problems are generated as a result of our unbalanced attitude and lack of regard for nature’s delicate balances. The most controversial problem is deforestation, perhaps the root-cause of other problems.

The great loss, and in many instances, ruthless devastation, of forests is evident from the data given following: Forest area has shrunk to 4,200 million hectares from some 6,200 million hectares—the area of rich forest mantle that earth was covered with at the dawn of agriculture, 10,000 years ago.⁴ In 1988, in Brazil, an estimated 12,350 square kilometres of rainforest was

reduced to ashes.⁵ The amount of forest that is newly logged each year in southern and south-east Asia is around 21,000 square kilometres. In tropical Africa it is as much as 75,000 square kilometres; in Latin America, an astounding 1,55,000 square kilometres!⁶ India is losing forest at the rate of 1.3 million hectares a year.⁷ Between 1982 and 1985, the deforested areas of the world increased from 10,000 to 27,000 square kilometres.⁸ These are the horrific figures that reflect the insensitivity and apathy of modern people.

Pondering over the above figures, the question arises why must forests be cut on such a vast scale? Apparently there are the following reasons—Forest land has been converted into cropland. Fuelwood collecting has severely reduced forest in the arid woodlands of Africa. Consumer demand for lumber in temperate countries has been a prime factor. Industrial hunger for tropical hardwoods has enticed many governments to raise quick cash by “mining” their forests to accumulate vital foreign exchange. Logging companies, construction contractors yearn for expanding sales of wood and bigger profits. Increased cattle ranching is a factor; and grazing on open ranges is a prime factor in countries like India. Developmental projects, like the construction of dams, are another reason why world forests are dwindling. And there are individual and other private interests that want to make more and more use of the woodlands. Modern people can no longer turn a blind eye to the situation. The old excuse

2. Quoted in P. Sensarma, *Plants in Indian Puranas* (Calcutta: Naya Prakash 1989) p. 10.

3. Peter Tompkins and Christopher Bird, *The Secret Life of Plants* (London: Penguin Books, 1973).

4. *Span Magazine*, June, 1990 (New Delhi, United States Information Service) p. 11.

5. *Time Magazine*, Sept. 18, 1989 (New York: Time, Incorporated) p. 36.

6. *Third Concept*, Oct. 1989 (New Delhi), p. 30.

7. *The Illustrated Weekly of India*, May 27, 1990 (Bombay, Bennet Collman) p. 20.

8. *New Scientist*, May 5, 1990 (London, IPC Magazines, Ltd.) p. 28.

“deforestation is the price we must pay for the economic development of the country” no longer seems adequate or justifiable. Our use and exploitation of our natural resources beyond a certain limit becomes damaging and destructive. It was a foolish man, not a wise one, who cut off the branch on which he was sitting! In all candour, our modern predicament reflects our sheer inability and unwillingness to embrace a vitally needed holistic value system in regard to life in general. Trees and forests, as well as other mute and silent beings, have always been man’s easy victims.

The Silent Benefactors of Mankind—Trees

Indians regarded a tree as equal to ten sons. The ten gifts of a tree are: oxygen, water, soil, timber, food, fodder, fiber, medicine, shade and firewood.

Other forest products include bamboo, that most useful of all woods, resins, mushrooms, and honey. One conservative estimate values the annual world trade in these products at \$10,000 million.⁹ The *Piquia* tree of the rainforest produces a compound which appears to be toxic to leaf-cutter ants, but such chemicals promise attractive alternatives to dangerous synthetic pesticides.¹⁰ Tremendous potentialities exist to be tapped. Further research on such discoveries of chemicals from trees will be extremely useful to humanity. Plants are responsible for generating oxygen in the atmosphere. Trees, therefore, are most essential for man’s life and well-being. One tree is said to produce enough oxygen for a hundred people. If we fail to protect trees, we shall ultimately perish with them. In addition, trees reduce noise pollution in cities and check heat build-up in the atmosphere. They also influence relative humidity,

retention of ground water, and wind velocity. Trees of different shapes and sizes supply life to landscaping. Ornamental flowering trees and aesthetic value to environment and create scenic beauty.

Billions of tons of carbon is trapped in trees, and thus they play a crucial role in the global cycling of that element. If burnt, on the other hand, trees spew carbon dioxide in the atmosphere. The problem of global warming that is threatening mankind (the greenhouse-effect) takes into account the increased carbon dioxide levels in the atmosphere, released due to burning of trees.

With the removal of forests, ecological balance in many areas is disintegrating, causing severe soil loss, contributing to the ravages of droughts and floods, and reducing the productivity of the land. In general, forests help anchor and stabilize soils; thus the loss of tree cover can lead to great loss of agricultural produce. Besides diminishing upland productivity, such erosion aggravates local flooding and contributes to the premature silting of reservoirs downstream. Climatic changes also occur due to gaps between the seasons and disturbance of rainfall patterns. Researchers at the Centre for Science and Environment in New Delhi, estimate that the flood prone area in India is now 59 million hectares, more than double the estimate given in the 1960s of 25 million hectares.¹¹

Rainforests have canopies of interlocking leaves and branches that shelter creatures from the sun, torrential downpours, and wind. This helps in maintaining a significant part of the earth’s biological diversity and genetic heritage. A report of the 1982 U.S. National Academy of Sciences estima-

9. *Span*, June, 1990, p. 13.

10. *Time*, Sept. 18, 1989, p. 37.

11. *Span*, June, 1990, p. 13.

ted that a typical four square kilometre patch of rainforest may contain 750 species of trees, 125 kinds of mammals, 400 types of birds, 100 of reptiles and 60 of amphibians. Each type of tree may support more than 400 insect species.¹² One can imagine that with the removal of trees, therefore, a significant part of precious life is lost from earth.

Conservation and Re-planting the Trees

Swami Vivekananda once remarked that "Nature's justice is uniformly stern and unrelenting."¹³ The ghastly environmental problems, like acid rain, the greenhouse-effect, ozone depletion, pollution, waste and toxic product disposal, staring at us are examples of such "stern and unrelenting justice" for the indiscriminate destruction of environment by human inhabitants.

But such a bleak picture, at last has sounded alarm bells in the public consciousness; many people have awakened to the stark truth and reality of the situation, and know how much is at stake. As a result, protective environmentalism has mushroomed into a diverse and imaginative movement. The prospect of imminent catastrophe has forced people to put a stop to further exploitation of forests, and instead, massive tree-planting programmes have been inaugurated, giving the impression at least that a spirit of conservation is being born. In some of the developed countries, forest cover is comparatively stable. In Brazil more than 1000 environmental groups are at work, striving to save the mere 03 percent that remains of the rainforest.¹⁴ And in Kenya, over a million young people have joined the

'Greenbelt Movement' to plant seedlings of trees and care for them till they are grown.¹⁵ India's 'Chipko' (Hug-a-Tree Movement), based on Gandhian ideology, is striving to prevent further deforestation in part of the Himalayas, and is gaining wide recognition, even in Europe. In Kerala, some 7,300 organizations are involved in tree-planting programmes. In 1985, annual planting in China doubled, to eight million hectares.¹⁶ Everywhere, tree-planting programmes are most effective when local people are involved in planning and implementation, and when they can perceive the advantages they will reap with the success of the programmes.

There was an interesting report published in *Time's* April 29, 1991 issue. The caption "*Babes For The Woods*" itself was arresting. The article told about Toland Tiensuu, a twelve year old school boy, who learned from his schoolteacher about the impending destruction of rain forests in Latin America. The young boy felt worried about it and thought of something to do. Planting trees in Latin America was out of the question as he lives in Sweden, so Tiensuu and his friends and their teacher raised some money and bought four hectares of rainforest in Costa Rica's Monte Verde Reserve. Their movement caught fire and several thousand Swedish schoolchildren raised money for the same purpose. So far they have bought 7,000 hectares of jungle forest. The forest owned by these children has now been given the name "The Children's Eternal Forest". What a noble example these little children have set for the world!

Apart from these voluntary organizations, UNDP (The United Nations Development Programmes), FAO (The Food and Agriculture Organization), the World Resources

12. *Time*, Sept. 18, 1989, p. 37.

13. *The Complete Works of Swami Vivekananda* (Calcutta: Advaita Ashrama, 1989) Vol. V, p. 240.

14. *Time*, April 23, 1990, p. 38.

15. *The Times of India*, Dec. 16, 1990.

16. *The Courier*, Jan. 1989 (Paris; UNESCO) p. 9.

Institute, and The World Bank have made up *The Action Plan*, which calls for accelerated investments of \$ 8,000 million over five years for tree-planting projects and efforts to arrest deforestation.¹⁷

Equally promising is the potential of agro-forestry—the combined production of crops and trees, as well as of social-forestry—the raising of plantations of quick-growing species on the roadsides, canalsides and railway lines. The demand of rural population for fuelwood, timber, leaf-fodder may easily be met with such planning and plantations; and work involved in actual planting and tending is sufficient to provide employment to villagers. Several ambitious projects in agro-forestry and social-forestry have been implemented the world over.

In spite of all these efforts to revive and re-plant the trees, experts are anything but optimistic. Says Mexican environmentalist, Luis Manuel Guerra, “For twenty years now people all over the world have talked, published books, formed organizations. But the truth is that the earth continues to suffer more each day”¹⁸ Nevertheless, the success of many projects has kindled a spark of optimism that at last trees have begun to find a proper place in the lives of people. To give more impetus to such movements, it needs to be demonstrated that: (1) Trees

are more useful if grown naturally than when felled for short-term profits. Sustainable use of forests will provide more local and national income than by their being cut for low-productivity agricultural schemes; and (2) that forest conservation must be coupled with economic development. In addition to this, the fundamental approach of governmental and non-governmental organizations should be to stimulate and encourage a re-orientation of values, attitudes and motivations of people.

The words of Luther Burbank, a great agricultural scientist, are especially appropriate and noteworthy. He said, addressing a scientific gathering:

Laying aside pre-conceived notions, dogma and bias, listen to the lessons Mother Nature has to teach, as she reveals the truths one by one. She conveys her truths only to those who are passive and receptive. Accepting these truths, we have the whole universe in harmony with us.¹⁹

This is quite a revealing and timely message to humanity—to live in harmony with Mother Nature—and is a re-affirmation of India’s age-old vision and philosophy of Unity in Diversity. The ties that bind the destinies of men with trees are strong in the minds of people of every continent, and therefore the time is ripe for our united action to save the trees—our benefactors.

17. *Ibid.*

18. *Time Magazine*, April 23, 1990, p. 39.

19. *The Secret Life of Plants*, pp. 124-25.

REVIEWS & NOTICES

PRAYOGIKA NITI SHIKSHANA (Kannada), By K. Ramarao. Published by the Ramakrishna Institute of Moral and Spiritual Education, Mysore. 330 p. Rs. 40/-.

The Sri Ramakrishna Institute of Moral and Spiritual Education in Mysore has been doing commendable service for the last sixteen years imparting moral education to B. Ed. trainees and teachers. They have evolved a non-sectarian course in morals in spite of odd challenges and cynical attitudes on the part of some 'authorities' in the official world of Education. It has been a remarkably successful effort and it is encouraging to learn that a Chapter of the same type is being started at New Delhi. This book, written by Sri Ramarao, who has worked as Principal of the Institute for over ten years, represents the cream of their experience. It should serve as a model guide for the increasing number of right-thinking persons who deplore the calamitous fall in the standards of rectitude and morality in our society today.

Discussing the principles of Ethics which is the basis of morality, the author points out the difference between the role of ethics in the West and in India. Different societies have different standards; and yet there are certain fundamental principles which are the same all over the world. Character is to be moulded in the young impressionable years of children and hence the necessity of introducing the influence of moral standards, directly and indirectly, in the schools. The objectives include the development of scientific temper, moral capacities, and virtues. Curricula have been offered for this purpose. It is not enough to know; attention must be paid to application and providing example. The author (and his staff) have worked out detailed charts to measure the effectivity of the various methods recommended.

Two chapters are devoted to the necessity of developing a right understanding of religion and its foundation, spirituality. Notable illustrations, inspiring quotations,

incidents from the lives of the great, are skillfully studied in the lessons. Emphasis is placed on building up a favourable environment for the natural growth of moral susceptibilities. Pearls of wisdom from men like 'Kuvempu', Swami Vivekananda are used with effect. This is not only the first book of its kind in Kannada, but possibly even in English. It is sure to benefit the student population and also parents who are at a loss to know in what direction to proceed in these times of moral chaos. Both the Institute and the author must be thanked for bringing out this practical Reader in Moral and Spiritual Education.

M. P. Pandit
Pondicherry

PATH AUR PATHEYA (Hindi), by Swami Brahmeshananda. Published by Ramakrishna-Adbhutananda Ashrama, Jayaprakash nagar, Chapra 841301. (Bihar). 188 pages, Rs. 15.00.

The book under review is a collection of well-articulated articles written by Swami Brahmeshananda of Varanasi Ramakrishna Mission Sevashrama, from time to time published in the Hindi Monthly, Vivek-Sikha. It is meant for spiritual aspirants. The author has attempted to prepare a guide-book for the seekers of truth in spiritual life, especially for the beginners. The book deserves special attention as the author himself is a monk.

The path of spiritual life is often supposed to be mysterious and beyond reason and rationality. The author very emphatically dispels such a view. He has given us a very clear exposition of spiritual life and the various stages through which it must pass. He has clearly delineated the goal to be attained by an aspirant, obstacles ahead on his path and the ways and means they may be avoided or overcome. The discussion on the obstacles to spiritual pursuit is quite comprehensive, which should help the beginners a lot. In spite of the abstract and

abstruse nature of the subject matter, the author has succeeded in presenting his ideas very lucidly in chaste but simple Hindi.

Although Swami Brahmeshananda has drawn heavily on traditional spiritual literature, his style and the novelty of his presentation is quite original. It is a significant contribution to spiritual literature in Hindi.

Sri B. N. Sinha
Narendrapur

MIND ONLY, By Thomas E. Wood. Published by the University of Hawaii Press, Honolulu. USA.

In his elaborate examination of the Vijnanavada, Dr. Wood makes a valid distinction between the doctrinal position of the Vijnanavadins and their philosophical stance. This is a major school of Mahayana Buddhism which at one time flourished in India. It holds that the world is nothing but mind. But on that account it cannot be called an idealist philosophy. It is not, says the author, either solipsism or theistic idealism, or monism. "That the world is 'nothing but mind' does not mean that the world is the manifestation or creation of some infinite or absolute mind." (p. x) The question arises, whose mind? The argument of the author is:

"The world exists (at least at the level of relative truth) in a multiplicity of independent minds. The impression that these minds have of the external world which is public (i.e. perceived by other minds as well as their own) is entirely false. However, the experiences of these minds—or at least the experiences they have in their normal waking state—are coordinated with each other because these minds are in immediate, mind-to-mind contact. It is this coordination of normal waking experiences which gives rise to the erroneous impression of

an external world. The world we seem to see in our waking state is in fact just as unreal as the things we dream about at night. The only difference is that objects seen in the normal, waking state are *collectively* hallucinated, whereas the things seen in dreams are not." (p. x).

A number of questions arise in the course of the discussion. If the mind is neither of a God or of an Absolute, then what is it? According to the original doctrine, the mind is only a stream of desire-impressions, it is not an entity by itself. Further what is the real purport of Nirvana into which the mind is dissolved or absorbed? The Mahayanist doctrine of *apratishthita nirvana* rules out total extinction and brings in fresh complications. The propounders of the Vijnanavada wrestle with these problems which are not faced in the Hinayana position. The author discusses these and allied topics in depth, taking some of the important texts as the field for discussion, viz., the first chapter of *Madhyantavibhaga* (Chapter 1); *Trisvabhava Nirdeśa* (Ch. 2); *Trimsika* (Ch. 3), etc. A whole chapter (Ch. 9), discusses the doctrine of 'Collective Hallucination' as presented in Vasubandhu's *Vimsatika*, and the *Chen wei shilun* of Hsuan Tsang. The author concludes that the Vijnanavadins did not find a philosophically convincing or viable alternative to materialism, on the one hand, and theistic idealism on the other... Without adopting some version or other of theistic idealism (either monistic or dualistic) one cannot make any sense of the notion that the world is 'nothing but mind'.

There are important appendices throwing light upon the position taken up in the Tibetan tradition. A scholarly treatise on the doctrine and implications of the Vijnanavada, examining the conclusions arrived at by modern interpreters and explaining why the author cannot accept them.

Sri M. P. Pandit
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FOR SEEKERS OF SPIRITUALITY

One should not ask for anything from God, but remain satisfied with whatever He is pleased to give. If you ask God for anything, He will give you a gift which is like a double-edged sword. Real welfare lies in using things properly; wrong use of things brings misfortune.

The most remarkable phenomenon is that all men, all animals desire to live for ever. This shows the immortality of all created things. Yes, it is really so. The One that is within us is without beginning and without end, without birth or death. There is nothing like death there.

You are the complete master of your mind, and you can shape it as you like. When the mind is completely under your control, it will have nothing to exist on, except noble thoughts. Just as we know that pure and wholesome food is necessary for our physical existence—impure and contaminated food will only injure the body—so is it necessary to nourish the mind with noble thoughts and high ideals, refusing to provide it with evil thoughts and bad associations, which are like poison to the mind.

You are the master of your mind, and you have to keep it pure. Your responsibility ends there, the rest is God's business. He is Providence, the wish-fulfilling tree, who provides everything. He acts like a valet to provide us with whatever we want. Is He to blame or are we? It is desire that is the root of all evil, and no one else is at fault.

What you require is hope, faith, and patience, and gradually, you will reach the goal. Only a prolonged look at Him will wash away all the sins and sorrows of your heart. He is all-pervading, He is within you all, and He knows everything. Confide in Him, but you must be careful not to go to Him with selfish desires. The mind is full of perversity; and so long as it does not get a severe jolt, it does not properly knock at God's door. It turns to God only when it gets a serious knock.

Don't find fault with others. Rather look at your own faults. Once, while I was at Belur, a gentleman came and expressed his regret that we had not married and had renounced the world. By all sorts of arguments, he demonstrated that our supreme Guru (Śiva) was also married. Owing to ignorance, man tries to support his views with numerous intellectual arguments, and the result is philosophizing. But he gets over all these, once he is blessed with true insight. The Master used to say, "The world is a bad place, and you should renounce it." There was no argument behind it, because he knew that no one can get over his unhappiness without renouncing the world. Once it is realised that a thing is bad, the best thing is to discard it, there is no question of arguing about it.

The very first attribute of God is lordliness. Contemplation on Him should enable us to gain lordliness over our passions and become masters of our souls.

*from the teachings of
Swami Vijnanananda*