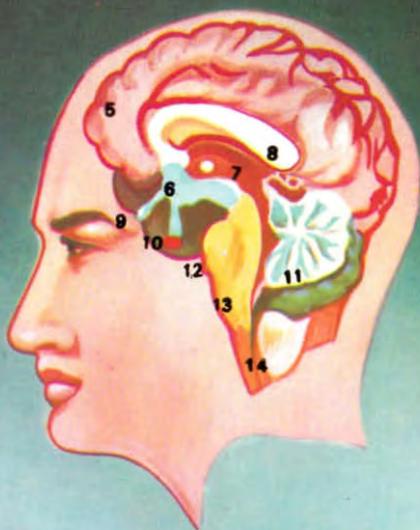


ETERNAL DRAMA OF SOULS, MATTER AND GOD

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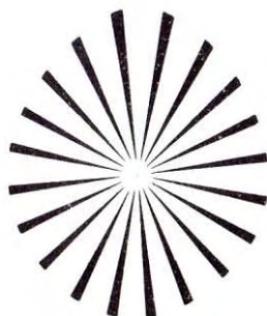


1. Soul 2. God 3. Matter 4. Eternal Drama 5. Cerebrum 6. Hypothalamus
7. Thalamus 8. Corpus Callosum 9. Optic Chiasma 10. Pituitary gland
11. Cerebellum 12. Pons 13. Medulla 14. Spinal Cord.

ETERNAL DRAMA OF SOULS, MATTER AND GOD

Part-I

SOULS



**Prajapita Brahma Kumaris Ishwariya
Vishva-Vidyalyaya**

Pandav Bhavan, Mount Abu, Rajasthan,
India

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A SMALL EFFORT TO START THE PROCESS OF CHURNING OF KNOWLEDGE

THE author of this book had, since long, a feeling that, if findings of various branches of science were considered in an impartial manner and without any materialistic presumptions and evolutionary bias, and were correlated and studied in holistic manner, they would support the revealed spiritual truth about the Cosmos, the Time Cycle, the World History and the self-aware Mind or Soul. Since Natural Sciences and Spiritual Knowledge, both aimed at finding the truth—the former in the material and the latter in the spiritual and socio-spiritual realm and since Matter and Mind or Body and Soul inter-acted on each other, he thought that scientists and spiritualists should join hands to discuss topics which were of interest to both, so as to have a well-knit, composite and clear understanding of the Self, the Cosmos and the world-events and of the over-all truth—both temporal and transcendental—in a cogent and coherent manner.

The author however felt that he himself had no special training to embark on the adventure. Yet his desire to share, with others, his own understanding of the self, the cosmos and the nature of the World History impelled him to do something in this direction. Further, his discussions, in many countries, with men, well-versed in various disciplines, had given him some confidence to take the risk, however great, for he thought this might at least inspire some others, who are better equipped, to make a more successful venture, in future, in the interest of spread of knowledge. So, finally, with the motive of service, he launched the scheme. The author, it should be kept in mind, has no claim of being an authority in any field of science. He can, at best, claim to have had some spiritual training in Brahma Kumaris institution, for some years, from the founding father of this great spiritual movement, and to have been a sincere student of some branches of science. He, therefore, suggests, in all humility, that the book be read as only a small effort to start the churning of knowledge, to which effort he invites others to join.

The material for the book, which was planned to be published in five parts, had been collected from various sources over a number of years. The author had taken help from hundreds of books and periodicals but since, originally, he had no idea that he would, some day, publish the material in the form of a book, but had rather been studying to improve and refurbish his own understanding, he did not, at times, note the names of authors and their works which he read. Moreover, some of the notes, he took were a verbatim copy of the lines of the author of the source book while others were in his own words. And, the author, at this distance of time, could not recollect, in the case of certain bits and pieces in his note book, as to whether these were in his own words or in the words of the author of the source book and also who was the author and which was the source book from which it had been taken. The author, therefore, had a great inhibition and hesitation in using such material, for he was afraid that the names of those authors and their works would not find mention if he used those bits of information. However, the thoughts that the material was valuable and had now become known to people conversant with that discipline and that it would be of benefit to the readers, enabled the author to overcome his hesitation. But in all sincerity, he offers his apologies to those to whom he is indebted but whose names he has, under the circumstances, been unable to mention.

The printing of this book had been started in the year 1976. But, after some of its pages had been printed, further printing had to be suspended because of some unavoidable factors, one among which was a very heavy schedule of other important engagements. Though most part of the script was ready, the up-dating of some references was considered necessary and, therefore, a final reading of it was thought proper before sending further portions of it to the press. And, for this, there was neither time nor proper environment. The printing work was started again only recently and suddenly, after a lapse of six-and-a-half years, and was rushed through so as to have one or two parts of the book ready before the Universal Peace Conference, commencing from 10th Feb., 1983 at Mount Abu where eminent people from various disciplines will meet. So, though it had much been delayed, the book has ultimately come through. The author gets solace from another fact also besides this, namely that many chapters of the book

were printed, in the intervening period, in various issues of *The World Renewal*.¹

Earlier, in the year 1975, in some of his works, the author had mentioned, as he understood it then, that the soul is an infinitesimal conscient Point-of-Light that abided in the Hypothalamus-Pituitary combine. For example, he had clearly mentioned this in a footnote to a chapter of his book on the Mahabharat and Gita.² In another book of his, which was on *Brahmcharya* (Continence), he had published a figure, showing the position of hypothalamus and the pituitary and had explained, for lay Indian readers, in Hindi language, how thoughts of sex led the pituitary to become active and to affect, ultimately, through its secretions, the gonads to secrete.³ However, since these books were not meant to deal, in detail, the question of location of the soul, and since these books were meant to cater to a different kind of readership, the author did not deal with, and elaborate, the subject of Mind-Body relationship or Soul-Body interaction in the light of findings of neurosciences, biology and psychology. For the other category of readers, he, therefore, started the publication of this book in the year 1976, which as said earlier, had to be suspended because of other heavy engagements. But, it is a happy coincidence that even this small mention led some others to think on the subject and this led to the spread of knowledge, for, many persons, highly qualified in the fields of medical sciences, psychiatry and health sciences, have, after that, mentioned it in their writings, the original clue at the starting point having been provided by the above-said books and articles in *The World Renewal*. This is no less an encouragement to the author.

This first volume, out of the planned five-volumes publication, deals mainly with the Consciousness, Thought, Mind, or Soul and it is an attempt to establish the truth that there is a metaphysical soul, located in the hypothalamus which is its point of conjunction with the nervous system and the body. The author has dwelt on the theme, discussing it from the angle of neurosciences, brain sciences, etc. The original plan had been to have some more chapters in this book, for the author wished to include some material from religious and

1. See Vol. 11, Serial Nos. 3-4 and 5-6, August-Sept., and Oct.-Nov., 1980 and various other issues.

2. See footnote to page 448 of the book : Mahabharat and Gita Ka Sachcha Sar.

3. Brahmacharya Vrat Ka Palan, pp. 179, 191 and 192.

philosophical points of view also. But the idea was later dropped because of preference for a smaller size.

A few chapters of the second, third and fourth volumes, which will deal with the Universe, the Cosmos, and the interpretation of World History, the Supreme Soul or God, the Meditation or Raj Yoga, and the Summing up the Conclusions—in that order—have already appeared as articles in some issues of *The World Renewal* but many others have not yet been published. The second volume will soon follow this first one and, let us hope that other volumes too would not take much longer.

The aim of this first part of the book has been to show that identification of the self with the body is at the root of all evils and all sufferings. After trying to establish that the soul exists and, after explaining that the soul is metaphysical, eternal, individual, and is, in form, an elliptical and infinitesimal point of conscient light the author, in the end, had proceeded to explain how identification with the body, has led to many individual, societal and world problems and, further, how Soul-Consciousness and meditation, can now enable the soul to attain health and happiness. It is now for the readers to judge how far the author has succeeded in his this aim. If after reading the book, at least some readers get the belief that the soul exists, and they take to the practice of meditation, the author will feel its work to have been amply rewarded.

The author feels that, because of heavy work, he could not do what he had wished to, to make the publication more informative, more useful, more illustrated and more beautiful. But that would have made it more costly and out of reach for common Indian readers.

The author offers his heart-felt thanks to Shiv Baba, Brahma Baba and many senior sisters at Brahma Kumaris Ishwariya Vishwa-Vidyalaya, Mount Abu, who were his main source of spiritual knowledge and training and due to whose encouragement and guidance this publication has been able to see the light of the day. My hearty thanks are also due to all those, in India and abroad, who, during the course of conversations, have been suggesting that the information be published in the form of a book.

1st January, 1983.

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ETERNAL DRAMA OF SOULS, MATTER & GOD

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Preface to the third edition

The second edition of this book was published so soon after the first edition that the author had no time to revise the text or to make some additions. The author had felt some of these additions necessary even at the time of the printing of the first edition but these had to be left out then for want of time. Only one or two of these could be incorporated into this book in that edition—one of these being a chapter on hypnotic regression.

Now in this edition, an Anthology of views of some famous scientists and eminent writers, in support of the belief in the existence of soul, is being added. This time again no more addition has been possible because of the same reason as before.

However, for the saké of clarity and convenience of understanding, the material that makes this book has been divided into the following three sections.

SECTION-I

This section explains that Thought is metaphysical and so is Mind. Thought and Mind are not made of Matter or material energy but are of non-material and conscient nature. An attempt has been made to show that Thoughts are not always in the nature of sense-perceptions or a person's response to external stimuli and that Mind works as thinker as well as a censor of thoughts, and that laws of physics do not apply to it. It has also been argued that while our body-cells change and are replaced after a period of time, it is the eternal, non-physical Mind which gives continuity to our individual selves. Some case-histories of hypnotic regression, out-of-body experience, reincarnation, etc. have been marshalled in support of the existence of soul which survives the death of the body. It has also been explained that Mind and intellect are not material adjuncts of the soul but are the names given to various faculties or manifestations of the soul. This section also explains that conscient entity cannot be created, it is eternal.

SECTION-II

In this section, evidence from the field of neurology and brain-sciences has been cited to give a scientific orientation to the belief that soul exists. An attempt has been made to establish that the functions of the brain cannot be satisfactorily explained without bringing in the concept of a metaphysical soul, ensconced in the brain. The nature of Memory, Dreams, Emotions, etc. have been discussed to show how the brain is only a mechanism of exteriorisation or a switch-board and how it is the soul which, in fact, has emotions, dreams, etc. The location of the soul in the brain has been suggested and the age-old question of Body-Mind connections has also been discussed in this section, giving schematic drawings. It has also been suggested that various altered states of consciousness, and the Electro-encephalograms also lead one to believe in the existence of a non-physical self.

SECTION-III

It has been explained in this section how identification of the self with the body causes negativity in thoughts and leads to various psychosomatic diseases and social, economic and various other ills and how, on the other hand, soul-consciousness leads to health, wealth and happiness. It has been explained that soul-consciousness gives relaxation of Mind, releases tension and lowers the process of aging and enables one to have deep peace and an undisturbed mind. The metaphysical form of the soul and the world from where it comes into this physical world have also been discussed.

An anthology of the views of Scientists, psychologists, etc. who believe in the existence of rules is also given in the end.

It is hoped that readers will find this clarification useful.

1st. January, 1985

The Author

What is life ? What is a soul ?

CAN LIFE BE CREATED IN A TEST TUBE ?

"Besides the body, there is an entity that has consciousness as its essential nature. This conscient entity uses its 'living' body as an assemblage of instruments of perception and action. It experiences pleasure and pain also through the medium of a 'living' body. This is called 'soul'. The body 'lives' and dies but the soul lives for ever. Know yourself as a soul and your living body as a wonderful medium for manifestation."

—God Shiva

FROM the articles on scientific research and experiments, published from time to time in newspapers and periodicals, some lay readers wrongly conclude and believe that the scientists have been able to create living and conscient forms in their test tubes. They, therefore, ask: 'Since scientists have been able to create conscious life, what else is there that leads religious people to believe in the existence of an eternal and immortal soul? Such people do not only themselves become atheists or agnostics but whenever anyone else talks of soul or soul-consciousness, they suggest others also to give up this old bogie, apparently because they think that only people with no scientific bent of mind believe in the existence of the soul.

So it is necessary to discuss this topic even though briefly. To my mind, there are four questions that require to be answered clearly: (i) What are the characteristics of life and whether, according to these accepted characteristics, any living beings— however small— have been synthesised by any scientist in a laboratory? (ii) Does science prove it conclusively that, on principle or in theory, living beings can emerge or can be produced from non-living or inanimate matter? (iii) Is there any difference between life and consciousness or between 'a living body' and 'a soul'? (iv) Does it make any difference in our personal or social life if we believe in the existence of a non-physical soul?

Can living beings emerge from inanimate Matter?

In answering the above four questions, let us take up the second question first. The belief that life can arise from non-living or inanimate Matter has, it seems, come from Darwin's Theory of Evolution, according to which spontaneous generation of life occurred by chance when in the primordial soup in some warm little pond with all sorts of ammonia and phosphoric acid, salts, light, heat and electricity and in a suitable atmosphere, proteids were formed or unicellular life arose. After these views of Darwin were published, various attempts have been made by organic chemists and bio-chemists to produce life in the laboratory believing that if the atmosphere that prevailed at the time of origin of the universe be created, life or living forms can be synthesised.

The belief, however, is controverted by the findings of Louis Pasteur, the nineteenth century great scientist, who is considered to be the 'Father of Microbiology'. Until Pasteur's views became known and accepted, it was thought that life could arise from inanimate matter. There was the theory of 'Spontaneous generation of micro-organisms' current in those days. All sorts of strange views were held about how rats or mosquitoes or germs are born from inorganic or organic, non-living matter. For example, it was thought that flies got spontaneously created from piles of manure.¹ Pasteur showed that flies did not crop up from the garbage but they came from eggs that had been laid by other flies on the garbage. So 'the theory of spontaneous generation' was abandoned. So, in principle, only life can produce life and no living beings come from inanimate matter though all living beings take some inorganic matter in their food and convert it into organic forms suitable to their body. In the light of the research of Pasteur (1857) and other researches after that, the belief that life can be synthesised from matter should have been discarded once for all but it continues to be there because of Darwin's Evolution Theory and the speculation about origin of life made in that Theory. How strange that many scientists believe in

1. Ancient Egyptians, Greeks and others thought that mature animals came into existence by spontaneous generation from non-living Matter. Aristotle said that fish, frogs and mice could appear from filth and moist soil. Mice were reported to appear after floodings of the Nile river. Snakes were thought to arise from horse's hair. At one time many people believed that flies came from putrifying meat. Francesco Redi, however, by using scientific methods, proved that flies came from immature stages or maggots that appear on meat from eggs, deposited there by flies.

the truth of Pasteur's findings and, at the same time, they believe in Darwin's views on origin of life though these are contradictory!

Has any living form been produced by any scientist?

Now let us take up the first question and see whether scientists have been able to synthesise any life-form, however small, in the laboratory.

Viruses are the smallest of all living beings. The evolutionists consider them to be the most 'primitive', i.e. those which appeared in the earliest times. The virus body consists of a protein molecule. It has protein and nucleic acid. Viruses are mostly poisonous and cause disease, like yellow fever, small pox and polio. They are extremely small in size so that they cannot be seen without an Electron Microscope. Now, those who believe in the Evolution Theory and in 'spontaneous generation from inanimate matter' think that viruses being the simplest and minutest of all living beings could be synthesised in the test tube. It was forgotten that viruses live inside host cells like parasites do and, as such, they being incapable of independent existence, cannot be called *the most primitive* because unless there are other living beings whose cells serve as host cells to them, viruses could not have existed. Anyhow, attempts were made to produce them. But all that could be done was to break up the virus into protein and nucleic acid and to recombine these again.

As pointed out earlier, this class of scientists believe that life began from something material which became organic and then proteinic. They think that protein is life and, therefore, they make attempts to synthesise proteins in the test tube.

Oparin's and Miller's attempts to synthesise life-molecule.

Professor A.I. Oparin, author of 'The Origin of Life'², believed that from simple, organic, life-like compounds, such as hydrocarbons, life might arise spontaneously under careful laboratory conditions. Building upon Oparin's view and work, S.L. Miller of the College of Physicians and Surgeons, Columbia University, passed an electric spark through an atmosphere of gases such as he thought the 'primitive' atmosphere on this planet must have had. In this experiment, Miller was able to produce amino acids in the laboratory. Since Amino acids are the building-blocks of proteins, scientists who believe

in the Theory of Evolution, suggest that, in the primitive atmosphere, a great flash of lightning might have passed through the gaseous vapour that enveloped the earth and thus was life created and this life fell down into the ocean and began to grow and evolve. But neither Oparin nor Miller nor anyone else of their line of thought has been able to produce life as we all know it. They have been able to synthesise only aminoacids or proteins.

In this context, it should be remembered that though protein molecules are necessary as building blocks of a living cell yet protein is not life, for life is dependent upon so many synchronising factors which are not only necessary for maintenance but also for its origin. There are millions of protein-molecules even in a single cell and these molecules and other particles in the cell have all to be at the same place and at the same time.

Naturally, therefore, many of the scientists, present at the symposium on the origin of life, held at Moscow, in August, 1957, felt that Oparin's suggestion that life-like molecules could rise spontaneously from inorganic or inanimate matter was incredible. They said that they could not believe that large enough molecules of the right kinds of proteins could arise spontaneously to become the basis of organic life. Dr. Erwin Chartaff of Columbia University, has remarked: "Our time is probably the first in which mythology has penetrated to the molecular level."³

So, if Darwin's speculation about the origin of life spontaneously from inorganic matter is wrong. Pasteur's view must conclusively and exclusively be right and it would be futile to make efforts to produce life in a test tube from inanimate material constituents.

Moreover, it should be remembered that we may have even dead protein in dead cells which shows protein is not life. If protein were life, the scientists would have been able to produce so many life-forms in the laboratory by now. The processes of protein-making are entirely physico-chemical in nature and have, in their result, no sign of life. The Coacervates don't satisfy the definition of a living system which we will discuss later in this chapter.

Moreover, recently, two of the world's most eminent scientists, based in London, have been forced by their research in science to come

3. Erwin Chartaff, "Nucleic Acids as carriers of Biological Information," *The origin of Life on Earth*, pages 298-299.

to the conclusion that life could not come into existence through gradual evolution by natural selection as hypothesised by Darwin. One of these is Professor Sir Fred Hoyle whose writings on subjects of cosmology are now known worldwide. The other is Professor Wickramasinghe, an eminent professor of Applied Mathematics and Astronomy. The former was an agnostic of Christian background and the latter is a Buddhist which is not a theistic religion. During their independent research, both these scientists tried mathematically to find the chances of life starting spontaneously. Each discovered that chances against life igniting accidentally are $10^{40,000}$. Now Wickramasinghe says (to use his own words): "That number is such an imponderable in the universe that I am 100 per cent certain that life could not have started spontaneously on earth." Further: "For life to have been a chemical accident on Earth is like looking for particular grain of sand on all the beaches in all the planets in the universe—and finding it. Once we see that the probability of life originating at random is so utterly miniscule as to make it absurd. . ."⁴

2. Another approach towards producing Life

Now different from the approach of the above class of scientists, there is another approach of those who are conducting research on D.N.A. Dr. Hargobind Khurana, Indian Scientist, was awarded Nobel Prize in the year 1968, for discovering genetic code. Two other scientists, Nirenberg and Holley also had done work in this field besides Dr Khurana. Finally, in 1970, a total gene was synthesised from simple organic substances. Since DNA controls the colour of one's eyes, the shape of one's body, one's personality and many other factors such as those which make one man different from another or a man different from a dog, it was thought that D.N.A. is the master molecule of life and that, by producing D.N.A. in the laboratory, it would be possible to create life in a test tube.

In this connection, it would be useful to know certain more facts about the DNA before considering whether the synthesis of a DNA molecule means synthesising life in a test tube.

The letters DNA for de-oxy-ribo nucleic acid. Whereas each living

4. See article, titled 'God alone knows', written by Geoffrey Levy and published in the Sunday Magazine of The Hindustan Times. New Delhi, in its issue of 6th September, 1981.

cell contains a number of component parts,⁵ one of which is called protoplasm, in the nucleus of the cell are thread-like structures, called chromosomes. There is a definite or fixed number of chromosomes in every cell of a creature and the number of chromosomes in every cell varies from species to species. For example, every human cell contain forty-six chromosomes. However, the germ cell of every species contains only half the number of chromosomes in any other cell so that when the chromosomes of the male and female germ cells unite, a new cell is formed that contains the correct total number of chromosomes for the species. For example, each germ cell of man and woman, carries twenty-three chromosomes and when these unite, their total number in every cell of a human body is forty-six. Further, each one of the chromosomes is composed of a large number of entities, called genes. Each gene is supposed to control some characteristic in the individual. Moreover, various combinations of genes may influence characteristics variously. It is now believed that each gene is a part of the very complex molecule of de-oxy-ribose nucleic acid, the detailed structure of which is "coded" to build a particular body in a particular way. The embryo or foetus continues to change and the ever-dividing cells form themselves into the digestive, respiratory, circulatory and other systems and thus form into the complexity of a man or woman by virtue of this genetic code in the DNA molecule which is in the chromosome—which is in the nucleus of the cell.

Now since DNA Molecule duplicates itself and also the chromosomes and, through the process of cell-division, or what is called 'mitosis', it grows to form the body, it has come to be regarded as 'the master molecule of life' and it has been thought that if this is synthesised, we should conclude that life can be synthesised in the laboratory. And, we have already said that Dr. Hargobind Khurana

5. The structure of human cell is like this : First, there is membrane. Certain fine things can pass through the cell-membrane and certain other things can come out of it; others cannot pass through it. Then, on the inside of the cell membrane is a substance called cytoplasm. In the cytoplasm are infinitely small spaces filled with molecules of fluid-of proteins, sugar, salts etc. In the Cytoplasm floats the nucleus. On the inside of the nucleus are small chromatin granules and in the process of cell division i.e. mitosis those chromitin granules gather together into rods, called chromosomes. Every species has different number of chromosomes. On these chromosomes are genes. There are forty-six chromosomes in every human cell and on these there are estimated to be as many as eight hundred million genes that have to do with the building of a body.

'synthesised' an *E. coli* gene. So, should we conclude from this that Khurana and others have been able to synthesise life in a test tube? Let us wait for a moment and think over it before we give a verdict.

The Gene was not totally synthesised

There is no doubt that genes are fundamental units of heredity and that the knowledge of the genetic code is of great significance because it will enable man to bring a desired change in the genes chemically yet *it would be wrong to say either that genes are completely responsible for life or that genes can be completely synthesised chemically*. Our knowledge of genes simply tells us that the cells make use of messages, coded in chemical form, and that we may use this fact to our advantage. But, by synthesising most of the chemicals, such as proteins, hormones, lipids, vitamins and genes, which are primarily found in living cells, the scientists are nowhere near to *synthesising* a complete 'living cell' in the laboratory. The great hope expressed by some molecular biologists, after Watson and Crick discovered the double helical structure of DNA, has now faded away when many new facts on the subject have come to light.

In fact, synthesis of the *E. coli* gene by Mr. Hargobind Khurana should further show that life cannot be synthesised because though they synthesised certain segments of genes and assembled them chemically into bigger segments yet, not to speak of the whole cell, even the *total* gene was not *completely* synthesised because *natural* enzymes had necessarily to be used to join larger units.

Further, many scientists⁶ now admit that the replication process of the gene is very poorly understood. For instance, the single chromosome of *E. coli* is thought to be a loop of double-stranded DNA, some 500 times longer than the cell and that, due to its spiral nature, this loop must spin on its axis some 360,000 times in the course of a single replication and the loop must be separated neatly. To explain how this occurs, biochemists have postulated many molecular mechanisms but they admit that none is yet clearly understood.

Therefore, Szent-Gyorgi, the Nobel Prize-winning chemist, has rightly said: "In my search for the secret of life, I ended up with atoms and electrons which have no life at all. Somewhere along the line, life

6. Watson, J.D. Molecular Biology of the Gene, Pages 282-292.

has run out through my fingers. So, in my old age. I am now retracing my steps. . .”⁷

Three accepted characteristics of living organisms

As of now, it is proclaimed by the scientists that a living system has three properties—*metabolism, growth and multiplication*. A living system takes molecules from the environment, retains and absorbs the materials needed to reconstruct itself and discards and eliminates waste-products. It grows from within and it multiplies from one to two and so on. Now, since the D.N.A. molecules and the genes have the code or plan for growth and they are also capable of replicating or duplicating, it is considered to be the molecule of life. *But it should be noted, in this context, that DNA cannot alone duplicate itself without the enzymes—the DNA polymerase. Self-duplication is a property of the whole intact cell only; DNA molecules by themselves do not reproduce in test tubes. Moreover, DNA cannot duplicate its own enzymes. So, in this sense, DNA does not fulfil the commonly agreed characteristics of life. The DNA does not work in vitro, i.e. outside the living cell but in vivo, i.e. in the living cell.*

No success in creating life from inanimate matter

Thus, some scientists may say that they are trying to create life but, in fact, they are trying to create physico-chemical (*not psycho-physical or psycho-chemical*) conditions in which a biological system may behave like a living system. Scientist James Watson, for example, has said in his book—‘Molecular Biology of the Gene’—that life is a co-ordinated chemical action. But the fact remains that, through co-ordinated chemical action and conditions, not life but the material which is akin to the biological material can be created. Consider, for example, what the scientists call ‘*cell-free system*’. You can have activating enzymes, the polymerase and the ATP outside a cell, in a test tube, and you can see the protein synthesis but, as pointed out earlier, these structures may be able to perform metabolism and grow and multiply, but these forms are not the living forms, as we see, in one essential aspect, which we will discuss later in this chapter.

3. Synthesis of Proteinoids by Sydney Fox

In this context, we may refer to the experiments of Sydney Fox, a scientist at the University of Miami in Florida. He took about seven or

7. ‘Biology To-day’. Del Mar, California, CRM Books, 1972. Page xxiv.

eight amino acids and kept them at about 120° centigrade for a number of hours. He thus got material which he termed 'proteinoids'. He added some nutrients to these proteinoids, maintaining specific atmospheric conditions. The result was certain molecular structures. Fox said that these microspheres grew and multiplied in the laboratory. He also claimed that these proteinoid microspheres were the chemical origin of a cell. But many scientists⁸, who have checked Fox's experiments, do not agree with Fox's inferences. Moreover, it has been said that these microspheres have the properties of peptides and polypeptides; these have no *psychic* and other signs which are essential to living beings.

4. Attempt to synthesise amoeba

Another interesting experiment was the one that was performed by the scientist Danielli of Buffalo. It was reported that he took an amoeba, and from the amoeba, he isolated some enzymes and chemicals and he also disrupted the amoeba's membrane. He put all these components and constituents in a test tube. In another test tube he had already put some essential enzymes required for the re-formation of the amoeba. It is said that he mixed the contents of the two test tubes together and claimed to have regenerated or produced an amoeba. Many scientists have adversely commented on Danielli and have laughed at his experiments and findings, for actually, nothing has been synthesised from the *inanimate* matter into what may really be called 'life.'

Is there any difference between 'a living body' and a 'soul'?

Now let us consider the third question: "Is there any difference between 'life' and 'consciousness' or between 'a living body' and 'a soul' or between 'a *jiva*' and 'an *Atma*' ?

From the experiments performed so far by scientists, it is clear that many important constituents or components, such as the proteins, DNA, etc. can be synthesised in the laboratory and something *akin to or alike* 'a living body' can be synthesised though nothing *identical to* life can be produced in a test tube. This clearly shows that body is made of material components. *But whatever the scientists have been able to synthesise, lacks consciousness—one essential characteristic of a living being. The proteinoids or D.N.A., etc. do not have the ability of*

8. Orgel, L.E. and Miller, S.L.: The Origin of life on Earth, Prentice Hall Inc. 1974, pages 144-145.

thinking, feeling or expressing emotions and moods. What they have been able to produce can be explained in terms of bio-chemical actions and reactions and is totally devoid of the self-awareness.

So, briefly, we can say that matter is of two kinds—dead matter (*Ajiva*) and living matter (*Jiva*). When matter has such chemical or biological composition that it can perform metabolic functions and can grow and multiply, it is a suitable medium for the Consciousness to manifest or to work through. In its functioning stage, it may be called 'living matter' or 'living body'. A functioning human cell with its protoplasm, nucleus, cytoplasm, chromosomes, DNA and all that goes with it is 'a living cell'. But this matter or that cell itself does not have the quality of consciousness though it appears to have this quality under the influence of Consciousness—the source of which is altogether a different entity which is non-material and non-physical and is called 'Soul'.

Again, considered in this light, 'Life' is the name given to that state of physical being when the soul is there in a physical system and its consciousness is at work even though it may be at a low degree. Or, in other words, 'Life' is the name given to the state (or states) of functioning (*living*) body, especially when a soul is ensconced in it, whereas 'soul' is a *non-physical* entity which may have existence and state (or states) of being even after leaving its gross body. 'Consciousness' is one of the essential attributes of the soul; it may be manifest or may remain dormant. In this sense, 'life' and 'consciousness' though closely related in a physical system, have two different meanings. A body may remain to be a 'living body'⁹ for sometimes, however small, even when the soul has left it and is hovering about in the atmosphere. In this state, the body will have no consciousness though it may still have its three accepted characteristics. It may however be brought back to normal state, through some process of resuscitation, and the soul too may come back or re-manifest itself through that medium. In other words, the soul, with its consciousness and other qualities, can exist without a material body and a material body may continue to be a living body, without a soul, for sometime —this time depends on how long an organism can maintain its accepted characteristics or three functions.

9. Remember, 'a living being' does not mean the same thing as 'a living body'. 'A living being' implies 'a soul in a functioning body' whereas 'a living body' is a body which continues with its three characteristics—metabolism, growth and reproduction.

But, non-cognisant of this prime truth, man believes himself to be a living body ! He easily forgets or overlooks the fact that he is a *souli*, which has the abilities of thinking, feeling, remembering and judging, but which he wrongly attributes or relates to 'Mind' of which he has no clear idea or which he wrongly considers to be a subtle material entity or a function of the brain.

This wrong identification with the body is the main cause underlying man's sufferings of various kinds. An attempt has, therefore been made in this book to explain that consciousness or mind which manifests in the form of Thought, Feeling, Judgment, etc. is eternal and is different from the body and that mind or soul is metaphysical and is located in the brain.

SECTION-I

Soul, The Strangest Truth

THINGS, MADE OF MATTER, ARE NOT FOR THEIR OWNSELVES

"In this self-luminous minute point—the Soul—lie the impressions of all the incarnate existence of the self and from this point emerge all thoughts and in this occurs the feeling. The purification of this self is the key to peace."

—God

IN the preceding chapter, we have tried to clarify three main points. One of these was that Mind and intellect are not products or evolutes of gross or subtle Matter; they are different from the body-system, including the brain and its functions. The second point was that Mind and Intellect are the names of the abilities and functions of thinking, imagining, understanding, judging, feeling, etc. and these pertain to the soul. The third point was that the actions done by the soul leave impressions on it and these form the tendencies, traits, proclivities, outlook, attitudes, urges, impulses or resolves, *i.e.* *Sanskars* of the soul, and go with it when the soul leaves one body and takes another. No doubt the genes have, coded in them, the blue-print of the growth and development of the body and the personality or what is called the hereditary traits yet what kind and quality of genes a person will inherit is determined by the soul's works and actions and the resulting traits and tendencies, *i.e.* *Sanskars*, formed in its previous life or lives.

Now, though these simple truths are there, yet many people who have not pondered over them, do not believe in the existence of soul as a separate conscient entity. Therefore, there is need to recount certain arguments in more detail so that this important truth becomes more clear and, with this idea, we discuss, how on the basis of common logic, one is led to believe in the existence of soul. In this effort, we should not mind a little unavoidable repetition.

The instruments are always meant for a conscient user

It is a matter of everyday observation that all inanimate things, e.g., instruments and machines are not meant for their own selves but for a conscient user. For instance, the telephone does not exist for its own sake but is there to be of use to men. He who speaks or hears by means of the instrument, called the telephone, is a human being, apart from the instrument itself. Similarly, man's ears, mouth and other organs are not there for their own selves, but for use by the soul whose own existence is distinct from that of the ears or the mouth.

Similarly, a house is not meant for its own sake, but is built for use by a living being. And, the chairs and the tables in that house are also for the purpose and use of conscient beings. So, if there is no conscient entity, distinct from the body, the latter cannot be proved to have any utility or purpose. Then we may ask: "Is the body there only for its own sake?" No, that cannot be. Just as the existence of the house or the chairs and tables therein is a conclusive proof of the existence of a conscient person who lives in that house and uses the said chairs, is a different entity, apart from the house or those chairs, so does the existence of the body prove that the entity that uses or rests in the body is a conscient person, entirely different and apart from what is known as the *body*.

A house is cleaned and fans and lights are put on and arrangement for cold drinking water is made—all this is done to meet the purpose of a living and thinking being. Exactly in the same manner, there are, for the sake of the living being in body, anyone or more or all of the processes going on in the body, e.g., the respiratory and digestive processes, the coursing of blood, and other activities going on in this 'house' which is the tabernacle of the conscient being. That entity is called: 'the soul'. When it leaves the body, all the bodily processes are ended simply because the one for whom these processes went on is no longer there in the body. When there is no one living in the house, for whom should the fan be working or the fire be lit or the rooms be lighted? Even so, when the soul has left the body, all its activities come to an end.

We may put this in another way. When a house tumbles down or when there is no proper and convenient means of ventilation, lighting, etc. man simply leaves this house. So is the case with the body. When the body's condition is such that the soul's essential activities do not go

on in the right manner, and the soul feels inconvenience or pain, the soul quits it.

The objects experienced are different from the Experiencer

Consider the question of the existence of soul in another way. The world is replete with numberless things for man's enjoyment. Fruit, flowers, vegetables, grains, etc. make a long list of these things. Are those for their own sake? Never does a fruit eat itself nor does water bathe in itself to feel refreshed. In all cases, it is something conscient that finds its purpose served by these things. Just as other material things are meant for use by conscient beings, so also is the body, that is made of Matter, for the purpose of the sentient beings. Hence it is that a conscient entity experiences joy or sorrow which comes through the agency of the body. Not the body but the soul it is that experiences delight arising from enjoyment of material things of various kinds. In short, the body is the object or the means while the soul is the subject, the experiencer. So the soul and the body are two distinct entities.

Thus, a reflection on the view of those who do not believe in the existence of Mind, apart from the computer-like brain, will expose the incorrectness of their view if we remember that all forms of Matter, even if they are working like an automatic electronic system, are not for their own selves. They are meant for a conscient user—a sentient being.

Essential difference

Further, we should know that these material things cannot think either about their own future or their past—what they were in the past and what form they would take in future.

Again, these material objects do not have an inherent ability to view things from all points-of-view and to deduce underlying springs of action. They have to be programmed for a special purpose by a conscient being. Take, for instance, the case of Viking-I which was put by the scientists on Mars. Though the instruments placed in it performed the experiments which were aimed at and programmed for finding out whether any kind of life, micro-organisms or macrobes, existed on Mars, yet the instruments or the apparatus could not, by itself, derive any inference. *The inference or the conclusion had to be deduced by the scientists and the significance of the outcome and the joy or frustration were realised and felt by the scientists—the conscient beings.*

So, it would not be wrong to emphasise that a machine or a computer does not feel or experience anything nor does it have any emotion or any conscience. Take the instance of a gramophone record or a magnetic tape which is made of Matter. It records the sound of words but it can never have any feeling of love or hate or sympathy or anger or pleasure and pain while one same word, sounded on its record or tape, does convey different feelings and thoughts in different contexts to different persons. The Tape-recorder or the computer can not understand bliss, much less realise and experience it. 'Love', 'self-sacrifice', 'renunciation', 'dedication' or 'surrender to God' have no meaning and no practical utility for a computer nor a record nor computer does ever think of getting liberated as some souls make efforts for getting liberated from the body and the brain. Nor does a computer ever feel weightlessness, enlightenment or separation from the body as the souls do by means of practice of Raj-Yoga or Spiritual Meditation.

Also, the machine may not understand the ideas behind an action. We will make the above point clear by another example. When a hand is laid on one of the pans of a weighing scale, it will show that the pan is heavy with a load, but it cannot express or indicate that the hand was laid on it by chance or with a purpose or because of some other consideration. But whatever is conscient reveals this. For instance, when someone from behind lays his hand over one's head, the latter begins to think why the former put his hand over his head. He can guess or judge whether this hand was laid on his head to bless him, to press his head with the hand to give him ease or with a view to insulting him. Not only can it judge the other man's action in this manner but it can also feel the motive of blessing, etc. of the other man.

Hence it is plain that the ability of experiencing is not in the brain. The soul it is that thinks and feels. It is distinct from the body and the brain. It is eternal and the word 'I' stands for the soul.

Mental and Emotional Disturbances

But one may ask : "Why do physical and mental ailments sometimes cause emotional disturbances like fear, suspicion, irritation, etc. ? Is it the soul or the brain that suffers these ?

As we have already said, the physical body, the brain, the genes, the chromosomes, blood and other constituents of the body are the medium through which the soul expresses its will. A disturbance in the

medium disturbs the expression, just in the same manner as a defective radio-receiving-set disturbs the reception of the voice and brings out a jarring sound or an interrupted voice instead of a really nice song. So, it should be borne in mind that emotional and psychological impressions pertain to the soul and not to the body but the brain-cells and certain glands and nerves get affected because of soul's emotions and, in turn, affect the soul's expression of its emotions.

In short, it should be clearly understood that there are two eternal entities—the Matter and the Soul—(Mind being only a faculty of the soul). Matter or *Prakriti* lends its services to the soul, i.e. *Purusha*. Matter is not capable of visualising the future or planning for it nor is it capable of brooding over the past because it lacks in the ability to think and in the angle of vision and in extracting the profound good out of any action, nor can it feel the effects. Mind and intellect are not any subtle, internal, material organs but are various names of the faculties of the soul as the following analogy will explain.

Mind and Intellect are not internal organs but faculties of the soul

All of us know that electricity is a kind of *energy*. When it is used in a kitchen to cook or simply heat an article of food, we call this electricity as '*Heat*'. This very electrical energy serves to cool when used in refrigerator and it gives us *light* through a bulb. When it works or moves our machines, we call it as '*power*'. Well, it is the same energy in all these cases, but because of being put to different uses or to works of different nature, it has been differently named as Power, Light, Coolness and Heat. Exactly in the same manner, when the spiritual energy that the soul is, i.e. when the power of consciousness that the soul is, expresses itself in the form of a Wish, Volition, Will, Attention, Feeling or Thought, we say that our **Mind** is working. When it expresses itself in the form of understanding, reasoning or judgement, we say that our **Intellect** is working, and when it appears in the form of **memory**, we say that our *Chitta* is at work. So they are only different manifestations of 'consciousness' of the soul.

Truth about the mind and the intellect

On the basis of the knowledge, imparted to us by God and on grounds explained in the previous pages, we can say confidently that the mind and the intellect are not entities separate from the soul nor are these material adjuncts of the soul nor another name for any physical

and subtle sheath but they are the soul's abilities to perceive, to experience, to attend, to be aware and to think. And the brain, the nervous system and the biochemical changes are only instrumental in the manifestation of these. Mind, intellect, etc., are the names given to these forms or expressions of the soul's own consciousness.

The soul that resides in the body is a self-luminous point, minuter than the minutest, without beginning in time, and is eternal, and the mind and the *Buddhi* are there, for they are the very sentience of a soul. Taking Mind and Intellect as distinct from the soul and as forms of Matter, is to deny the existence of the soul because, without sentience or consciousness as its nature, an entity cannot be called 'soul'. In reality, in this minute point—the soul—all the thoughts, feelings, and impressions of all the existences of the soul so far, comprehended to become, as it were, a part of it, and yet invisible and unmanifest. This is the strangest truth which the Supreme Soul, Shiva, has made us understand through the mouth of Prajapita Brahma. □

Having discussed in some detail the nature of thought, Mind, Intellect, Consciousness or Soul and having concluded that soul is an entity different from the body and brain and that Mind is not an epiphenomenon of brain though it uses the brain, and is located in the brain, let us now discuss where in the brain the soul abides and what is the Body-Mind connection.

Incidents of re-birth prove the existence of the soul

"If one is unable to reap the fruits of one's actions in this life, one reaps them in the next. Thus, the law of action remains inviolable. Therefore, never must you indulge into bad action, for action goes with the soul wherever it goes."

—God Shiva

BIOLOGISTS, neurologists and psychologists, who believe that there is no soul or non-material Mind but only brain, are unable to explain the stories of re-birth as told by some children. Here are some of them, translated from those published in a special issue of Nav Bharat in 1976. All these clearly bring out the truth that there is an entity, called the soul which survives after the physical death and takes another body.

"It was a strange thing indeed that a little boy, Ismail, came from the place of his birth to a site about three quarters of a mile away where his eyes fell upon an ice-cream seller. He suddenly accosted him: "Hullo, do you recognise me?" The ice-cream seller, named Mehmat, failed to recognise him, for he had never seen him before. He, therefore, shook his head to indicate 'no'. Thereupon, Ismail reminded Mehmat in a very familiar tone that he was Abit Sujulmus and asked him since when he had started selling ice-cream, for he had been selling vegetables previously.

Looking at the little boy with his eyes distended with extreme surprise, Mehmat confessed that he did recognise him, though he was wondering all the time how that little boy could call himself Abit Sujulmus. He knew very well that Abit Sujulmus did wholesale business of fruits and vegetables, and that he grew those in his own orchards and gardens, looked after by his own servants, but he had been murdered a long time back by three persons acting in collusion. He was, therefore, at a loss to understand how the little boy, Ismail,

could identify himself with fully grown man, Abit Sujulmus. Mehmat's eyes were thus an open question mark?

And, then, Mehmat was told that this little boy, Ismail had not even learnt to articulate when he started telling his father about his previous birth. At the age of a year-and-a-half he said, "I am bored with my life here. I want to go home to see my children." His father was astounded and struck dumb to hear this. He was a butcher by occupation and carried on a flourishing business at Aden. Not only was he puzzled by what his child said, but all his kith and kin as well as other relatives were also confused and perplexed by it.

Ismail was born in the year 1956 and was his father's ninth child in the family, with physical characteristics distinct from those of other children. He had something like a mark of a wound on his head which went on fading away as he grew older.

No sooner did he learn to speak than he began to talk about things relating to his previous birth. He said that he was a resident of a town, three quarters of a mile distant from this place. All people were struck with wonder at his memory. Abit Sujulmus, a wealthy businessman that he was, was well-known all over that town. His first wife was Hatis, from whom he had no issue. He, therefore, divorced her and bequeathed some of his property to her. Thereafter, he married a beautiful girl from whom he was blessed with several issues.

Then there occurred a traumatic incident. On the 31st January, 1956, Sujulmus was nearly 50 years old. He had then engaged three men from a near-by village to work in his gardens.

That day, one of the three men came and asked Abit Sujulmus to see one of his horses in the stable which was lame. Sujulmus accompanied him forthwith to his stable where the two others were already present. Unsuspecting, he bent to examine the horse's legs. Just then, one of the three men suddenly dealt a heavy blow on his head with an iron rod. As a result, Sujulmus simply heaved only a deep sigh and collapsed in a heap.

His cry of anguish, however, reached the ears of his wife, Shabida and her children who at once came running to the stable but they, too, were done away with as soon as they reached there.

The assassins, thereafter, took to heels, but they were arrested within a week. Two of them were sentenced to gallows while the third



Ismail →

Shaktipal Sharma

Gopal Gupta



↑
*Ismail with Hatis, who was
his wife in his previous life*



← *Madhu*

was imprisoned and died in jail soon after. Some months after this occurrence at Aden, about three quarters of a mile away from that place, was born Ismail who carried the mark of a wound on his head. God knows if this was the mark of some wound which Abit Sujulmus had suffered in consequence of the fatal assault on his head.

When he was three years old, members of both the families—the present one as well as the one of his previous birth—gave Ismail full permission to visit them. Now, he said in clear words that he was a married person, that he had married twice, because his first wife was issueless, that his second wife, Shabida, was very beautiful, that he was murdered by his servant at the age of 50; further, that one of the servants, named Ramzan, had dealt a fatal blow to his head with an iron rod as a result of which he had died, that his wife who had heard his painful cry had come running to the stable with her two children, Ismajl and Zinu, and that all those three were also murdered. All these things were true, word for word, and the town's people knew all about the tragic death of Sujulmus.

Ismail now went to the town of his previous birth where his business had been wound up and his first wife was living in a two-roomed mud hut. Seeing her in this lowly condition, his eyes filled with tears. In the fervour of his love, little Ismail stepped forward and embraced her with his little arms just like a loving husband does on seeing his wife in an unhappy condition. Even now Ismail keeps visiting the wife of his previous birth, but he is helpless in that he cannot return to his previous life, with all the accompaniment of prosperity, to remove his wife's misery. And therefore, little Ismail remains ever miserable.

Hearing this, the ice-cream seller, looked with wonder toward Ismail. In the meantime, Ismail had also treated himself to some ice-cream, taken from the seller. When Ismail's father began to pay for the ice-cream, Ismail said at once: "Let it be, father, don't pay him. He is still indebted to me. In my previous birth, he used to fetch vegetables for sale here and he ran an account with me which is still in debit." When Ismail's father, thereupon, raised his eyes inquiringly, the ice-cream-seller, Mehmat, with strange look in his eyes, said: "Please don't pay, Ismail is correct." Speaking thus, Mehmat's eyes had suddenly, for some unknown reason, filled with tears. And, he simply exclaimed: "God is great and glorious."

Gopal used to say: "I am Shaktipal Sharma"!

Holding a finger of his father, the little Gopal was intently watching the noise and bustle of a marriage party—the noise of the trumpets and bands playing, people gaily dressed in their new and varied garments and all that decoration and adornment! A child hardly eight or nine years that he was, he was lost in the tunes being played by the band.

And lo! suddenly he screamed. His gaze had fallen upon someone in that crowd who frightened and repelled him so much that he began to cling to his father's body and seek refuge in his arms. Some incidents of his previous birth had suddenly come to his mind, one after the other, and he began to weep and cry, saying: "Father, leave this place at once; this man will kill me, this man. . . He had shed my blood once before also."

Little Gopal was trembling with fear and clinging to his papa's leg. His sudden weeping and crying in this manner also startled his father and attracted the attention of some of the people in the marriage party. Gopal's father knew that the boy, from his very childhood, was given to speaking such incoherent things. When he was two-and-a-half years old, Gopal had started saying that he was a resident of Mathura, that his real name was Shaktipal Sharma, that his whole family lived in Mathura, where there was a big firm, named 'Sukh Sancharak Company'. Gopal's mother was, however, vaguely aware that the boy was recalling things of his previous birth which, according to elders, presaged his imminent death.

Anyway nothing like that happened for, Gopal is living even today with his parents in Delhi. His father is a 'Gas Station Manager' and Gopal is the only beloved son of his parents. When, in the beginning, his mother heard the child talking thus, she scolded him into silence. But, her motherly heart began to misgive at times about her only darling child coming to some harm. Gopal's father, on the other hand, had simply ignored the things spoken by the child. But, on that day, when accompanying his father to join a marriage party in Sita Ram Bazar of Delhi, Gopal—then aged eight or nine years—suddenly cried and screamed at the sight of a man in the procession, his father could not but be startled and alarmed by his terror-stricken child. He, therefore, decided to leave the procession and return home before anybody's attention was attracted to his child's predicament.

Even on returning home, Gopal's condition did not change at all and he was still so frightened that he kept weeping again and again at intervals. Seeing this, his parents tried, for the first time, to hear completely what the child had to say. Fortunately, at this time, a couple of intimate friends of Gopal's father happened to visit him. When they talked with Gopal, a big question confronted them all and it was writ large on their faces, astounded as they were. Was it a case of some happening in the child's previous birth or was it a case of some screw being loose in his brain or, again, was it merely the child's haunted imagination or hallucination?

Gopal had said that the man in the marriage crowd, the sight of whom had frightened him, was his real brother who had shot him dead in his previous life. After a great deal of thought and discussion, Gopal's father and his friends came to the conclusion that this matter be thoroughly investigated after taking Gopal to Mathura to see whether or not he was fully acquainted with the town—its streets, its lanes and bylanes, etc.

This would also help to reveal how far the other things, he spoke about, were true.

Hence, Gopal's father took him to Mathura along with two or three of his friends because Gopal had stated that there was the betel-seller's shop at the corner of a particular lane. They reached Mathura at last and left him at a random place, which, they thought, was very much a maze of lanes and by-lanes with their in-shoots and off-shoots, to make sure if Gopal recognises them and winds his way through them to locate the spots specified by him. Gopal had never been to Mathura since he was born, but strange to say, he went through this maze easily and confidently, as if, he was already well-acquainted with them. He neither stopped to look around at any turning, nor did he falter at any street-crossing; he went ahead till he reached the corner of the lane where he actually showed them the betel-seller's shop. He proceeded further on until he reached the site where the premises of the big firm stood and said: "Here you are at 'Sukh Sancharak Company'—my firm." All this was so astonishing and yet so true!

People were astonished at this, but there were some who were in doubt. Gopal, they thought, might have read the firm's signboard and then told them so. One of the friends, accompanying his father, said: "Well, son, now find out your house". And Gopal proceeded auto-

matically towards the house of his previous birth, as if he had trodden those paths for years. Meanwhile, the rumour had gone round in the bazars that a boy, brought from Delhi, claimed that he was Shaktipal Sharma, the proprietor of the well-known medical firm 'Sukh Sancharak Company'. Shaktipal Sharma, they knew, had died in the year 1948. The news that he was re-born eight years later, in 1956, was startling for them. What intrigued them was that the child's memory about things of his previous birth was meticulously correct! Hence a good crowd had gathered to follow Gopal's father and friends to see how far these things were true, or, in other words, was re-birth a true phenomenon or a myth, created by a diseased brain?

The climax, however, came when Gopal Gupta came in front of a grand building and informed the people that that indeed was his home in his previous life. Wonderstruck people had begun to exchange glances. A woman, standing in the balcony of that vast, splendid mansion was also looking wonderingly at this scene. She could not help making a sign to the little boy to come up. And, lo! the boy—conversant as he already was from his previous birth with all the details of the structure—its doors, windows, verandahs and stairs, etc.—entered the building with alacrity and climbed up the stairs in a moment to reach the spot where the lady stood. People began to wonder how Gopal had reached so easily a spot which was accessible only after crossing long and intricate corridors and verandahs, etc. Had he really taken rebirth? Was he indeed Shaktipal Sharma in his former birth? Among whispers, thousand questions arose in the minds of the people and they began to ask him some questions.

At this, the family members of Gopal—Shaktipal Sharma—of his former life also could not but be startled. Gopal told them that his wife was always at cross purposes with him. That day, when he had asked her for a sum of Rs. 5000/-, she became displeased. She was unhappy and angrily told him to go and take it out of the Company's account. Shaktipal Sharma had then left her angrily and proceeded towards his firm's premises. Gopal's wife of his previous birth herself admitted to this statement of his. Gopal further told them that the very same day his younger brother had shot him dead. He also showed them the very site where he had been murdered.

Thereafter, Gopal was taken to the premises of his firm, the Sukh Sancharak Company, where also he fully recognised everything and every place. His deportment towards all, including the servants of

his previous birth, was perfectly natural and familiar, as it had been in his previous birth. He also correctly identified the place where he used to sit and work as also the chair and table he had used. Despite all this, Shri Narain a friend of Gopal—Shaktipal Sharma in his previous birth—said: "Wait a bit. I will apply one more test. If he passes that, I will be convinced."

And he brought forth an old album from somewhere, which he placed before him. Selecting a photograph from it, he asked Gopal to identify himself in the photograph and also tell when it was taken. There were many faces in the photograph. Before other curious people could guess which of them was Shaktipal, Gopal, to the astonishment of all pointed towards the legs of a man behind a curtain in the picture, and, at once, said "This is I. My face and body in it is hidden behind the curtain. This photo was taken during the Australian High Commissioner's visit when I was with him in the boat. . ." Shri Narain, a friend of his in his previous life, was struck dumb with astonishment and simply looked at Gopal with distended eyes for he had not only recognised himself in that picture but had also correctly stated when that photo had been taken.

Gopal is alive to-day and lives with his parents in Delhi. It is not known that, in the face of all these proofs, whether he has been given any portion of his possessions in his previous birth. Nor can it be stated, in this context, whether, from the legal view-point, he has any right to the property of his previous birth or he will be deprived of it.

A Brahman girl who was a Harijan

THERE is, in U.P. a district named Mainpuri. Ten years ago, an incident occurred in Kankariya locality of it. It was the day of Ramnavmi festival. A Harijan (Sweeper), Lala Ram had beaten his wife, Poona, in a fit of anger, with the stick of his broom. Poona gravely resented it and, under the pretext of picking charcoal, she went to the railway lines where she threw herself in front of a running train from Shikohabad and died. On receipt of the news, members of Poona's family reached there, wailing and crying. They gathered in a Panchayat thereafter and duly performed the last rites of the funeral. Some days after that, her family forgot all about the tragic occurrence.

Thereafter, in the year 1969, the wife of Shri Lakshmi Narain Mishra, who was a resident of Mainpur and a *vaidya* (physician) by profession, gave birth to a daughter who was named Madhu. When

Madhu was able to speak, she began to say strange things, relating especially to hog's flesh. Though immensely surprised, the girl's parents ignored it, taking it to be a childish prank.

One day, Lakshmi Narain, the *vaidya* (the medical doctor, practising oriental medicine) went out, with the girl, to the railway station for a stroll. When the girl, Madhu, saw a train at the railway station, she shouted: "Papa, I was cut by this train." While saying so, the little girl made a sign by revolving the palm of her hand round her belly so as to suggest that her body had been torn into two pieces, Lakshmi Narain did not pay any special attention to Madhu's talk even then.

In the year 1973 A.D., on the day of the Holi festival, Lakshmi Narain Vaidya was sitting near the door of his house. There was a pile of wood-dust near his house. There, a sweeper came and said: "Vaidya ji, I want to take a little wood-dust." The Vaidya said: "What will you do with it?" To hide the truth from the Vaidya, the sweeper said "I will do something of my own with it." then the Vaidya said, "Tell me frankly and then I will let you have it." Being thus obliged to tell the truth, the scavenger said: "It is Holi festival today; I have killed a bear-which I want to roast with this wood dust".

The Vaidya understood and permitted him to take away wood dust. The little girl, Madhu, who was, at that time, standing near the Vaidya, was listening to the talk between him and the scavenger. When the latter began to remove wood dust, Madhu said in her half-articulate voice: "Papa, let us also go and eat ham to-day".

Hearing this from Madhu, the Vaidya was confounded but, recovering his calm, he said: "Why are you talking about ham? To-day is the Holi festival and tasty sandwiches are being cooked in the house You have never seen meat in my house; have you become stupid to talk of ham like that?"

Madhu mustered up courage and said: "Papa, you do not know, I am a sweepress. I have a house in Kankariya, also a daughter-in-law there. I have also my husband. There are some currency notes kept under the straw. My clothes are placed in the box of my daughter-in-law. I have buried some rupees under the ground also. The little girl, Madhu, said all this in one-breath. Hearing this, the Vaidya began to look at her with eyes full of astonishment.

The Vaidya is a social worker. He also owns a chemist's shop and is very sociable. He asked her many questions and Madhu replied to all

of them. He asked her where her husband lived and what his name was. She said clearly that her husband's name was Lallai and he lived in Kankariya locality. She said further that there was a *Neem tree* near her house, a *chabutra* (raised platform) as also a well and a cinema building. There was a big *nālā* (stream) besides, she said. To test Madhu, the Vaidya asked if she could recognise Lallai. Madhu hesitatingly said: 'Don't call him Lallai; he is my husband'. Further asked to name the members of her family, Madhu said, "I have many daughters, Vasanti for one."

I* came to know of this incident in July, 1973. I first met Shri Lakshmi Narain Vaidya who produced Madhu by way of proof. She was called to the Vaidya's shop, situated in the Chhaptatti locality of Mainpuri. Knowing that I was a stranger, Madhu felt a little inhibited at first. I gave Madhu a mango which she accepted. In the presence of the Vaidya, I asked Madhu many questions to which she replied correctly. Madhu showed great keenness about taking out the money she had buried under the earth in her previous birth as also about the bank notes she had concealed under the straw. She wanted also to take out her clothes from the box of her daughter-in-law. After my talk with Madhu, I went to the Harijan area of Kankariya locality. I was alone. When I asked about Lala Ram, the inhabitants of the locality were confused and said there was no such person. I asked if there was any scavenger, Lallai by name. There was silence. When I repeated the question, one of them said: "Yes, there was Lallai who lived here, but he is dead. "Since how long?," I asked. "Nearly two years," replied one of the inhabitants. Hiding my curiosity, I asked the name of Lallai's wife and where she lived. I was told that Lallai's wife, Poona, had died about ten years ago and that she had been cut off, on Ram Navmi day, by a running train.

After that, a large crowd of people gathered round me. When I wanted to know about the family members of Lallai, they began to be surprised and suspicious. When I reassured them, Lallai's son, Inder, came forward and told me all about his mother, Poona, and father Lallai. Vasanti, he said, had been married. She was very much liked by her mother, Poona, Inder admitted. Inder also showed his house. The *Neem tree* is very much there even today as also a raised earthen

*The author who contributed this article to the News paper

platform and an old well. I asked the people as to why and how Poona got cut off by a railway train.

Inder said: "Mother had gone to collect some charcoal pieces from the railway line. The passenger train from Shikohabad ran into her body, cutting it into two pieces. On my inquiry as to whether she had gone to the railway line to commit suicide by getting cut off by a running train, Inder said: "No, she had gone to collect coal, but was suddenly cut off by a railway train"

At this statement of Inder, another man, who was old, just smiled and signalled to me as if to indicate that it was not correct. I, however, dismissed the subject. Then I asked the inhabitants if Poona had been particularly fond of hog's meat. They all replied with one voice: "Yes, she liked that very much indeed." I met the Vaidya and also Madhu. Again I asked the latter who cooked the ham and where. At once came the reply from Madhu: "The ham used to be cooked by the daughter-in-law in a big brass vessel. Interrupting me, the Vaidya asked if she had no iron pans. Madhu replied, "No." I asked Madhu further where she had gone after being cut by the train. The little girl could not answer this question. To satisfy my own curiosity, I asked her again what kind of a man Lallai was and why he beat her. Madhu said: "He drank a lot; when I stopped him, he suddenly beat me with the broom-stick."

There is a great deal written about the re-incarnation of human soul in Indian books on philosophy and it will be unnecessary to discuss it all here. However, it will not be out of place to mention here that the *sanskaras* (propensities) of a man's previous birth do accompany him in the next. Meat and fish are not eaten by members of Madhu's family in her present birth and yet Madhu keeps recalling the relish of ham. The Vaidya told me another thing in this context. He said: "I arrived, one day, with Madhu at Mainpuri, to see an exhibition being held there. Madhu said, "Papa, buy me a *majira*'.¹" I asked her: "What for?" She said that she used to play '*majira*'. On the day of the Holi festival, her husband used to drink and dance, while his daughter-in-law beat *Dholak*² and she played '*majira*' in accompaniment. I returned to the Harijan basti in Kankariya where I called Inder. On my inquiry, Inder confirmed that, on the day of Holi festival, his father used to drink and

1. A kind of cymbal.

2. An Indian musical instrument.

dance merrily while his mother played 'majira'."

Now, these incidents of re-birth can be verified by anyone. These lead one to believe that there is an eternal entity, called soul which does not die when the body dies. This entity is not physical or material in its nature but is superphysical, metaphysical or spiritual. We cannot understand the order of the universe and the purpose of life unless and until we understand and believe that the soul exists. □

Out-Of-The Body Experience

"The soul is like a bird and the body is like a nest or a cage. The body may also be compared to a five-horse carriage or a motor car and the soul to a driver. The soul can move and act even without the body as a bird can fly out of a nest or a cage, or a man can walk out of his house, or even as a driver can move out of his vehicle. Remember that the body is like a caravan sarai which the soul will leave one day. Therefore, let there be no attachment with the body."

—God Shiva

BRAHMA Baba, the founding father of Brahma Kumaris institution, had, at one time, before he founded the great Institution, a vision of a human soul, moving out of the body at a tremendous speed and disappearing from the psychic vision in a split second. This was the soul that, in the embodied state, was known to people as Kaka Mool Chand, The maternal uncle of Dada Lekhraj—as erstwhile Baba was known¹. Kaka Mool Chand was a philanthropist and a dealer in articles, made of ivory, and passed away when Dada was out of the town. Dada saw this vision in a distant city. This vision supported Dada's belief, held by him earlier, that the soul is immortal and eternal.

We have also heard Brahma Baba explaining personally how he left his own gross body and, becoming discarnate, attained the holy, angelic, clairvoyant stage after facing briefly his physical indisposition. And, he now comes among us and, along with Shiv Baba, he imparts to us nectarian knowledge of high virtues and excellence of manners.

These instances of becoming discarnate, besides many others of like nature, prove, beyond an iota of doubt, the fundamental truth of soul's existence in the body, its after-life and out-of-body existence. One such event was reported by Sir Auckland Geddes² before the Royal Medical Society of Edinburgh on February 26, 1937. We will reproduce here-below an excerpt from it. This speaks of the experience of a man who passed through the gateway of death but, sometime later,

1 Ek Adbhut Jewan Kahani. Brahma Kumaris. Mt. Abu, India, page 24.

2 Dr. Geddes was knighted in 1977 and was elevated to the peerage in 1942.

came back to life. Medical treatment might have been one of the factors that brought him back to his body. The record of the experience of this man was taken down in shorthand by a proficient secretary as the soul was rehabilitating itself in the body. Here is the excerpt :—

On Saturday, November 9th, a few minutes after midnight, I began to feel very ill, and by 2 O'clock, was definitely suffering from acute gastro-enteritis, which kept me vomiting and purging until about 8 O'clock. . . By 10 O'clock, I had developed all the symptoms of very acute poisoning; intense gastro-intestinal pain, diarrhoea; pulse and respirations becoming quite impossible to count. I wanted to ring for assistance, but found I could not, and so quite placidly gave up the attempt. I realised I was ill and very quickly realised my whole economic position: thereafter, at no time did my consciousness appear to me to be in any way dimmed, but I suddenly realized that my consciousness was separating from another consciousness, which was also me. For purposes of description, we could call them 'A' and 'B' consciousness, and throughout what follows, the ego attached itself to the 'A' consciousness. The 'B' personality I recognized as belonging to the body, and as my physical condition grew worse and the heart was fibrillating rather than beating, I realised that the 'B' consciousness, belonging to the body, was beginning to show signs of being composite, that is, built up of "consciousness" from the head, the heart, and viscera, etc. These components became more individual and the 'B' consciousness began to disintegrate, and the 'A' consciousness which was now me, seemed to be altogether outside my body which I could see.

Gradually, I realised that I could see not only my body and the bed in which it was, but everything in the whole house and garden, and then I realised that I was seeing not only things at home but in London, in Scotland, in fact wherever my attention was directed it seemed to me;. . . **I next realized that my vision not only included "things" in the ordinary three-dimensional world, but also things in these four or more dimensional places that I was in. . .**

Just as I began to grasp all these, I saw "A" enter my bedroom; I realized she got a terrible shock, and I saw her hurry to the telephone; I saw my doctor leave his patients and come very quickly; and heard him quite clearly speaking to me on the bed, but I was not in touch with the body and could not answer him. I was really cross when he took a

syringe and rapidly injected my body with some thing which afterwards I learnt was camphor. As the heart began to beat more strongly, I was drawn back, and I was intensely annoyed, because I was so interested and just beginning to understand where I was and I was "seeing". I came back into the body really angry at being pulled back, and *once I was back, all the clarity of vision of anything and everything disappeared, and I was just possessed of a glimmer of consciousness which was suffused with pain*".³

Conclusions

1. The above report shows that consciousness can function outside the body. The patient has narrated that he saw his body as distinct from himself. He also saw "things" at home and, miles away, in Scotland and in London and wherever his attention was directed. This means that consciousness is not an epiphenomenon. It is neither a biochemical product nor it is a result of the work of brain. Not only can one think and feel but also 'see' and 'hear' outside the body, for the report says that the patient heard the doctor saying: "He is nearly gone". This evidence indicates that the reticular activating system (RAC) is only an instrument for receiving the external stimuli and sending the messages to the brain in the form of coded electrical impulses but, otherwise, it is this conscious person which really takes cognizance of the impulses and this person is called :*soul*.

2. Highest mentation when there is lowest cerebration

Another important thing worth noting is that because of an arrhythmic condition of the heart, called Fibrillation, the heart could not maintain the normal circulation of blood throughout the body and, under this condition, brain anaemia naturally occurs. And, finally, the brain ceases to function normally. In other words, cerebration either stops or is at its lowest ebb. So, if consciousness were a brain-function, it should now have been at its lowest ebb or should have extremely dimmed, but on the contrary, we find, from the report that as cerebration lessened consciousness so increased that the patient could see and hear from a great distance. This, therefore, clearly establishes that consciousness is the inherent attribute of an entity that is separate from the brain and can exist in discarnate form with higher stage of awareness.

3. Consciousness is limited by the brain

Since the patient has reported that the clarity of his vision and

3. The Scotsman, February 26, 1937. p. 16, Cols. 3-4

audience, etc. dimmed when the discarnate conscient person was sucked back into the body, due to its having been revived, by means of an injection, it shows that brain limits the consciousness when the soul functions through it. The brain enables it to have experience of only three-dimensional objects whereas outside the body, the soul can have multi-dimensional experience and can also have clairvoyance.

4—Thought and Volition are functions of the Soul

Since the patient could see, hear and feel angry while he was discarnate, i.e., outside the body, the fact is established that thought, perception, feeling, volition, memory, etc. are non-cerebral functions. It is not the brain that thinks and wills.

Further, the fact that the patient was unwilling to return to the body, shows that volition or 'will' pertains to the entity that can exist outside the body and is conscient.

5—The soul takes with it the past impressions

Since the patient had the memories of the past, such as how he had vomitted and purged and felt pain etc., and also he was angry when the doctor injected camphor and he was 'sucked back' into the body, it shows that the soul takes with it the impressions (*Sanskars*) of its thoughts, feelings and acts which may be dormant—as they do in most cases—or become manifest.

Though all these facts are very clear, yet when people of medical profession, or those who are well-versed in psychology, are confronted with such reports, they are unable to arrive at the conclusion that, besides the body, there is another entity, in which inheres the consciousness which manifests in the form of Will, Thought, Emotion, Memory, etc. But they have no material to deny the truth. If, however, one considers the cases, as the one reported above, without any bias, one will find that no other hypothesis but only that the existence of soul can explain such cases of discarnate consciousness and clairvoyance adequately and consistently.

Some, however, raise the objection that the travelling clairvoyance, etc. are hallucinations. In other words, the patient in the above case was not outside the body but his consciousness had separated temporarily from his habitation. This objection, however, is unsustainable because, in hallucination, one does not become clairvoyant. □

The Real Story of An Animal Reborn As An Animal

"A human soul re-incarnates in human species, and a soul of the animal kind reincarnates in the animal species. Souls of one kind differ from the souls of the other kind in respect of their innate abilities and potentialities—their mind and their Sanskars or predispositions. Each one reaps the fruits of its past actions in its own kind. Being of human kind, a man ought, therefore, to have behaviour and qualities far above the animalistic one"

—God Shiva

Just as the genes of the human kind are different from the genes of pigeons or cows or elephants, even so the souls, in which is coded the plan and the potentialities according to which it takes a human body, are different in respect of mind and Sanskars (predispositions) from those of all other kinds. As the living or the animate kingdom is different from the non-living or the inanimate matter so also are souls different from Matter, but, further, they differ among themselves, not only each one from the other one but also each category from the other wherefore we find that, in the manifest world, not only does one man differ from every other man but mankind categorically differs from other categories and kinds of living beings. The law of karma works in this setting; every soul reaps the fruits of its actions in its own kind and is, therefore, reborn in its own kind—a dog in the dog family and a man in the human kind. Below is given a narrative about the rebirth of a dog. We are giving this here not with the intent of proving that a dog is reborn as a dog—though it substantiates this doctrine also—but to give a story of rebirth from the animal kind also further in extension of the stories of rebirth of human beings which have heretofore been given. We will give the reasons for the reincarnation of souls of each category in its own kind later in another chapter; here, in giving the story of rebirth of a dog, our main aim is to reinforce our stand that all does not

perish with the cremation or burial of a body but there is a soul in every living being which continues to exist even after that and which, generally, takes another body to manifest itself.

We have been reading, from time to time, news-reports about children telling verified or confirmed facts about their past lives. In almost all cases, such reports are about rebirth of human souls in human bodies. But, sometime ago, there was published, in *Nav Bharat Times*, a *New Delhi Hindi Daily*¹, the event of rebirth of a bitch into the form of a bitch. This report confirms the belief that human souls are reborn in human form and *souls of animal species take rebirth in the animal kind*². But the question is how we can know it for sure that this is a case of rebirth—the difficulty in this case is that we cannot talk to dogs nor can they talk to us. In the case of human beings, there is generally no language-barrier and one can cross-examine a child to get at the truth. But, plus point in favour of animals is that they cannot tell lies or try to play fraud with us as a grown up human being or a tutored child may try to befool. And, in the present case, the reader will, probably, see that it seems to be a fairly reliable event of animal rebirth in animal species.

The incident relates to America. A gentleman, named Mr. Edward was driving towards California. Accompanying him was his wife, Anne. As they were passing by a suburb, their bitch, Doxy, got excited. The excitement was extraordinary. The couple was driving at 70 kmph. and, before anyone of them could understand the cause of her unusual and sudden excitement, Doxy jumped out of the car's window. Fortunately, she was not hurt—she got up as soon as she fell and then ran towards a farm which the car had just left behind.

Edward stopped his car immediately and the couple now chased the bitch. Further on, they noticed that Doxy was trying to cross over or pass through a barbed wire-fencing to enter the farm and to proceed towards a hut that stood on one side of the farm. An old woman stepped out of this hut and, as soon as Doxy saw this aged lady, she hopped out of the lap of Anne (who had now taken her) and, crossing over the fence, began to kiss and lick lovingly that old woman.

She did just as pet animals do when they meet their owner from whom they had got separated. After expressing her glee at this

1. *Nav Bharat Times*, New Delhi, dt. the 24th March, 1976.
2. There is some difference between 'the species' and 'the kind'.

meeting, she entered the hut and then, going out of it, she ran towards the farm.

And now starts the most noticeable and peculiar of all events.

There was a machan in the farm and a ladder was affixed to lead up to it. In a trice, the bitch ran up this ladder as if she was already used to it by virtue of following some daily routine. Those, who have a dog or a bitch as a pet, know how difficult it is for a dog, ordinarily, to do this. When Doxy got up the machan, she began to move about as if she was in search of something. Edward had followed Doxy up and had now picked her up and got down the ladder.

After sometime, when all were sitting and having tea, Mrs. Woodford, the old lady, told the following story :

About six years ago, she had a bitch, called "Queen". She had given birth to pups on this machan in December, 1948 in severe winter. Her son, Robert, had, therefore trained Queen how to go up the ladder. Queen had delivered her pups on the machan perhaps thinking it a safer place.

Two days after Queen's delivery, Robert went back to his college and Mrs. Woodford suddenly got intimation of her husband's admission into a hospital after a serious accident. She, therefore, instantly left for the hospital. In this state of hurry and disturbance, she did not notice that Queen was having her food in the kitchen. Mrs. Woodford could not return before two days had passed.

How must have Queen's mind yearned to see her pups?—one can only imagine it! As soon as Mrs. Woodford opened the door on her return, Queen rushed out to the farm and began to hop up the ladder and reached the upper end of the ladder where it joined the machan. This spot was covered with a thin layer of snow. As soon as Queen put her front legs on it, she slipped down on an axe below and that caused her instant death.

This is, in brief, the case-history of Doxy. Keeping all this in mind, one could say that it might well be that Queen had taken rebirth in the form of Doxy, for her age now was six years. Else how could one explain Doxy's sudden jump from the racing car into the direction of the farm, through the barbed wire fence, and approach Mrs. Woodford and lick her lovingly and then rush up to the Machan *via* the ladder, all so briskly as if one were rehearsing or repeating one's routine act? □

It is the eternal soul which attains Knowledge

"It is the soul which has the ability of cognition and retention or memory. It is the soul which learns or forgets. If one learns the truth about the self and becomes soul-conscious and forgets the evil one can attain deity status in the kingdom of heaven."

—God Shiva

In order to judge whether there is a soul, we have to see whether there is a conscient or sentient entity that has its existence apart from the body. One of the ways of enquiring into this can be to see whether the person who perceives, observes, understands or learns is an **eternal** being. If there is an eternal being, then the existence of soul would, at least theoretically, be a proved fact, because the body is mortal. Now in order to examine whether, in principle, the existence of an eternal being is necessary to our life as we live it, we may examine, for instance, how we learn, for learning is an important act of a conscient being.

So let us consider, for a moment, how we acquire knowledge. The view commonly held is that knowledge originates from observation. But, in fact, this is only partly true for, in actual practice, *knowledge is always a modification of or addition to our earlier knowledge*, however crude, rudimentary, elementary or full of gaps our previous knowledge might be. If there were no earlier knowledge, an observation, by itself, would not lead to any new knowledge. In fact, without earlier knowledge, observations, in the usual sense of the term, would not even exist, for, without earlier knowledge, one would not have the wherewithal to understand or interpret what one observes.

Now, if our this view about acquisition of knowledge is correct, as in fact it is, then it evidently, leads to infinite regress, for our present knowledge is due to modification of or addition to our previous knowledge and our previous knowledge was, in its turn, due to

modification of or addition to still previous knowledge so on *ad infinitum*. Thus, in final analysis, our knowledge ultimately goes back to some in-born basic knowledge-potential. Considered thus, we arrive at the conclusion that, besides the brain, there is some unborn, primeval, self-conscious knowledgeable eternal entity, called soul.

Let us consider a concrete example. A boy goes to a zoo. When he reaches a particular cell and observes the animal therein, his guide tells him : 'this is a camel.' Now, since the boy has earlier knowledge of other animals—a crow, a horse, a buffalo for instance—he acquires the knowledge of what a camel looks like, by applying some modifications or additions to his previous knowledge of other animals. This process of acquisition of knowledge has been going on since early childhood so that one would have to admit of some previous knowledge-potential even at that age and the pre-natal stage, or the state before birth.

This leads us to the conclusion that there is an eternal conscient entity, called 'The soul'.

Propensities or tendencies exist as eternal nature or Sanskars of the Soul

That the souls are eternal, can be proved by means of another premise also. We have already given some cases of rebirth. Now since every person is born in a family different from that of the other, and has different idiosyncrasy, mental constitution, complexion and form of body, and is born in different environments and to parents having different monetary conditions, etc., etc., as compared to others, his these differences must be explicable on the basis of certain spiritual laws.

The Gita explains that the manifestation or descent of a soul in a particular body, family and environment depends upon the soul's earlier impressions or predispositions, resulting from its past births. According to the Gita, the next life of a being is determined by what resolves he has at the time of its death. Thus, each birth can be explained on the basis of the understanding that the same soul has taken several births in the past. Therefore, if we go on considering births in continual regression, the series will extend to infinity. For, this birth is due to certain predispositions resulting from past births which

again are each due to certain predispositions and so on *ad infinitum*. Our consideration of the cause, underlying each birth, will lead us, at last, to the time when the soul first descended from its unmanifest abode (*Brahm*), called *The Soul World*.

But the Gita points out that even the first birth also was according to the soul's nature or *Swa-bhava* (Propensities, peculiar to the self). For, though at the end of one world cycle (*Kalpa*), the souls get emancipation from their past vicious actions and abide in the Soul-World, in a state characterised by 'stillness' or tranquility of mind, yet the *Swa-bhava* (nature) of each individual soul persists to be, however in the latent form.

Therefore, it should be remembered that the individual nature, impressions, inclinations, tendencies, etc., are the eternal 'bearing' of the soul. From the time a soul descends on this World Drama Stage, its latent thoughts or desires and ideas or idola begin manifesting. Since then, there continues to be a constant transflux of thoughts or volition so that, by the end of the World Cycle or *Kalpa* the whole chain of the merged *Sankalpas* (thoughts) having been completed or fully transmitted and manifested in the creative play on this Field-of-Action, the soul starts again. in the next *Kalpa*, from where the chain of its merged thoughts began manifesting in the previous *Kalpa*—the World Cycle. Thus, this repetition goes on endlessly in cycles'.

As such, the thoughts or volition (*Sankalpas*) and inclinations are eternally the part and parcel of every soul and, in this sense, every thought or act of the soul is reflexive. This also shows that the souls are eternal so that they do not start learning from a zero level.

Instincts prove that soul is eternal

The concept of instincts of curiosity, gregariousness, self-preservation, etc., which many psychologists have discussed, can also be properly understood if the soul is considered as eternal, for these instincts cannot be considered to have origin. McDonald and others who have discussed the subject in detail, have expressed the opinion that one cannot trace when the instincts were born; they are inherent though, sometimes, latent. Considering all these factors, one comes to the conclusion that souls are eternal and plural or many, and each has its own latent potentialities.

Having understood, in this way, that the self is an eternal entity, different from the body, one should be soul-conscious, for body-consciousness is based on ignorance and, therefore, is the root of all sufferings. One should have this consciousness : I am eternal and immortal. I am non-physical and am a self-luminous entity. I am a point of conscious light who can elevate myself by attaining righteous knowledge.”

□

Body and Mind or Consciousness

"The body is constituted of elements of Matter. Consciousness or Thought is neither an attribute of these elements nor of any combination of them. Consciousness is an attribute or manifestation of a non-physical or a spiritual entity, called soul."

—God Shiva

THERE has been an age-old controversy about whether body and mind are two separate entities or Mind is an epiphenomenon of the body, its nervous system and the brain. In the East, the sages pondered over this question deeply and, on various counts, came to the conclusion that there is, in every living body, a conscient being or experient or personality which continues to exist even after the body is cremated. They called it : *Atma, Purusha* or *Kshetrajna*, i.e. the self or the indwelling *soul*. In the west also, many philosophers have discussed the question threadbare and have given weighty arguments to establish the reality of the existence of a conscious person, apart from the body. Since the question of the existence of the metaphysical entity, called *Mind* or *Soul*, is very important, it would be beneficial to consider it once again in the light of modern science.

In the light of Modern Science

Physiology tells us that bodies are made up of cells which, in turn, are constituted of molecules. It further says that the cells of our bodies are constantly changing so that, in a period of about seven years, the old cells change so enormously that, at the end of that period, one can say that all those cells have been 'replaced' by new ones. There is now not a single cell in one's body which there was seven years ago.¹ Thus, body is not the same as it was seven, fourteen or twenty-one years ago. For example, at my physical age of fifty years, my body has undergone at least seven 'renovations'. During this period, there have been

1. Annie Besant, *Psychology*, 2nd Edition, Los Angeles, California : Theosophical Publishing House, 1919, pp. 230-232.

enormous changes in my brain cells also. But, as far as my consciousness (implied by the words *I am*) is concerned, I feel the same person now as I felt seven, fourteen or twentyone years ago. I remember the friends I had when my body was seven years old or the books I read when the body was fourteen years of age, and this evidently, implies that one same conscious entity (which I am) has continued to exist throughout this period. *This therefore, shows that 'Consciousness' and 'Body' are two different entities and that while the latter changes, grows or decays with age, the former maintains its identity and continuity.* Contrariwise, if a person be considered as a mere body (brain included), the fact of his *continuous* identity and continuous consciousness cannot be explained, for the cells of his body and brain have changed tremendously after every seven years.

Two different realities

Furthermore, one can clearly observe that body and consciousness are two entirely different realities, for, while the body tires, the consciousness does not, it may however get bored only. **The body may get exhausted of physical energy whereas the Mind or consciousness may feel inexhaustibleness of psychical, metaphysical or spiritual energy and may, in fact, grow with the years. While the body ages with years, the Mind gets only wiser or more experienced. The heart, which is a part of the body, may grow weaker with age but the consciousness or Mind may grow in its power to love or hate. Thus, the two are different entities; whereas the body is cellular and molecular, i.e. physical and is subject to laws of chemistry and physics and physiology, the Mind, Consciousness or soul is psychic, spiritual or metaphysical.**

Medical and Clinical Evidence supports this truth

Some people believe that consciousness is a product of the brain but, if we study medical and clinical cases of patients who suffered brain injuries or disease, we come to the conclusion that the medical evidence also supports the fact that consciousness is a separate entity. Vincent H. Gaddis, in his article, entitled '*With Brain Destroyed, They Live and Think*', in an issue of the *Fate* magazine,² has given many

2. Vincent H. Gaddis, "With Brain Destroyed They Live and Think", *Fate*, Vol. 1, No.2, Summer, 1948, p. 81.

examples of persons, who, with their brains either partially or wholly destroyed, continued to live and think normally.

Mr. Phineas Gage, a railroad foreman, who, while charging a hole with powder, preparatory to blasting, suffered the accident of having a three-and-a-half feet long tamping bar driven completely through his skull. Mr. Gaddis says that the bar "passed through the left anterior lobe of the cerebrum and made its exit at the junction of the coronal and sagittal sutures, fracturing the parietal and frontal bones and breaking up considerable portion of the brain." When the bar was removed, it left behind it a hole, three-and-a-half inches in diameter and yet Mr. Phineas Gage, the railroad worker, did not lose his consciousness. On the contrary, he walked a considerable distance for obtaining medical aid. It is recorded that he remained sensible and rational until recovery and lived normally afterwards, for many years. To-day, the original bar, together with a cast of the skull of Mr. Phineas Gage, is on exhibition in the Harvard University Medical Museum.

Prof. G.W. Surya reported the case of a man who had been insane for many years but who suddenly became normal a little before his death. Prof. Surya says that "The autopsy revealed that there was practically nothing of the brain left in his brain pan. A pathological process had gradually destroyed its substance, but the mystery of his return to normalcy remained unexplained."³

In Dr. Gustave Geley's book, "*From Unconscious to the conscious*", is mentioned the case of a young boy who died in full possession of his mental faculties, although, due to an active abscess, involving the entire cerebellum, this encephalic mass was completely detached from the bulb—which is a condition equivalent to literal decapitation. Dr. Gustave has given many such cases in his books which leads one to infer that there is a conscient entity apart from the brain and that brain is only an instrument or a mere switchboard.

The clincher proof which can settle the controversy at rest and can clearly establish that consciousness is not an epiphenomenon of brain is the example of amoeba. Amoeba has no brain nor does it have any special organ for remembering. But, it is a known fact that, in its own way, it has its *memory* wherefore it can *learn*, though after several **repetitions**, to approach its food and to avoid irritants. Mast and Pusch,

3. Quoted by Vincent H Gaddis op cit

in their work 'Modification of Response in the Amoeba' have stated that Amoeba learns wherefore it gets used to certain stimulations.⁴ Thus, it is clear that the soul can think, feel, remember and learn even without a brain though brain is a useful instrument for better manifestation through the body. It would, therefore, be wrong to say that *consciousness* is a product or an epiphenomenon of the brain. Consciousness, in truth, is an attribute or manifestation of soul.

There have been news reports of cases of birth of babies without brain. The birth of one such baby was reported in Oct., 1984. The baby had brainstem but it had no grey matter and white matter.

We will further show, in the next chapter, that thought and Mind are metaphysical in their nature. They are not material or physical. Therefore, the identity of the self is metaphysical or spiritual: it is not material or physical.

4. Amoeba, being unicellular, cannot be said to have any brain. This is true of virus or small microbes also. However, they may have such molecules which help retention or transfer of certain learnt traits.

The Thought and the Thinker

—both are Metaphysical

“Thought is the basis of all actions and it is the soul which thinks through the mechanism of the brain. Good thoughts bring one peace and evil thoughts result in mental tension and peacelessness. One should, therefore, know the self—the Thinker—and should purify the thoughts so as to be in peace and to spread vibrations of peace.”

—God Shiva

THE existence of Thoughts, Ideas and Consciousness is an indubitable fact of human experience. Every human being thinks and every living being has consciousness and, therefore, the existence of Consciousness and Thought is a well-established and irrefutable fact of life. Every human being has at least some knowledge and knowledge can be stated, in simple terms, as a system of ideas, concepts, thoughts and experience. So, the existence of knowledge implies and proves the existence of ideas, concepts, thoughts and experience.

The Nature of Thoughts

But thoughts and Ideas, or Concepts and Knowledge, or Experience and perceptions are not physical things. Their existence is not like the existence of a chair or a motor car. Chair and car occupy space but Thoughts and Ideas are spaceless. Chair and car deteriorate with the passage of time; they get worn out and, ultimately, get destroyed. But ideas and concepts may not necessarily get destroyed or emaciated by Time. Instead, they may get more currency and may become more known in course of time.

Again, a chair or a car may be destroyed by means of fire, or by being hammered into bits and pieces, but ideas are such subtle and non-physical entities that they cannot thus be destroyed. In fact, if a person tries to destroy an idea, a concept or a system of Thought and Knowledge by opposing, refuting, criticising, resisting, ridiculing or contesting it, it is likely that it will get more publicity and will spread more widely and get deeper and firmer roots. If we don't make any

attempt to wreck the car or the chair, it is likely to stay intact but silence, non-action, oblivion, overlook or non-discussion of an idea may kill and wreck it. Thus, the existence of Ideas and Thoughts, or Concepts and Knowledge of Perceptions and experience is unlike the physical existence. It is metaphysical in its nature. Thoughts and Ideas are relatively more permanent and lasting. One may destroy a chair but one cannot easily destroy the *idea* of a chair. That is why one is heard saying: "You can kill me but you cannot kill my beliefs."

Let us give some more points of contrast between the nature of existence of these two entities so as to make the matter more clear:

If I think a thought again and again, it gets well set. If I use an idea again and again, it becomes more mature. But the more I use a chair or a car, the more is the wear and tear. Physical things get emasculated by more use whereas Thoughts and Ideas become more clear, deep and strengthened by more and better usage.

Secondly, if I give away my chair or my car to someone, it no longer remains with me. But if I think loudly unto others or if I pass on my knowledge to other people, my knowledge remains undiminished. *If I spend money, I am left with that much less but if I spend my knowledge, I do not lose even a small fraction of it. Rather, I should say that Knowledge increases by expenditure. More and more people to possess knowledge without my losing even a small bit. Evidently Thoughts and Ideas or Knowledge and Experience are metaphysical entities. So, they are not and cannot be the by-products of either the brain or the body.*

Thoughts and Ideas are not by-products of the brain

But there are people who say that thought is an epiphenomenon of the brain or a by-product of some processes in the braintissue. For example, Carl Vogt has said that Thoughts are the secretions of the brain as bile is a secretion of the liver! Obviously, people who have this belief, fail to appreciate the fact that brain is a physical entity which operates according to the laws of physics and chemistry whereas Thoughts and Ideas are metaphysical or non-physical realities and, therefore, brain cannot produce the Thoughts because of this great incompatibility of their very nature. If thoughts and Ideas were physical entities, we should expect them to conform to physico-chemical laws but they do not because they do not have physical existence. There is another way of understanding this truth.

Those who believe in the cerebrocentric theory, i.e. those who hold the view that ideas are production of the brain, say that every Idea, Thought or Experience corresponds to some synaptic connection in the brain. In other words, for every Idea, Thought or Experience there should be a related synapse in the brain. But Thoughts, Ideas, Perceptions and Experiences are *infinite*. Does one have *infinite* synaptic connections in the brain? No.

There is no doubt that the neurological capacities of the human brain are almost astronomical. The physiologists say that everyone of us possesses around ten billion brain cells and that everyone of these cells can be in relationship with as many as 25,000 others. Thus the number of possible associations is of the order of ten billion raised to the power twenty-five thousand—a quantity which, according to physics, is larger than the number of atoms in the universe, but it is not infinite as the number of thoughts and Ideas, etc. is. For example, the Mind can count to ten raised to the power of infinity but there aren't as many corresponding synapses.

This is however not to deny that the function of thinking is connected with the brain but 'connection' does not mean that it is the brain which produces the Thoughts even as the connection of light in a florescent tube does not mean that it is the florescent tube that produces light, or the connection of the movements of the wheels of a cycle with its pedals, flywheel and chain does not mean that it is the pedal or the flywheel or the chain that produces the movement. In the former case, we all know that, it is the Power House or the electric Generator from which the electric current comes though it manifests in and through the medium of the florescent tube whereas, in the latter case, it is the rider who pedals the cycle. Likewise, Thoughts, Ideas, Concepts, Perceptions and Experiences manifest through the medium of the brain, the nervous system and the body but their source is the metaphysical *soul*.

Ouspensky has given another simile to explain this connection of the Thoughts, Ideas and Experience with the brain. He says that the brain is a sort of a prism and Thoughts, Ideas, etc. are broken white light of psychic or spiritual energy, passing through it.¹ Of Course, this light

1. P.D. Ouspensky. *Tertium Organum. The Third Cannon of Thought. A Key to the Enigmas of the World.* Third American Edition. New York, Alfred A. Knopf. 1945. p. 164.

or spiritual energy comes from the metaphysical entity, *the soul*.

Sir Charles Sherrington, in one of his lectures at Oxford University explained this connection by means of another beautiful simile. Says he, ". . . grown up with the animal, the brain fits the motor mechanism of the animal as a key fits its lock."² In this simile, it is, obviously, the Mind or the soul which turns the key.

While this makes the relation between Thought and Brain amply clear, there are those who either assert that "*Thought or Consciousness is but another name for subvocal speech*" or a product of the molecular processes in the brain tissue or that '*ideas are mere sensation*'. We will first take up the former view.

Thoughts are not a product of molecular processes

It seems that those who consider Thought as subvocal speech or as a product of the molecular processes of the brain, perhaps, confuse the electrical impulse in the brain tissue as synonymous with the Thoughts or they identify Thought with those molecular processes which generate electrical impulses that are set up by the sensations. If these people keep in mind the difference between the *physical* and the *metaphysical*, they would fairly-well appreciate that Thoughts are non-physical things and can, by no stretch of imagination, be identified with the electrical brain-impulses or molecular processes—though the sensory messages are carried to the brain and (through the brain) to the soul by means of electrical impulses or molecular processes. Let us explain this difference by means of an analogy.

The musical notes from a guitar are produced by means of vibrating strings of the Guitar. But one should not forget that these are being produced by the musician—the person who is playing the instrument. It would, evidently, be wrong to say that the music is a product of the vibrating strings and that there is no producer apart from the Guitar. Likewise, the molecular processes and the electrical brain impulses are merely the vibrations whereas it is the soul which, like a musician, uses the brain as an instrument to produce, to interpret and to appreciate the Thought. To consider Thought as the by-product of molecular processes or as sub-vocal speech in the form

2. Vincent H. Gaddis has quoted this in "With Brain Destroyed, They live and Think"! Fate, Vol. 1, No. 2, p. 82, Summer, 1948.

of electrical brain-impulses would be, as Mr. Paulsen says, merely 'tampering with language'. We quote Paulsen more elaborately from C.J. Ducasse's book. Ducasse has strongly refuted the view that Consciousness is the by-product of molecular processes. Here he quotes Paulsen :

"... no evidence ever is or can be offered to support that assertion, because it is in fact but a disguised proposal to make the words 'thought', 'feeling', 'sensation', 'desire' and so on, denote facts quite different from those which these words are commonly employed to denote. To say that those words are but other names for certain chemical or behavioural events is as grossly arbitrary as it would be to say that "wood" is but another name for glass, or 'potato' but another name for cabbage. What thought, desire, sensation, and other mental states are like, each of us can observe directly by introspection; and what introspection reveals is that they do not in the least resemble muscular contraction, or glandular secretion, or any other known bodily events. No tampering with language can alter the observable fact that thinking is one thing and muttering quite another; that the feeling called anger has no resemblance to the bodily behaviour which usually goes with it; or that an act of will is not in the least like anything we find when we open the skull and examine the brain. Certain mental events are doubtless connected in some way with certain bodily events, but they are not those bodily events themselves; the connection is not identity."³

Thoughts and Ideas are not Sensations

Now let us discuss the view of those who say that thoughts are nothing but sensation or sensory stimulations. Who can deny that even when our senses are not in contact with their objects and when there are no sense stimuli, we can and we do create mental images, make plans and have ideas? All our Thoughts and Ideas are not the result of stimulation of sensory messages or sensations. No doubt, sensations provide, in most cases, the raw material for thinking. But Mind, Consciousness or Soul has the power as well as the ability to reconstitute them into ideas. Or, Ideas may even suddenly flash on our Mind. Or, as we say, our Mind may hit upon an idea, formulate a

3. C.J. Ducasse: 'The Empirical Case for Personal Survival, in *Body, Mind and Death*. New York, Cromwell Publishing Co., 1964, pp. 223-224.

concept, think deeply upon a sensation and may interpret a sensory message and yet decide to defer action on it. Thus, Thoughts and Ideas are a different order of existence; they are metaphysical in nature and, even though they are connected with sensations, they are not another name for sensations.

The difference will become more clear if we ponder over this question: "What sensations correspond to space, time and number? What sensation is the mathematical number 1 or 2 or 5?" Obviously, these and such other concepts, ideas or thoughts are not sensations. Man thinks; he is a thinker. It would be wrong to say that he merely senses. It is the soul which interprets, understands, appreciates and acts on the sensory messages or sensations.

This known fact is noteworthy that the cerebrum itself registers no sensation. It cannot sense and feel. For example, it cannot feel pain. No sensations can be aroused in the cerebrum. It would, therefore, be wrong to say that ideas are centrally aroused sensations. Well, even if they be, the question is who transforms these sensations into ideas? The answer would be that Mind, Psyche, Consciousness or Soul does it. So, soul is an entity, different from the brain.

However, there have been some philosophers who have said that the self does not have any entity or existence apart from perception. They have said that the Mind is a kind of theatre where several perceptions successively appear. We will examine this statement and see whether Mind is a perceiver or a bundle of perceptions only: whether it is a succession of perceptions or it has a permanent entity which perceives and is capable of perceiving.

Is man a bundle of Thoughts or an epiphenomenon of Brain?

“Thoughts and perceptions successively and constantly make their appearance and they pass, repass and glide away because soul, the conscient entity is constantly there. The constant appearance of thoughts in a succession or a chain does not show that Mind is a process but that Mind or soul constantly processes the stimuli or the sensory messages and perceives and reacts to them. So consider yourself not a process or a bundle of successive thoughts but as one who observes this process and succession and is a subject and object of these”—God.

EVERY human being thinks or is capable of thinking. Of this truth, there can be no refutation. But the question is : “What is the relation between *the thought* and *the being* ? In other words : “Is this being a thinker or he is merely an *observer of Thought* ?” By understanding the relation between *the Thought* and *the Being*, we will be able to understand the nature of *the Being* or *the self*.

Am I a thinker or a thought, a perceiver or a perception ?

Descartes, a German philosopher believed that it is the being or the self that thinks. He thus proved the very existence of soul on the premise that thought exists. He said : “*cogito ergo sum*”—“I think, therefore, I am”.

However, David Hume, a famous British philosopher refuted the above argument. Referring to Descartes and to other philosophers of his line of thinking, Hume says : There are some philosophers who imagine we are every moment intimately conscious of what we call our *self*; that we feel its existence and its continuance in existence; and are certain beyond the evidence of a demonstration, both of its perfect identity and simplicity... For my part, when I enter most intimately into

what I call myself, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch my self at any time without a perception, and never can observe anything but the perception. When my perceptions are removed for any time, as by sound sleep, so long I am insensible of myself, and may truly be said not to exist. And were all my perceptions removed by death, and I could neither think nor feel, nor see, nor love, nor hate, after the dissolution of my body, I should be entirely annihilated, nor can I conceive what is further necessary to make me a perfect non-entity. If anyone, upon superior and unprejudiced reflections, thinks he has a different notion of himself, I must confess I can no longer be with him. All I can allow him is, that he may be in the right as well as I, and that we are essentially different in this particular. He may, perhaps, perceive something simple and continued which he calls himself; though I am certain there is no such principle in me. Setting aside some metaphysicians of this kind, I may venture to affirm of the rest of mankind, that *they are nothing but a bundle or collection of different perceptions, which succeed each other with inconceivable rapidity, and are in a perpetual flux and movement.*"¹

So, to Hume, man is nothing but a mere bundle of different perceptions and thoughts.

Hume further says: *The mind is a kind of theatre, where several perceptions successively make their appearance, pass, repass, glide away, and mingle in an infinite variety of postures and situations. There is properly no simplicity in it at one time, no identity... The comparison of the theatre must not mislead us. They are the successive perceptions only, that constitute the mind; nor have we the most distant notion of the place where these scenes are represented, or of the materials of which it is composed."*

Thus, according to Hume, mind is a kind of a theatre where perceptions of heat or cold, love or hatred, pain or pleasure pass, repass, glide away and conglomerate and yet Mind is not a place; it is constituted of successive perceptions only !

The flaw in Hume's argument

It should not be difficult to understand where Hume, the philosopher, has erred. The basic flaw in his arguments is that he has

1. Treatise of Human Nature. B.K. 1. Part IV, page 251.

made no distinction between the perceptions and the perceiver or the thoughts and the thinker. Hume wrongly considers the perceptions as the self or the mind whereas the truth remains that Mind or Self is the Perceiver or Thinker. Perceptions or Thoughts are the manifestation of consciousness or awareness of the self. Without a self-aware Mind, thoughts or perceptions cannot occur. Thoughts and perceptions are, so to say, the pulsations, vibrations, expressions, gesticulations of consciousness or the self, or they are the reception, registration or catchment of vibrations and stimuli. The difference between the self (Thinker) and thought is as between a river and its waves or between a designer and a design or a doer and a deed, though this difference. is not to be understood in any gross sense. If Hume had not cast this difference away, under the influence of an impulse, as it were, he would have, like the metaphysicians he has criticised, believed that there is a self or a soul underlying all perceptions. Let us examine Humes statement.

The self is also the observer of perceptions

Read again the italicised portion of Hume's statement. Hume says: "*I never can catch myself at any time without a perception, and never can observe anything but a perception.*" This means that I am an *observer* of perceptions, or I am always *with* (i.e. never without) a perception. Evidently, it implies that I have my entity separate from the perceptions, for one who observes is different from that which is observed. Similarly, one who is *with* something is himself different from that something. The self is *never without* a perception because perception is an ability of the conscient self but the self is not the perception even as good smell is a quality of a rose but rose is not the same thing as its smell.

If Hume had kept this in mind, he would not have stated that, during sound sleep, the self may be said not to exist for, in fact, the self is there but only perceptions, which are a function of the self, have ceased, or the self has ceased to observe perceptions. If a carpenter ceases to make furniture, it would not mean that the carpenter has ceased to exist.

Further, who says : *I am certain*, there is no such principle in me..." To be *certain*, after observing many perceptions means that I am an *observer of perceptions* and, having observed, I think and formulate a conclusion. Evidently, this one, who observes, applies rational sense

and arrives at a decision, is not a perception but a perceiver and is also an observer of perceptions and is a thinker. When he is in sound sleep, he ceases to observe perceptions and to formulate conclusions but, nevertheless, he continues to exist, and can start from where he had left before sleep.

**A Bundle or collection of perceptions is not possible
without the self**

In his statement, Hume asserts that the self is nothing but a bundle or collection of perceptions. But the question is: "If there is no permanent self to experience the thoughts and perceptions and to notice the order or sequence in which one thought follows another, then who is it that comprehends the thoughts as a 'collection' or as a 'Bundle' which terms imply more than one thought? Who is it that notices and says: "This thought had come to me previously also and keeps coming to my mind again and again?"

Again, think on this statement of Hume: "When my perceptions are removed for any time, as by sound sleep, so long as I am insensible of myself, and may truly be said not to exist." The question may be asked: "If on falling asleep, one ceases to exist, who is it that, on waking up, says, for instance, before he went to sleep, he had been thinking of writing an essay on the 'Nature of Mind'? In other words, who is it that remembers what has been going on before sleep and who also says that he had a sound sleep. Evidently, there is a permanent self who existed before sleep and exists after the sleep and who has memory of the past events and has the ability to link that to the present so that there is continuity of thought process and there is also a personality, an individuality and the identity of being.

Hume tries to explain this continuity by saying that the different perceptions succeed each other with an inconceivable rapidity and are in a perpetual flux or movement. He gives the example of a theatre where scenes, projected by a cinema film, succeed with such rapidity that there seems to be continuity of movement. Drops of water in a river also are divisible and separate but they seem unified because of flow. Thus, according to Hume, a steady flow creates the illusion of continuity. But the question is: "If the unity or continuity that is observed in all mental images is no more than the sum total of changing thoughts, then who suffers this illusion? Or who understands that this is an illusion? Moreover, who understands that continuity is due to rapid

flow or succession of perceptions? Hume does not answer these questions.

In fact, there is a great inconsistency in his views. On the one hand, Hume says that each perception is independent of the other and that the continuity is a mere illusion and, on the other hand, he says that the self is a *bundle or collection of perceptions*! He thus contradicts his own assertion.

Further, if one reads the above statements of Hume, substituting the words "a bundle or collection of different perceptions" for the words 'I' and myself wherever these have been used, one will find that the statement becomes amusing. For instance, read the following :

"...When the bundle of perceptions enters most intimately into what the bundle of perceptions calls the bundle of perceptions, the bundle of perception *always* stumbles on some particular perception or other of heat or cold, light or shade... The bundle of perceptions never can catch bundle of perceptions at any time without a perception. When bundle of perceptions are removed for any time, as by sound sleep, so long bundle of perceptions is insensible of bundle of perceptions, and may truly be said not to exist.."

We have replaced the words 'I' and 'my' in Hume's statement with the words 'bundle of perception' in consonance with Hume's own conviction that the self or 'I' is a bundle of perceptions. Now this makes it clear that the existence of the self as an entity cannot be brushed aside without endangering the very meaningfulness of one's statements or the validity of knowledge. The belief in the existence of the self is indispensable, for, without it, all statements would become redundant and ridiculous.

Memory cannot be explained in the absence of a permanent self

We all know well that, besides the perceptions, every human being has memory. If there is only a rapid succession of perceptions then who has the memory or the faculty of recollection? Let us explain this question by means of an example.

Suppose that I saw a boy twenty years ago. There was a

perception of his form and figure. Now, after this long period, during which millions of other perceptions have taken place, I see him again. The boy has grown up to be a man in the meanwhile. There is a perception of this man now. The question is who compares and matches those two perceptions and notices the similarities and the changes ? If there have only been perceptions and there was no permanent perceiver, then who links up the past and the present perception, choosing it out of millions of other perceptions ? If one ceases to exist during sleep each night and comes into existence as a perception or as a bundle of perceptions each morning, who was it that recollected a perception that is now twenty years old ? Physically, I am not today what I was yesterday or, say, twenty years ago. Considered as a perception also my existence is not what it was twenty years ago. But the knowledge is vouchsafed only to that person who has observed the boy today and also twenty years earlier. This, therefore, proves that there is a permanent self who perceives and recollects.

It is really a wonder that Hume should have failed to experience the presence of self. He himself states that when he looks into himself, he finds thoughts coming and going, but he conveniently forgets that this '*himself*' constitutes *the self*, the thinker the perceiver, the knower or the one who remembers and recollects.

Hume's Theory cannot explain the process of knowing and storing of knowledge

One can appreciate this fact on the basis of one's daily experience that the process of knowing involves (i) perceptions or receiving the impact of a thought, stimulus or information (ii) classification of this information or experience (iii) associating it or comparing and contrasting it with other information (iv) assimilation or retention and (v) improvement or refinement, development or growth. But these subtle processes can occur only if there is some permanent psychological or conscient entity which has the will or motivation to accept knowledge, the ability to appreciate or evaluate, to understand and comprehend it, the ability to retain it and make use of it. It not only learns and stores but experiences and applies knowledge to practical situations so as to avoid the feeling of pain and to have the result in the form of happiness. This entity which, to say in one word, has consciousness, is the *soul* or *mind*. If one reads and reads again the statement of Hume, one would find that it is, in fact, this permanent self which has found expression in the words '*I*', '*myself*'

'me', etc. Otherwise, who says : "I am certain...", "I may venture to affirm... etc. ? Is it the bundle of perceptions which is certain or which ventures to affirm ? No. it is the permanent self, the conscient being which says this and which also uses such phrases as : "I must confess..." All I can allow him..." etc. etc.as have been used in Hume's above statements. And, the reader should know that because of the opposition to the reality of his own existence, Hume is not at peace with himself as will be evidenced by his own statements :

**A philosophy that denies the existence of soul,
leads to peacelessness**

It should be noted, in this connection, that Hume has himself stated in his writings that, because of his disbelief in the existence of the soul and also because of his this philosophy, he was in deep melancholy and delirium. He says, in his book : "Most fortunately it happens that, since reason is incapable of dispelling these clouds, nature herself suffices to that purpose, and cures me of this *philosophical melancholy and delirium*, either by relaxing this bent of mind, or by some avocation and lively impresssion of my senses which obliterate all these chimeras. I dine, I play a game of backgammon, I converse, and am merry with my friends, and when, after three or four hours' amusements, I return to these speculations, they appear so cold and strained and ridiculous, that I cannot find, in my heart, to enter into them any further."²

Thus Hume himself has confessed that his philosophy gives to man's mind a state of melancholy and delirium. He has called his philosophy as '*speculations, cold and strained and ridiculous or Chimeras*'. He has said that he does not want to enter into these speculations any further. But it is a pity that many laymen who have not gone fully into the views of Hume, and who do not know that Hume himself confessed about his melancholic and delirious state of mind and that he called his these speculations as chimerical and ridiculous, follow his 'philosophy' and take to his line of thought for refuting the belief in the existence of the soul !

Others say that Mind or Thought is only an epiphenomenon of brain. Though many of them are neither neurologists, nor brain scientists, yet they say it with so much conviction as if they had opened

2. Hume's Treatise of Human Nature, B.K. 1, Part IV; 7 Aikins Philosophy of Hume—Vide Roger's A Student's History of Philosophy, Page 384.

a man's cranium and had seen thoughts emerging from the brain as smoke emerges from the fire. They should know that, in medical history, doctors have given instances in which a patient had little or no brain and yet he felt and thought and worked.

Mind is not an epiphenomenon of the brain

Dr. Gould and Dr. Pyle reported a case who suffered from a cerebral tumour that ultimately caused his death. Autopsy revealed a five-inch long cavity in the brain of this man. The patient, nevertheless, had his sense and locomotor muscles in perfect control upto the moment of death. Until two weeks before his death, this man had also been memorising poems, which showed that this memory worked even though the tumour had destroyed much part of his brain.

Dr. Hufeland of Germany reported the case of a man whose skull was found to contain nothing but a little water. However, his mental faculties had remained pretty normal until his death.

Vincent, H. Gaddis, has reported in *Fate* magazine, Vol. I, No. 2, 1948, the case of a male infant, born at St. Vincent's Hospital, new York City, in 1935. The infant had lived for 27 days without a brain and yet reacted to stimuli, defying all orthodox concepts of physiology which say that it is the brain which thinks.

Moreover, it has been found that, sometimes, surgical removal of many parts of brain, *i.e.* the brain-substance, instead of crippling mental functions, brings about some improvement. The author of this article had come across the report of a case, published by The American Psychiatric Association, a number of years ago, but does not remember where he had read that report. The case of a woman whose entire right prefrontal lobe and most of the left lobe had been extirpated by means of a surgical operation. The report said that the patient became more even-tempered and her powers of concentration and memory had improved.

The object of this writing is not to deny the importance of the brain or to say that the brain has absolutely nothing to do with thought and perception but to establish that the conscient entity is different from the brain and to say, in the light of what has been discussed above, that the soul exists and that the brain and the body are merely the instruments for perception, action and feeling.

Let us first discuss about the pronoun 'I' used in Hume's above statement. Hume has said: "When I enter into what I call myself, I always stimulate on some particular perception or the other, of heat or cold, light on shade, pain or pleasure . . ." We want to ask: "what is this 'I' that stumbles on a perception and is able to observe and recognise that it is a perception of heat or cold or light or shade? Is it itself a perception? If it is itself not a perception but an observer and recogniser of perceptions, then I am not a bundle of perceptions. If it be said that this 'I' also is a perception, then the question is: "Of what is this 'I' a perception? Of heat or cold? Moreover, can one perception in a bundle perceive other perceptions and, separating itself from all the rest of them, scrutinise each one of them, name them and recognise them as a bundle? On what basis or for what reasons is the perception, called 'I' different from all other perceptions in the bundle?"

A little introspection will lead us to the conclusion that 'I' is not a perception but an observer of perceptions. It is a being who perceives and names and recognises each and every perception. This 'I' is conscious of itself and also of all the perceptions. The perceptions are neither conscious of themselves nor of each other. The perception of heat, for example, is neither aware of nor recognises the perception of cold or of light or darkness. It cannot say: "I am the perception of heat, nor can it sort out other perceptions and say: "This is the perception of light". It must, therefore, be known that the pronoun 'I' is for the conscient self which is a perceiver and not a perception. The term 'I' is not used for the shifting scenes or perceptions that present themselves before, or impinge on, the consciousness; it is used for one who is aware or is influenced by those perceptions. The perceptions or conceptions are his; he himself is not a perception or a bundle of them.

Again, the stories of their past lives, told by many subjects, under hypnotic regression also corroborate that the soul has an eternal entity. We shall now discuss this subject in the light of the experiments in the field of hypnotic regression and mediums.

Memories of past lives, revived in hypnotic state

and also cases of apparition and of the use of mediums establish the existence of the soul

THOUGH in some countries in the East, hypnotism is still considered as something mysterious, it has achieved scientific status in the West. Now psycho-analysts in most countries commonly use the method of hypnotic recall of forgotten memories. In order to unearth the possible causes of a patient's mental illness, they employ hypnotism so that they can know details of forgotten events and can, then, reconstruct these details to understand what happened. Hypnotism is now a recognised therapeutic method also. It is now taught as part of a regular course in many medical colleges, such as in Salpetriere and Nancy in France. In fact, it is only those who are ignorant of its being a scientific technique who look on it with skepticism or suspicion.

What is Hypnosis?

The hypnotic condition, brought about by hypnotism, is called *Hypnosis*. Howard Warren, in his dictionary, has defined Hypnosis as "an artificially induced state, usually¹ resembling sleep, but physiologically distinct from it which is characterised by heightened suggestivity, as a result of which certain sensory, motor and memory abnormalities may be induced more readily than in the normal state."²

Different uses of Hypnotic state

Hypnotism is used for different purposes. One of these is to render a patient's body insensate to pain so that critical operations may be performed on it without the use of ordinary, i.e. chemical anesthetic. The other use of hypnotism is to make a person hypersensitive. Yet, in many other cases, hypnotism is used to make a person to recollect past memories. We will first discuss this last one.

In this last-mentioned hypnotic state, a person can be made to have a

1. The hypnotic state is *not* always a kind to sleep.

2. Howard C. Warren, 'Dictionary of Philosophy'. Cambridge, Houghton Mifflin Co., The Riverside Press, 1934, p.128.

journey back in time and to revisit the past scenes. He is thus able to recall very accurately the past. He relives, so to say, his past life and is able to reconstruct, involuntarily, the details of sight, sound, taste, touch, smell, etc. of the past scenes and happenings.

Hypnotic Regression

This journey back into time by means of hypnotism is called '*Hypnotic Regression*'. The psychiatrists became aware of the possibility of taking a patient far-far back in time and even to past life, by chance. Taking clue from earlier researchers, like A.D. Wiersman and Van Kraff Ebbing, who were successful in regressing their subjects to their period of childhood, De Rocha³, a psycho-therapist tried it on some of his subjects to regress them to still earlier period and, to his amazement, he was able, in 1904, to regress a girl of eighteen-years to the time of her birth. Feeling encouraged by this, he tried the technique to see if he could take his subjects to previous life⁴. Since then many psychiatrists, psycho-analysts and psycho-therapists have adopted the technique of hypnotic regression and verified the incidents reported by their subjects.

Some cases of hypnotic regression, reported in the Monthly Mirror

A case was reported in Sept., 1982 issue of the Monthly 'Mirror', published from Bombay. Its reporter had interviewed J.V. Rao, a hypnotist based in Dadar, Bombay. Mr. Rao mentioned a curious case of regression. A Christian girl of 18, in a hypnotic show in Bombay, started speaking Italian. She revealed that, in one of her previous lives, during the period of Mussolini, she had been born as a man in Italy. She narrated how her that life had ended by a road accident. After the hypnotic state was over, she could neither utter Italian language nor could she narrate even a single incident which she had stated while in hypnosis. In her present life, she had never gone out of India. She did not have even the slightest notion how Italian language sounds.

Two other clear cases were mentioned in the September, 1982 issue of the Monthly "*Mirror*" One of these related to a well-known

3. De Rocha.

4. C.J. Ducasse, "The Empirical Case of Personal Survival", in *Body, Mind and Death*, The Cromwell Publishing Co., 1964.

American lawyer who professed to be a hard-core atheist. When he was hypnotically regressed, he gave out the details of his former life as a prostitute. The other case relates to a high-class french lady. In the state of hypnosis, she revealed that she had been beheaded in her previous life. She said that she had been detected to have been carrying on a clandestine love-affair with a Britisher and this became the cause of her being murdered.

Some other cases mentioned in various books

Professor Theodore Flourney wrote a book about a curious case of hypnotic regression after having verified the truth of its details from very old documents. This case has been mentioned by Professor McDougall also in the book: "*An Outline of Abnormal Psychology*".

Prof. Theodore Flourney of Geneva University once hypnotised a Swiss girl. She gave details of her past-life. Prof. Flourney then suggested to her to recall the earliest of times she could. She said that she had been born as a very loving and dear daughter to an Arab Chief. She even mentioned that her name then was Simandanee. She then began to speak in Arabic language very fluently. She also said that she was married to a Hindu Raja, called Sivruka. She further said that she knew Indian dance. She even began to demonstrate her first-hand knowledge of it. She also mentioned that she can clearly see how her husband was busy constructing an excellent fortress, called Chandragiri. She mentioned all these and many other details as if she was seeing these on a celluloid screen or as happening these to herself. The investigation of the case confirmed the veracity of her statements.

The case of Jan Evans and other cases reported by Arnall Bloxham

Jeffrey Ireson has mentioned in his book "*More Lives than One*" (*Pan Books, 1977*), the cases reported by a British hypnotherapist, Mr. Arnall Bloxham who applied the technique of hypnotic regression on more than 400 cases. In 1939, Arnall Bloxham hypnotically regressed Jan Evans, a married woman, aged 43 years. This lady was able to recall as many as her six previous lives. She gave details of her life as a nun in Maryland, U.S.A. She even mentioned that the end of her this life came in 1920. When regressed further, she could recollect her life as a sewing girl in London during the reign of queen Anne. This was

from 1615 to 1714. She then travelled further back in time and said that she was an Attendant to Catherine of Aarazon. this was between the years 1485 to 1536. Earlier, she was servant to Jacques; her that life ended in 1451. Still back in time, she was a Jewish lady in York, and the earliest period she could remember was 286 A.D. when she was the wife of a tutor in Britain under Roman Empire.

Among 400 cases of Arnall Bloxhan is the case of a person who said that he, in one of his previous lives, watched the execution of Charles I at White hall in 1649. Another case is of a Welsh lady who described vividly the massacre of Jews in York in twelfth century.

The case of Varvara Ivanva

Another very interesting case is of a Russian hypno-therapist, Varvara Ivanva, herself. She once met a Russian psychiatrist who told her that learning Arabic language was very easy. This statement stirred curiosity in Ivanva's mind. She tried regression on that Russian therapist. It was discovered from the facts revealed by him in the state of hypnosis that he was born an Arab in his previous life wherefore he found Arabic easy. This man gave clear details about his social and family life, his environment, and his actions of the past life. In that state, he could read and write Arabic with great ease. This well-known Soviet psychiatrist never before gave any credence to the possibility of true and verifiable facts being revealed by hypnotic regression. But now that he himself gave facts in that state, he was convinced of the scientific nature of the technique. It will be further interesting to know that hypnotic regression was then tried on Ivanva herself and she revealed that she had been a Brazilian in her one life and a German in another life⁵.

Similarly, Dr. Ian Stevenson has conducted many cases of Hypnotic regression.

Reports found true after Investigation

It is worthy of note that the revelations made in the state of hypnosis have, in a number of cases, been investigated and verified. Suppose a person, when regressed, gave details of his or her previous life in Spain or Italy or USA, and these related to the fifteenth century. The details of dresses, the eating habits, the social customs, the political and economic conditions, the geographical location etc., relating to the events were enquired from the subjects, who, in the normal state, could

not give even a small bit of such information and who had never visited that country or read about those times. *These details came out to be true. The technique of hypnotic regression is, therefore, now considered to be scientifically established because these revelations are verifiable.*

If Memory is a phenomenon of the brain, how can one remember past lives?

Presently, many theories are current about Memory. We will deal with them in some details in the chapter, titled '*Brain, Memory and Soul*'. Here it would suffice to say that, according to man, Brain-Scientists, long-term memories are encoded in the neuronal connectivities in the brain. They say that synaptic connectivities of nerve-cells in the brain serve as the memory-store. Others link memory with RNA in the brain. Still others say that hippocampus plays an important role in memory-consolidation. One thing common to all theories is that they consider memory as a function of the brain.

Now an important question, relating to the memory in these cases of hypnosis is: "If memory is a function of the brain-substance, how can a person give details of *past lives*? Memory is generally considered to be the *preservation, recall and recognition* of the past events or experiences. **If these are the functions of the brain, how does the present brain-substance or hippocampus or RNA preserve, recall and recognise the events and experiences of long-past periods? The fact that a person under hypnosis can retrieve, recall and recognise events of the distant past and of past lives shows that each person is a non-physical conscient self who does not die with the body.** It is this conscient metaphysical being who retains the memories of the past in dormant form though it uses, in its each life, the brain as an instrument for expression or an aid for present preservation even as a person keeps a notebook or a diary as an aid.

How does one see physically non-existent persons?

Again, those who believe that *Thought* and *Memory* are the result of merely physico-chemical processes or that these are the outcome of

5. A noteworthy point is that, out of thousands of hypnotically regressed subjects, not a single one has, as yet, stated that he or she, in one of her previous lives was a bird or an animal. In other words, the subjects have, invariably, given details of rebirth in human form and not of transmigration.

brain-functions, cannot explain how one sees persons and things which are now physically non-existent. The physiological explanation of visual perception does not make it clear how one gets the perception of such objects, in the state of hypnosis, as are not seen by one's physical eyes.

According to physiology, rays reflected from an object impinge on the retina. There is the vibration of nerve-cells and there is nervous stimulus and this stimulus travels through the optic nerve to the optic lobe and this is how one gets a visual perception. But, in hypnosis, of which some cases have been mentioned above, the object is physically not present and, therefore, there is no question of light being reflected from it and then impinging on the retina. It is only the suggestion of the hypnotist that brings about or awakens the perception of the past. This suggestion is, evidently, *non-physical* and must, therefore, awaken a *non-physical* being—the soul. The suggestion also—though it is conveyed to the being through the mechanism of brain does not stimulate the person's visual apparatus nor does it produce visions by stimulating any such part of brain as may be considered to have been the storehouse of the memories of *past lives*. Hypnotic regression, therefore, establishes the truth of the existence of the metaphysical self or soul.

The soul is not only different from brain but brain puts limitations on soul

In fact, hypnosis clearly establishes that brain and body put limitations on the expression of consciousness. The cases of exaltation of senses and the mental capacities in the state of hypnosis clearly bring out that the brain and the nervous system are not the causative sources of mental life but are, instead, delimiting factors.

Cases of Exaltation of mental capacities

In Du Prel's book, *The Philosophy of Mysticism*⁶ and Dr. Haddock's book *Somnolism and Psychism*⁷ is mentioned the case of Madam Lagandre. Annie Besant of theosophical society also has referred to this case⁸. Madam Lagandre made use of her hypnotic (or

6. Du Prel: 'Philosophy of Mysticism,' English Translation by C.C. Massey, London, 1889.

7. Haddock: 'Somnolism and Psychism,' London, 1851.

8. Annie Besant, *Psychology*, Supra, pp. 212-213.

somnambulant) clairvoyance to diagnose the sickness of her mother, shortly before the latter's death. She told in that state that the right lung of her mother had shriveled up and that there was water in the cavity of the heart. A post-mortem examination of the body in the presence of Dr. Broussard M. Moreau, Secretary to the Surgical Section of the Royal Academy of Medicine, Paris, and another doctor, Mr. Chapelin, revealed exactly the same condition as Madam Lagandre had described under hypnosis. The question is how here senses and mental abilities got exalted to such a stage that they could discover this?

J.B. Rhine, in his book *'The Reach of the Mind'*⁹ has mentioned the experiments performed by Sir William Barrett, an English physicist and by Dr. Alfred Backman, a Swedish physician, who reported that they suggested their hypnotised subjects to project themselves mentally to distant scenes and objects and bring back information as to what happened there. On verification, these were found to be true. This information was unknown even to the investigators and, therefore, could not be attributed to telepathy.

Evidently, in all these cases, the hypnotised person had better mental abilities and perception and it can be said that what they revealed could not be revealed in the 'normal' or ordinary state when a person uses his or her nervous system and brain-mechanism.

Cases of blocking of vision

A strange kind of phenomenon that may occur in hypnotic state is what may be called 'Oblivion' or *'The blocking of the Vision'*. Binet and Fere, in their book *'La Magnitisme Animal'* (meaning: Animal Magnetism) have given many cases of this type. Some of these have been referred to by Annie Besant, in her book *'Psychology'*¹⁰. One of these relates to a hypnotised subject who was told, in her state of hypnosis, that she would not be able to see Mr. A. When she was brought back to her normal state, she could not really see Mr. A who was just in front of her. At this point, she was told: "Alright, you may now go and rest." She proceeded towards the door through which she had to pass in order to go to the other room so as to take rest. Now though Mr. A stood in the

9. J.B. Rhine: *'The Reach of the Mind'*. William Sloane Associates, Inc., 1947, New York.

10. Annie Besant: *Psychology*. 2nd Edition, 1919, Theosophical Publishing House, Los Angeles, California, pp. 210-211.

middle of this doorway, she was unable to see him and, therefore, she lumped against him. Even then she did not take notice of him. She made a second attempt to pass through that door without, as yet, being able to see Mr. A. She struck against him again and became alarmed. She could not even now see what this blockage of the door was due to. She however refused to go again through that door.

At this stage, a hat was placed on the head of the person A. The lady could not see the person A but saw only that hat! She was very surprised, for she thought that the hat was suspended in the air! Now the person A took off his hat and saluted the lady several times. The lady was all the more surprised for she saw the unsupported hat making curved movements in the air. Mr. A now put on a cloak. She now saw the cloak moving and taking the form as though some person was wearing it. She cried: "Ha! it is like a hollow puppet!" Even now she could not see Mr. A's face, etc.

Now this blocking of vision is inexplicable in terms of physiology and also psychology, based on physiology. The person A was right in front of the lady, the rays of light were reflected from Mr. A. towards the lady, the optic nerve and optic lobe of the lady were alright and the stimulus was also there but, despite all this, she could not see Mr. A! While in the cases of hypnotic regression, the object and scenes were absent, the hypnotised person was having the visual perception and, in the case, cited above, the person A is there and yet there is no visual perception! Both these kinds of cases show that Mind or Conscient Being is an entity different from the brain though brain may be its seat. If the conscient person is not different from the brain, why is he unable to see when he is not a blind person? Evidently, the inhibition is not of the physical nerves but of the non-physical Mind. Even though the inhibition of certain parts of the brain or visual mechanism is there, it is in fact the non-physical Mind which received the suggestion and which is now using the inhibitory mechanism so that it cannot see the person A. The hypnotist, by giving the suggestion, has influenced the conscient person and has thus persuaded it to control its perceptive faculty rather than the visual mechanism. In other words, it has blocked the perception rather than the physical processes or instruments.

Scientific investigation establishes the truth of existence of soul

Scientific investigation of the physical state of a hypnotised person, who shows exaltation of mental abilities, substantiates the truth that the conscient being is non-physical and is different from the brain.

It can be seen that the heart-beat of a hypnotised person is very low and the movement of the lungs also becomes slight. The brain condition of the person may be compared to the state of coma because there is low blood-flow towards the brain. In medical terms, the brain should, therefore, be refractory to excitation. Physiologically speaking, the brain, to a great extent, is now inactive. It is not responsive to stimuli. So, if it is the brain which causes Thought or has Memory, the brain now being in a state akin to coma or inactivity, there should be no thought or expression of thought. But we find that, on the contrary, the brain-activity intensifies and there is also the exaltation of the person's mental faculties. How is it in this state of cerebral torpor or inactivity, the person becomes sensorily more active and his consciousness uses *its abilities in a better way. Evidently, it shows that thought is not an epiphenomenon of brain and that Mind can operate better without it and that Mind is, therefore, different from Brain and is non-physical.*

Cases of paralysis also show that soul is separate

Not only the cases of exaltation of mental abilities in hypnosis but also those psychological cases which show paralysis of sensation such as the case of the Australian soldier, mentioned by W.B. Pillsbury,¹¹ also show that soul is different from the brain. The Australian soldier at Gallipolo was firing through an embrasure when bullets struck, many times, the right side of his face, near his head. After this, he could no longer see with his right eye. On examining him, it was found that his tissues were perfectly normal. So, the question was: "When body-mechanism of visual perception is operative, why can't the person see? The visual parts of the body are not paralysed; why is then no vision taking place?" *The answer naturally is that the mind is so paralysed that it has inhibited the perception. This clearly shows that Mind (or soul) and Brain are two different entities and that Mind is non-physical.*

Above we have discussed the cases of hypnotic regression and also the hypnotic state in which a person's mental abilities increase

11. W.B. Pillsbury: "*The Essentials of Psychology*". Macmillan Company, New York, 1930.

manifold. We have also mentioned the case of psychological inhibition. Besides these, the cases of the discarnate or disembodied souls speaking or acting through a medium or appearing as spirits or phantoms unto corporeal beings also show that there is a metaphysical being in the body who survives physical death.

The use of a medium to communicate with a discarnate person

It has also been this time-honoured belief that the spirit of a dead person may speak through the lips of a corporeal person (medium) in trance, when his near and dear ones invoke him into the body of a medium so as to enquire about his welfare or to get an important information from him. Sometimes it may be the disembodied spirit who left the body suddenly and had no chance to speak to the relatives and who, therefore, now wants to communicate to some dear ones. In India, there was a tradition, in the past, to communicate to a discarnate spirit through the medium of a Brahmin, for, in the remote past, Brahmins were expected to lead a holy and spiritual life, untouched by malice, violence or other unethical traits so that some of them had the power to be a *medium*. Even until half-a-century or a century ago, some people invoked the discarnate spirit into a tripod or asked it to use a planchette, etc.

In this connection, it would not be out of place to mention that, when a person serves as a medium, it is the spirit that controls the brain, the nervous system and the muscles and uses the medium's body to serve as an instrument. However, while some 'mediums' or 'sensitives' are conscious or their being under the control of the discarnate spirit, others are unconscious of it. Edgar Cayce is well-known example of a sensitive. Swami Abhedananda of Rama Krishan Mission has discussed some of such cases in his book.¹²

It will be appropriate here to refer to the case of a five-year old girl, Alexandrina Samona. She was the daughter of Dr. and Mrs. Carmelo Samona of Palermo, Sicily. She died of meningitis in Palermo, Sicily, on 15th March, 1960. Her death caused great agony to her parents. After three days, her mother in a dream saw the dead child Alexandrina, assuring her that she would be re-born in the family. She heard as if she was saying, "Mother, do not be in grief, for I shall come again". Three days after this dream, the same dream recurred in seances through a

12. Swami Abhedanand: "*Life beyond Death*", Ramakrishna Vedanta Math, Calcutta, 1971.

medium to the communicators. They announced that twins will be born. And, in about a year, Mrs. Carmola Samona gave birth to twin girls. One of these had a very conspicuous resemblance to Alexandrina and was now named Alexandrina II. She had not only physical similarities but her personality traits or functional features were also like Alexandrina-I. A long list of similarities has been given of the two, that gives the impression that they had identical physical and mental features. Some of these are given below:

- 1) Both had indifference to toys and dolls.
- 2) Both had resentment to cheese so much so that she did not even touch cheese if it had the least taste of cheese.
- 3) Both enjoyed altering people's names for sheer fun.
- 4) Both maintained meticulous tidiness of hands & legs.
- 5) Both pulled out the stockings from the drawers in the bedroom to play on. . . .
- 6) Both were left-handed
- 7) Both had facial asymmetry
- 8) Both had Hyperamia of the left eye
- 9) Both had similarity of appearance and size
- 10) Both had slight seborrhoea of the right ear.

It is mentioned further in this case that when Alexandrina II grew to be of eight years, her parents had suggested to her that she go with them to Monreale. At this, she said that she had seen it earlier but, actually, her parents had taken her to this place for the first time during her this present life as Alexandrina II. In order to convince that she had visited it earlier, she recalled a great Church with a huge statue of a man whose arms were thrown open. She also mentioned some other scenes. These were, however, visited by Alandrina-I.¹³

Evidently such verified cases point to the existence of non-physical self which survives physical death.

Apparitions of the dead

Mention may also be made of apparitions of the dead. There are innumerable stories current in almost every country. There has been a belief, since very early times, that those who die prematurely because of some accidents or sudden and unexpected causes hover about in

13. G. Delance, Documents pour Servir a L Etade de la Reincarnate a Evitions de la B.P.S., Paris, 1924.

the atmosphere in subtle forms for varying periods. Many such stories have been published in books¹⁴, reputed periodicals also from time to time. Author's own friends also have vouch-safe to the fact of apparition. He knows of a lady whose husband after his death used to visit and haunt her in subtle form during night and to disturb her. Arthur Hill, in "*Accounts from physical Research*" has mentioned what was reported by Driessen. Driessen, one night, after putting out the candle in his room, heard the sound of footsteps in the next room. He became suspect. In order to check up, lighted a match stick and to his surprise, he saw in the form of a phantom his father-in-law, who had died nine days earlier. He abhorred this apparition because he did not have happy relationship with his father. However, he had the boldness to ask him "Why are you here? whom do you want?" To this, the phantom replied: "At times, I acted wrongly against you. Please forgive me. I feel restless to think of my wrong actions and will be happy if you forgive me". The spirit then pointed upwards, perhaps to say that Driessen should forgive him in the name of God. At this Driessen answered: "God is my witness that I never had anything against you. Then the figure of the Phantom bowed and vanished.

Besides such cases of apparition of the dead, there have been hundreds of thousands of cases of haunting. In "*Footballs, On the bounday of another world*" is mentioned an interesting case of an English army officer who fell in love with a young canadian lady whom he enticed and seduced and then abandoned. This broke the heart of the devoted lady when she found that the officer disappeared from the country. She was in such a despair that she ultimately died. After her physical death, her spirit haunted the army officer wherever he went. She constantly knocked at the windows and the doors of the room in which he slept and did many other things so that the man's life became miserable.

This author also knows the case of an Indian lady whose husband after death, used to visit and haunt her during the nights. Many cases of haunting are reported in periodicals from time to time. These present an additional evidence that there is a spirit or a soul inside the body which does not die when the body dies.

Over and above this, are out-of-the-body experiences of such

14. i) James H. Hyslop, Science and future life. ii) F.W.H. Myers, Human Personality and its survival of bodily death.

persons who were pronounced clinically dead but came back to normal life once again, and also the experiences of past life as related by children in their new life. We have dealt with these in a separate chapter. Here, however, we would like to mention one common feature found in hundreds of cases investigated by Dr. Raymond A. Moody, Jr. and recorded in his book 'Life after Life'. These cases relate to persons who were on the throes of death and were clinically pronounced dead but who came back to life.

Dr. Moody has recorded that the departed soul witnesses a loving, warm spirit of a kind he has never encountered before: a being of light appears before him". In the presence of this Being, the departed person feels obliged to make an evaluation of his life in terms of his good or bad acts and thoughts. There is then an instantaneous play back of the major events of the dead person's life. For a couple of seconds he gets absorbed into this sequence of events that project themselves unto him in a flash as it were. And, suddenly, he "somehow re-unites with his physical body and lives", and tells that he saw this Being of Light. Moody has said that 'the experience affects his life profoundly, especially his views about death and its relationship to life'.¹⁵

We will discuss this encounter with this **"Being of Light"** in some greater detail in the second volume of this series but we would like to point out here that such-like experiences, related by many are an evidence on after-life and on the existence of a Supreme Soul and also of a soul which sometimes comes back after leaving the body and is, thus, known as a non-physical being. It is this non-physical being or the *soul* which thinks and has memory.

We must also put on record here that we ourselves are witnesses to the discarnate spirit becoming manifest through a corporeal medium. Most important of these all is the fact that the author has personal experience of the incorporeal Supreme Soul becoming manifest through a human medium, Prajapita Brahma. Many are witnesses to this truth. In truth, our belief in the existence of Supreme Soul is based, besides other factors, on this as a very important fact.

We will now discuss, in the next chapter, the nature of Thought and Mind so as to have more clear understanding of the self, soul or mind.

15. Raymond A. Moody, Jr., *Life After Life*. Bantam Books, New York, 1977.

Mind and Matter

WHAT IS MIND & WHERE DO THOUGHTS COME FROM ?

“You are not a body made of Matter nor are your thoughts the electrical impulses of your brain. You are a super-physical entity, called soul, whose thoughts and actions have a moral dimension.”

—God

TIME there was when Matter and Energy were considered to be separate things. But later researches in science revealed that atom which, until then, was believed to be the smallest and indivisible particle of Matter, consists of electrons, protons, neutrons, etc., which are infinitesimally small sparks of energy. It was discovered that atom could be split up to release or unleash energy. These findings worked as a major break-through in the sphere of science and, coupled with some other discoveries, brought into their wake uncountable scientific inventions.

Research into the theory and practice of electronics and into the field of different forms of Energy, such as Light, Sound, Electricity and Magnetism, enabled the ingenuity of man to take further big strides into domains, previously unknown to and unheard by Human Thought. All this resulted in a state of highly sophisticated scientific contrivances and inventions such as spaceships, computers, television and a million other things.

A Harmful Bias

While all these researches greatly enlarged the field of man's thought, broadened his vision, rang the death-knell of superstition and blind faith, yet they resulted in giving a harmful bias also to man's thinking. Man became a little more conceited and he became more and more engrossed with the pursuit of material things and, in this mad race after machines, computers and electronics, he even forgot about his own real *identity*, so much so that he began to look upon himself also as a mere robot or wobot.

The things have now reached such a stage that many people now do not believe in the existence of soul; they believe in the existence of Matter or various forms of Energy only. They think that man is nothing but brain, functioning through the nervous system and the body. The brain, they say, is comparable to a computer and is worked by electrical impulses. It all resolves to this that man is only a complex form of Matter or a complex form of material energy or both combined. In that case, nothing else remains for which need there be for any moral sanctions, ethical code, political constitution, social norms or economic discipline. Then all talk of life's goal, man's aims or a nation's objectives also becomes meaningless. It is like man disbelieving his ownself or Thought disbelieving its own source or man committing his own spiritual suicide.

Is thought a form of Material Energy?

Science has, no doubt, landed man on the moon, yet it remains to be answered rationally by scientists and other wise people as to what mind is. If Mind is the name given to Thought, then one would like to ask: "What is Thought? Is thought also a kind of energy?" If it be said that the mechanism of brain converts the electrical impulses into thoughts, then one has to explain what 'emotions' and 'feelings' are. The sensory nerves, we all know, carry only the messages to the brain, to the grey or the white matter and record changes in it, but who it really is who receives those messages and perceives those changes? No doubt, brain is the main instrument for perception, control, command and recollection, yet who it really is who operates through this mechanism? Further, how will one explain the parapsychic experiences, like precognition, premonition, ESP, etc.? Who it really is that narrates events about past life or that forecasts the future?

Again, what has one to say about the stuff that Thought is made of? Is thought really a form of material energy? If that be true, then thought, like all energy, has mass and is also propagated. Further, if thought is propagated, it surely has some velocity of propagation. Can anyone say what the velocity of Thought is? Can anyone give the mass or weight of Thought?

Has Thought any dimensions of time?

The latest theories of science consider the speed of Light as the ultimate top-speed of the universe. The Light, they say, takes about eight minutes to travel from the sun to our earth. After one has carefully listened to the latest findings about the sun, one can sit back and try to recapitulate these facts. It surely takes much less than a minute to think

of the sun. Does it not mean then that Thought flies to the sun in a matter of seconds? How does one explain this if one considers Thought to be a form of material Energy?

Moreover, all will agree on this that Thought is abstract and dimensionless because we can imagine the sun and the far-off galaxies and the regions beyond the galaxies within almost the same time. Also, Thought cannot be construed or reckoned in scientific terms because it can fly into the past and the future, the dimensions of which cannot be covered in the concept of velocity. One can only guess and say that the velocity of Thought is multi-umpteen billion years per impulse. But, one really must confess that, despite all the fund of knowledge of mind that psychology has placed at our disposal, one does not clearly know what Thought or Mind is. One can only wish that God had not kept so much to Himself. But if God had not kept certain things to Himself, man would have been only too arrogant about it all.

The Mystery exploded

Now, let it be known to all that God does not keep all this to Himself. At a certain point of time in world history, He does share this knowledge with man and one should be pleased to know that He has already revealed this esoteric knowledge and has already exploded the mystery about Mind. He has explained it at length that Mind is not Matter nor Matter is mind. Thought is not a form of material energy. It emanates from the conscious and superphysical and supernatural entity, called soul. Soul has no mass, no weight. Thought or Mind does not have the velocity that can be measured in scientific terms, for Thought is the basis of all kinds of measurements rather than a measurable thing. The soul, from which the thought arises, has no time-dimension; it is eternal. So, the Thought can traverse all barriers of time and go to events of the remote past or reach the realms of the distant future. Mind is only another name for the consciousness of the soul. It refers to that faculty of soul which manifests in the form of volition, will, attention, cognition, etc. Thought is a conscient or a spiritual energy which also has a moral dimension and which perceives and expresses sentiments and emotions.

What kind of energy is Thought?

If Thought were a form of material energy, it could cause sensations but not feel the sensations. For example, Sound takes the form of intelligible and meaningful words or melodies but sound itself

cannot understand the word or appreciate the songs. Light can enable a person to see a man's face and sound communicates to him certain words uttered by the latter, but it is Thought which enables him to understand with what intention or what background and feeling those words were uttered and what inner sentiments were reflected in the speaker's face. Evidently, by its very nature, Thought is unique. It is not made of stuff the other forms of Energy are made. It is an energy that knows other forms of energy; it is an immaterial entity which feels various forms of Matter and Energy and yokes all of them to serve its purpose and to give it happiness.

Some may opine that thoughts are only certain kinds of electrical impulses of very small voltage and of a particular kind of frequency, generated by the nerve cells in the cerebral cortex, in the brain. "The EEG (Electro encephalograph)—a tool invented by the scientists—gives us a record of the pattern of these brain waves and enables us to know the state of consciousness of a person, by placing electrodes on scalp or forehead of the man," they may further say.

But, we should not overlook the fact that, by reading the record of the brain waves—which have been categorised into Alpha, Beta and Delta kind—we can only know whether the person is in a state of restful wakefulness or in a state of drowsiness, sleep, arousal or tension; the EEG cannot enable us to contact or confront The Thought, The Mind or The Soul directly and to know its real nature or its content. It cannot capture The Thought itself and say, this is the Mind, nor can it enable you to know why a person's brain is giving a particular Beta rhythm. The cause is known to the conscient entity, called 'the soul', which being in a particular state of thought and emotion affects and influences the brain accordingly which reflects this by generating electrical waves of a particular kind, and the EEG merely picks up these influences on the brain and the neuronal network. Obviously, the electrical waves, impulses, cycles or spindles recorded by the EEG are not thoughts; they are mere forms of electrical, insentient energy, the significance of which is understood not by these waves themselves but by Thought or Mind which in the present case is giving rise to waves of a particular kind, voltage and frequency. In fact, the very functioning of the brain and, in particular, the Reticular Activating System* of the

* This is a collection of neurons in the subcortical region. There is a constant flow of nervous messages into it in the form of tiny electrical sparks generating currents that only the most sensitive instruments can detect. These currents finally go into

brain, which normally maintains the stage of wakefulness, and neuronal feed-back, and the memory neuronal circuit which we will briefly discuss later in this book, lead one to believe that Mind is different from the tiny electrical sparks that travel through the neuronal network and it is different from the effects of the increase or the changes in the RNA (Ribonucleic Acid).

So, we should know it for certain that the self or the Mind is neither the body nor the brain nor is it any evolute or instrument of Matter. Therefore, it does not end with the death of the body or the brain. The actions of the self are not the actions of a machine but of a conscient entity and have a moral dimension or ethical sanction and the results of these actions last even after the body or the brain has ceased to be.

In the light of this, everyone as an individual has a responsibility towards his own actions, for he has to reap the fruit thereof and, since the actions are based on Thought or Mind, one has to sublimate and divinise the mind so that one has peace and does not suffer sorrow nor does he cause peacelessness to others.

In this effort for self-elevation or thought-purification, the knowledge of the self or soul is of great importance for, if one firmly believes and remembers that one has to reap the fruit of one's actions in this or the after-life and that one's thoughts and actions give him some tendencies, traits or deserts which he takes with him after physical death, it helps him to reform the self.

This attitude towards the self and towards others is very important, for it can serve as base for lasting moral values, provide certain noble goal or goals and can lead to better relation between man and man and between man and other living beings and can change the shape of events and things and make the world a much better place to live in as we shall explain at an appropriate stage in this book.

Presently, we will discuss the views of those people who think that if we consider brain as a computer and if we try to understand human personality a result of genes and environmental influences then there will be no need to bring in the concept of the soul.

the cerebral cortex and gives the cerebrum a heightened state of activity. This is called 'wakeful state'. The cerebrum, in turn, stimulates the Reticular Activating System still more and so on. It is the soul which can decide to stop this inter-action.

You are a Soul with a goal

Man is neither a machine nor a gene

"Link your mind to Me and have full faith in Me and I will shower divine peace and bliss on you" —God

ALL things in this world are in a state of motion and are, without a single exception, changing every moment. Verily, this process of change is a non-stop phenomenon. Much of the activity is however due to the forces of Nature—inner or outer—and most of the changes are due to mutual action or reaction by material substances or inter-action between various Elements of Matter or between the earth, sun, moon and stars. But human activity is quite different.

Human Activity is different

Thoughts, ideas, and will, play a prominent part in it. These take the form of human action and bring further changes—both inward and outward. Human life, therefore, is a mainstream of thought, will, feeling and action. Thoughts and ideas are like seeds which, when sown, grow into action and bear fruit of achievements—good or bad. *Now, where do these ideas, thoughts and wishes come from?—this is a vital question and may lead us to better understanding of ourselves and of the world. People say, these ideas, thoughts and will belong to Mind. But what is mind?*

Again, human beings have also a special and valued faculty of taking decision or acting according to worked-out plans and devising the means for the way out of difficulties. It is this distinctive ability that holds man as a superior being to the rest of the species. More so, there is something in man which goads him, even though mildly, towards goodness and purity or towards morality and also towards happiness and bliss. People call these abilities as 'Intellect' and 'Inner conscience' respectively. But who or what is it that possesses these?

Undeniably, thoughts, ideas and 'inner conscience' and the abilities of judgement and decision are the goading, the guiding and the regulating factors of human activity. These are various manifest forms of human consciousness and it is these which maintain life on the Earth. It is ideas which determine an Age. Ideas form such a pivotal forum that the whole humanity revolves round them. Ideas link up the sequence of actions in a chain that constitutes life. Jungle law prevails where there are no wise ideas and judgement or where human mind, intellect and conscience are absent. But what is mind, what is Intellect and what is Conscience? A study of Mind, the trajectory of Ideas and a study of Intellect that deciphers and understands ideas, would certainly clarify our vision. We should, therefore, make a sincere attempt to know these marvellous abilities and activities of man.

Mind, Consciousness and Soul

Before we proceed further, let us say at the outset that Mind is generally believed to be a manifestation of *consciousness* or *awareness* and rightly so. Thoughts, ideas, imagination, feelings, will, volition, etc. would not exist if there were no awareness in the person or entity which has these. So, Mind, Intellect, Tendencies, Feelings, Emotions and Conscience need must belong to the realm of animation, awareness, *sentience* or consciousness. That is why we refer to Mind as conscious or sub-conscious Mind. Even that which is called 'Unconscious Mind' is, in reality, not unconscious; it is only named thus because it is not manifest at the moment. *Now, to the religious, or spiritual people, the sentient being is the soul which enters the human frame to play its role. So, Mind and Intellect are the invisible functioning abilities of the soul. They are the soul's faculties which work through the brain, the nervous system and the organs of the body.*

Cognition and Affection cannot be attributed to Matter

The psychologists also are generally agreed that Mind has three main faculties or manifestations. One of these is known as 'Cognition'. This includes the faculty of understanding, perception, judgement, reasoning, memory, etc. The other two are known as 'Conation' and 'Affection'. Conation includes various inherent tendencies or proclivities that engage man into action. The tendency to construct, to learn, to sustain etc. are some of these. The third one, called 'Affection', refers to the inherent emotions such as the emotion of love, surprise, fear, etc. It also refers to the feeling that results from these. Evidently, all these

tendencies, or inherent faculties of Mind, cannot be attributed to Matter or anything made of Matter, for none of the elements or their combinations has any of these faculties. Rather, it is these three—cognition, conation and affection—which together are known as ‘consciousness’ or *chetanta* of the soul. It is these which distinguish *Purusha* from *Prakriti*.

Emotions and feelings point to a superphysical entity

Any human action, whether it be seeing with the eyes, hearing with the ears, eating by using the mouth or any other organ employed to do the action appropriate to the organ, is accompanied by its relevant experience. Imagine a poor man approaching a rich friend for help and telling him that his mother was very ill and that he needed money. The ear is the *organ* of hearing but hearing the poor man’s words does bring in the *feelings* of kindness, compassion, sympathy, etc. But that is not felt by the ears but by that conscient thing, called the soul, through the brain.

Again, suppose a person goes to another and offers him a flower out of *love*. Now, eyes are only an organ of sight and see it as they have seen other things. But to *understand* this person’s *love and regard* and the beauty of the flower, and to *delight* is an *experience*, a composite experience which is that of something other than the eyes. That something is what we call ‘the soul’. If the eyes or the ears felt the delight, it would end with the removal of the object of sight or hearing. But facts are otherwise. even after the removal of the flower from his sight or after removing it several times for the purpose of experiment, one would still experience delight to think of the smell and beauty of the flower.

If anyone appears in front of me, not only do I see him but at the very moment of seeing him, I think of whether I am acquainted with him or not, whether he is my friend or is unfriendly to me. Along with thoughts like these, come to me the *feelings* of joy or unconcern or even displeasure or that of attachment to him or complete detachment from him. Thinking things and feeling pleasure or pain is not the job of the eye, but is the nature of that conscient thing which thinks and feels—the thing that is known as the soul.

Experiencing pleasure, pain, astonishment, earnestness, kindness, etc. is not the attribute or ~~work~~ work of Matter. Never have we seen any

material thing engaged in thinking or *feeling* joy or grief. Hence, we cannot deny the fact that consciousness or conscience is not an attribute of the body which is just so much Matter, however complex and evolved, but is an attribute of some other thing.

The 'will and the 'effort' are soul's

Man always wishes to possess that which he considers delightful or source of happiness. When the wish is formed, he begins thinking and forming plans and then starts making efforts to secure it. Having at last got it, he feels delighted and declares that his wish has been fulfilled. Who is the one that has the wish or the 'will' and makes the effort?

The statement that his wish has been fulfilled proves that he is the one who wished and whose wish has been fulfilled. Clearly enough, we see that this feeling or these words cannot be those of the body as such, because the body, at the time the wish arose, was different from what it is at the time of fulfilment. Time works its way; the body is constantly, even though slowly, passing on from childhood to youth or further on from youth to old age. All this goes to prove what has been said several times so far that, entirely distinct from the body, there is an entity which is conscient and which can, therefore, *think* of other things, to be able to say that they are either painful or pleasing and then *selects* from amongst them the good ones in order to *make efforts* to have them and then *experiences* pleasure when the thing wished for is within his possession. Like so many other things, the body is a means employed to get either pleasure or pain but is not the *experiencer or enjoyer (Bhokta)* thereof. He who *wishes* for bodily pleasure or comfort or for pleasure to be obtained through the body and who entertains the *thoughts* of keeping the body in proper condition in order to *enjoy* that pleasure, is something apart from the body. The body does not *feel*. It is something other than the body that has the *experiences* of wordly objects and their attributes and of *the body* also and that something is called: 'the soul.'

In none of the material things are found the qualities or marks of conscience, ability to feel pleasure and pain, memory, knowledge coupled with some sentiment, recognition or desire, will, effort etc. which have been mentioned above. One cannot find any of these qualities in the body because it is made of Matter. If at all these were inborn qualities of the body, they would always be there just as

sweetness resides always in sugar. But, as all have observed in the state of death and of other similar states, qualities of life, memory, etc. are not there. Hence, it is clear that these are not the natural or innate qualities of the body or brain but of something else which is non-physical.

Soul it is that co-ordinates and recollects

Moreover, eyes are the means of seeing things and not of hearing. Ears are the organs of hearing, but not of sight. So, when I see anyone standing in front of me, or hear him, I say without hesitation, "I have seen him; I have heard him *before* also". Who this 'I' is that makes this statement? The ability whereby one remembers the past, cannot be the attribute of the eye or the ear. Secondly, the eye does not know what has been heard by the ear. Nor does the ear know what the eye has seen. Hence, that conscient entity, though apart from the eyes or the ears, is yet able to connect together the experiences obtained through these organs, and is able to remember past experiences and, having collated these experiences with those of the present, expresses itself, through another organ, *i.e.* the mouth, the idea that he has seen that person before. The non-material entity that connects and collates is called 'the soul'. In the soul are to be found the abilities of recognition, recollection, etc. and through the organs and the brain does this soul know, recognise, feel and act.

Further, the earlier psychologists such as McDougall had formulated a list of fourteen or sixteen instincts. Burgasson, a well-known psychologist, considers the life-force or what he call '*The Elan Vital*' at the root of all these instincts. Freud, whose theory of psychoanalysis or of 'Id', 'Ego', 'Super-ego' is widely read, considers sex-lust as the root. Schopenhauer regards the 'will-to-live' as the basic instinct. Yung thinks love, and Adler thinks that 'will to power' is the basic instinct. Evidently, none of these instincts, can be attributed to Matter which, in reality, is inconscient, inert or insensate but appears to be sentient because of the presence of the sentient soul.

Furthermore, the psychologists are unable to explain the origin of these instincts or the basic faculties and tendencies of mind. They only say that these primal instincts have been passed over to man by innumerable preceding generations. They are there in man from times-out-of-memory. Their date of advent cannot be determined. But, a little reflection will reveal that these instincts are the very warp and woof of

Mind. Mind and these are inseparable. So, all this leads one to the conclusion that *Mind is different from Matter not only because of its instincts or its faculties of cognition, conation and affection but that it is not as old as his body or the brain; it has existed since immemorial times.* These instincts are there in an entity, different from the body and the brain. In other words, they inhere in what the religionists or the spiritualists regard as the eternal, conscient soul. In fact, in olden times, Mind and soul were considered to be synonymous and psychology was originally regarded as the branch of knowledge that studied the soul. And now, one of the offshoots of this knowledge, called Parapsychology, also brings one to believe in a super-physical and non-material entity called soul, which does not end with the body, for the parapsychologists have found sufficient and reliable evidence which goes to prove that *there is an entity which can have extra-sensory perceptions and which, after leaving one body, and, on entering into another, can reveal the events of its past life.*

Consciousness, Experience etc. are not properties of Bio-chemical mechanism

There are people who say, "Learning, thinking, etc. are not in the nature of the body or matter as such, but when the material elements get together in a particular manner to form a particular combination, attribute of animation or consciousness does of itself come in the body. 'Life, thoughts, instincts are not the marks of the soul', they say; 'it is only when material elements take the form of a body with its functions going on then, in that state comes in Matter, brain or body, the faculty of will, feeling, remembering etc.'"

But, this view is not correct, because whatever distinguishing features are absent from the cause are not to be found in the effect. When we do not find consciousness in (the elements of) Matter, we cannot find it in material objects as well. Even if we took for granted that the quality of consciousness absent from matter gets added to the shape or form made by elements in a particular combination, the fact still remains that the one that combines these elements or one for whom this is meant should be something conscient, through whose instrumentality any particular form is presented to our view. The reason simply is that, without the existence, presence or agency of a thinking being, elements of Matter cannot, by themselves, combine to

make a particular complex desired object for a special purpose, suitable to the *experience*.

Again, matter and material objects are the *objects of enjoyment* and they cannot themselves be the '*enjoyers*'. They are the *objects*, and not the *subject*. Objects of experience cannot make man experience them. For fulfilment of his wishes, material things are the necessary means, but these things themselves cannot entertain any wish or desire. They are the *objects of thought*, they are *not the thinkers*. In fact, when we are thinking, we feel we are entities different from the bodies. When we think of or about the body, we have a clear feeling that we are thinkers while the body or brain is but a thing to think over.

However, in these days of rank materialism, there are some psychologists and biologists who believe that it is the brain-cells and their connectivities and the white and the grey matter of the brain which are responsible for learning, thinking, memorising, etc. and that Mind is only a biological response to the external or internal stimuli or that it is the effect of certain biochemical action. Arguing thus, they don't believe in the existence of any superphysical Mind. Actually, this is wrong inference of their study or experiments as we shall now explain:—

1. No doubt, thinking or learning are linked to the synthesis of protein and riboneuclic acid (RNA) but this is only an effect of the thinking, done by the Mind or the soul through the neurons and their connectivities. It is a fact that Thinking brings about many bio-chemical changes; it excites nerves and neurons, and the latter results in the formation of new connectivities (the connectivities of each nerve-cell of the brain with another nerve cell are of the order of 10^{10}). Thinking excites many glands also in the body so that they give out various kinds of secretions. Thinking has its effect on the heart and the breathing also. The investigations, conducted by Molecular Biology and Neuroscience have rightly said that these internal changes take place. But these are the result of thinking which is done by the Mind or the Soul through the highly sensitive medium of the brain, though the changes in the grey matter of the brain or in neurons, in their turn, affect the Mind also. The effect of external or internal stimulus may be recorded in the brain and there may take place changes in the brain cells, but the *feeling* of shock or joy or *the experience* of strain or relief is done by the Mind or the Soul. It is the soul that *understands and lives* the effects of

actions. Brain is only a unique kind of biological instrument used for receiving messages, recording events, storing information and recalling the facts when needed but it acts as a control room or a reference library and not as a controller, or a Registrar or a librarian.

2. No doubt the brain receives images, sent through the eyes, or the sound-effects sent through the ears, but it is the soul that *interprets* these images and sound-effects and correlates them. The brain can receive and record but not *realise* the meaning or the significance of these effects. The voice that reaches us through the ears, *i.e.* the words and their relevant sound, are received by the brain, but what these words mean, what the object of the speaker of these words is or what feelings they express—there is a conscient being, apart from the brain, who understands and feels all this, and that being is 'the soul'. Not only does the soul understand the meaning and the significance with a mild or deep feeling, but it has some emotions and sentiments. Soul is the master which uses brain as much as any other part of the body to translate its will, its desire, its emotions or its beliefs into action. Brain is a great helper but it does not carry the power of attorney from the soul to act on its behalf.

3. There are some psychologists and biologists who are of the view that Mind is neither a physical nor a spiritual entity but is the name given to perceptions which result from bio-chemical changes that occur when objects and events of the world impinge on our biological system. Thus, from their point of view, Mind is not an object but is a continuous process or is subtle result of a process in the brain.

But this belief does not satisfactorily answer many questions. For example this question: "If there is no superphysical or spiritual entity in the body then how is it that an object or event of the world, having impinged on our brain and nervous system by means of some bio-chemical changes, can be recollected after lapse of sometime? Since the brain, the nervous system and the chemical constituents of the body change continuously because of newer stimuli, or newer events, who is it that can call back to memory a previous occurring? Evidently, that which has changed substantially and materially cannot resurrect a past image. There must be a spiritual entity—an entity which does not undergo any physical or chemical change—which can re-live a past experience.

4. The desire to attain liberation is another proof

Every individual wishes that there be no pain or sorrow in his life. Wise men wish to have final and eternal liberation from pain. They know that the body and the brain also are, in the present day world, the means of bringing in pain, more or less, and, therefore, they desire, ultimately, final release from the bondage of both these also. This desire of theirs for obtaining release goes to point to the existence of a sentient and reasoning entity which is separate from both the body and the brain and which desires to be released from the bonds of these. If there were no separate entity, named the soul, the body or the brain would not have desired to get liberated from itself.

There is another aspect to consider. To desire release from body and its birth and death shows that there is surely an undying entity which survives the body and that this entity existed even before this present body came into existence. For, if it had not existed before and had not, at some point of time in the past, experienced Liberation, it would not desire for it now also for it is an accepted principle that man desires only for those experiences which it already has had in the past. Hence, the present desire for *Mukti* makes it clear that there is, besides the body—that we see and touch—something that is eternal and immortal, that existed even before this body was born and that, even after the body's decay, will continue to live.

Moreover, we know (from observation) that mental anguish or mental punishment is always very hard to bear and everyone wants to be liberated from it. Now, who is it that wants to get liberated? Not the brain at least, for the biological studies and clinical experiments reveal that brain does not experience itself. The brain has two hemispheres and its various parts are connected with various organs. This also leads us to believe that there is a separate being who feels and experiences through the brain.

5. Furthermore, it should be noted that the brain consists of about 100 Billions neurons and each one of these neurons or brain-cells has about 60 Billions RNA molecules and many many molecules of other chemical compounds. So, the question arises: 'For which one of these neurons or brain-cells or various types of molecules one uses the pronoun 'I', which connotes one sentient person?' Evidently, there is no satisfactory answer to this because all these together constitute

the brain and the brain is only a medium or a tool to a sentient entity which uses the pronoun 'I' for itself. That 'I' has a personality and an individuality of its own which, besides its brain and body, has certain proclivities, impulses, desires, traits and tendencies, many of which can be traced to its existence previous to when its present body came into formation. The personality of this conscient entity, denoted by the word 'I' has continuity of existence so that it is there in all mental states—sleep, dream, swoon, etc.—and is the knower of all these states and is, therefore, different from the brain.

The Brain is like a Computer but not its user

Yet there are many psychologists and scholars who are of the opinion that thinking, judging etc. pertain to the brain which works like a computer. They say that the network of the sensory nerves, spread throughout the body, conveys messages, images or information to the brain which deciphers these, thinks over a way out and hatches out plans to meet the situation. They say that an electronic wave rises from the brain to bring out a response to the stimulus. They thus assert that there is no Mind apart from the brain which works like a computer.

But, in saying this, they forget that a computer is only a special type of machine and machines and instruments, made as they are of material parts, cannot move of themselves and *for themselves*. The one that sets it moving, that presses the button, fills it with fuel, overhauls it when needed or does many other things related to it and sets it to purpose, is an engineer, an operator or a mechanic—a living worker, a conscient person. Thus also the body is, in some respects, like a motor car. He who provides it with food as its fuel, earns its food, cooks for it, feeds it at the proper time, sees to the cleaning of one's own body as one would do for his engine and does other things to keep this engine in condition, and uses it for set purposes, is obviously a living being, which is what is meant by a *soul*. All the parts of a motor car begin to move in their proper manner when the driver presses a particular part of the machine. Exactly in the same manner, does the soul, which abides in the body, (its seat being in the brain), sets the body working by dint of its motive force or Thought Power. Thought or feeling is the agency which keeps the brain at work and the nervous system functioning. The body, by itself cannot do anything. *The soul works as driver or the Motive Power and the body and its food as the motor power, and the brain as the starter, the gear or the steer wheel.*

When the fuel gets exhausted or does not convert itself into energy, the engine simply stops. It cannot think of ways and means of setting it right. It is only a thoughtful person—a sentient being—who knows where the defect lies in the engine and adopts means to set it right. The case of Viking-I that landed on Mars would illustrate this well. Its arm had got struck down and did not work. Later, the scientists—as conscient persons—studied the factors that could have caused this hitch or obstacle and sent radio-message whereby they removed, through remote control—a screw that had caused this jamming. The Viking, with all its sophisticated instruments could not by itself do all this.

Further, imagine a man who does not get food to eat or cannot digest it even if he is given or cannot convert this food into energy. In order, therefore, to set right the body which is being starved for want of fuel because it is defective, a living person it is who thinks of ways of giving it proper medical treatment. Hence, the body cannot work independently of the conscient principle, nor can it, in this condition, keep itself going by keeping it safe from impediments, much less control its working to a set purpose.

So, there is no denying the fact that the brain can be compared to a computer though it may sound strange if we add that the computer would emerge poorly from such a comparison, for it has been said by those who know the subject that, if a mechanised version is ever built to duplicate a human brain (if at all it is possible to do so), it would require a 100-storeyed sky-kissing building to accommodate all the electrical circuits, and the power of the Niagaras will be required to cool it! And even then a conscient entity—a human soul—will be required to programme it and to work it, proving thereby that, besides the body and the brain there is another entity, called the soul.

A further discussion of the abilities of thinking, judging, etc. would make the existence of soul more clear. While discussing these abilities, we will also examine the view-point whether Mind and Intellect are 'internal organs', i.e. whether these are material instruments and adjuncts of the soul.

SECTION-II

Is Mind a Metaphysical Entity ?

WHERE IN THE BODY IS SOUL LOCATED?

“You are a shining Point-of-Conscient Light, seated on the throne, located in the centre of the place between the two eye-brows.”

—God Shiva

WE have explained briefly in the last chapter that the brain is like a computer and that it is the metaphysical Mind or Soul that sets this biological computer to purpose, stores the memory of events in it and uses it to perceive, experience and enjoy material objects according to its Will. In the present chapter we will deal with this matter a little more elaborately. We will discuss, once again, whether Mind is a product of the electrical impulses of the neurons or an epi-phenomenon of certain electro-chemical processes in the brain-tissue, or it is a separate entity—not material but metaphysical and transcendental. We will further try to find out how Mind is related to the brain and the body, where, in the brain it is located and, seated in that particular part, how it makes the entire physical and mental system work.

However, before we embark upon this venture, we shall state, once again, what abilities, functions or events we attribute to Mind or Soul so that when we enter into discussion about its physical or metaphysical nature and about its location in the brain, we are able to understand clearly what we are discussing about.

The abilities or functions of Mind

We think most people will agree that wishing, willing, intending, perceiving, feeling, understanding, reasoning, judging, planning, etc. are functions of the Mind. It is these which give to man a living personality. Since these functions or abilities are there only if there is

consciousness or sentience, the term consciousness (though it has various stages, levels or forms of manifestation) has also come to be used for the Mind. So, we will see, in this chapter, whether consciousness is a product of the brain and the body or it has its source in a metaphysical entity and, also, where in the body or brain is it located.

The seat of Mind is in the brain

Now, in this regard, all the evidence we have, from the study of mind researches in the field of biology, physiology, anatomy and neurosciences, up to now, lead us to conclude that though, normally, we find manifestation of Consciousness in the whole body yet¹ the Point-source of Consciousness or Mind is located somewhere in the brain. For, we all know that, after a doctor has surgically cut off someone's arm or leg, the latter still feels to be pretty much the same person as before the surgical operation; his beliefs, emotions, memory, perceptions, reasoning, etc.—which are abilities of the Mind—remain to be the same. Similarly, if one undergoes a heart-transplant operation, then too he is much the same person as before; he does not go from hospital to the house of the person whose heart has been transplanted into his body; he does not suddenly find in him any knowledge or memory of the relatives of the person whose heart he now has. The same can be said of kidney-transplant or blood-transfusion, etc. But our knowledge of the central nervous system and neurology leads us to conclude that the mind is located somewhere in the brain, for it is brain (i) which receives information from our sense-organs. (See Fig. 1 & 2 on page106) and (ii) controls the working of our glands (Fig. 4 on page108) (iii) our skeletal musculature, (iv) our vocal or speech apparatus, or process of vision and all other parts which make us act as we do.

Moreover, we find that if certain parts of the brain, as for example, the Temporal Lobe, (Fig. 2) are removed, then changes occur in man's memory and if there is a lesion on his limbic region (Fig. 3, page108) here is some change in his emotions and behaviour and personality. So it is right to aver that the Mind is located in some region of the brain.

Furthermore, the human brain, with its network of about 10,000 million neurons, which are inter-connected, has the capability of

1. All parts of the body seem to have consciousness because they are connected with the brain where the source of consciousness is located.

receiving large quantity of information, and handling it, and also of being in a large number of dormant or potential states so that we can understand the existence of 'conscious', 'sub-conscious' and 'unconscious' processes of mind. Many psychologists have shown that unconscious processes also are very important as they goad many conscious actions also and it is only the brain which has some such activity that does not manifest itself in conscious perception and experience.

Again, modern researchers point out that it is the brain which seems to form the physical basis of conscious awareness and various cognitive capabilities because damage of or injury to various parts of the brain results in damage to the manifestation of various faculties of the Mind.

Now the question is : "Where exactly in the brain is the Consciousness or Mind or Soul located ? For answering this question, we will have to understand how the brain works. We will have to see where the point of inter-action of the Consciousness with the body is or which is the area that is responsible for receiving sensory information and then triggering the motor action in response to it.

Various parts of Brain and their functions

As is now well-known, the brain has six major divisions : (1) Cerebrum (2) Diencephalon, (3) Cerebellum, (4) Medulla Oblongata, (5) Pons and (6) Mid-brain. Many neuro-scientists consider the midbrain, pons and medulla as constituting the Brainstem, since this part looks like a stem for the rest of the brain. So, from their point of view, the brain has only three parts. We will now undertake a short review of what functions each one of these has and how these are connected to one another and to the rest of the body.

1. Cerebrum

The cerebrum is the largest division of the human brain. It is divided into two hemispheres. Each one of these hemispheres is divided into four lobes—(i) Frontal (ii) Parietal (iii) Temporal and (iv) Occipital lobe. See Fig. 1 on page

The cerebrum performs three kinds of functions—(i) sensory functions, (ii) motor functions and (iii) integrative functions. Complex discriminative sensations depend on the cerebral cortex especially its somatic-sensory, visual and auditory areas. These areas of cortex do not merely register sensations but they compare and co-ordinate

various sensations and evaluate them. They are instrumental for integrating them into perception of wholes. After getting sensations of temperature, shape, size, texture, weight, etc. of a thing, they are used for perceiving a total impression of the object, compounded of all these sensations.

A region of the cortex is known as the '**Motor Cortex**'. But there are motor-neurons in other regions also. There are neurons (in the pre-central gyrus) which exert control over and produce movements of distal joints, such as of wrist, hand, fingers, foot and toe-movement.

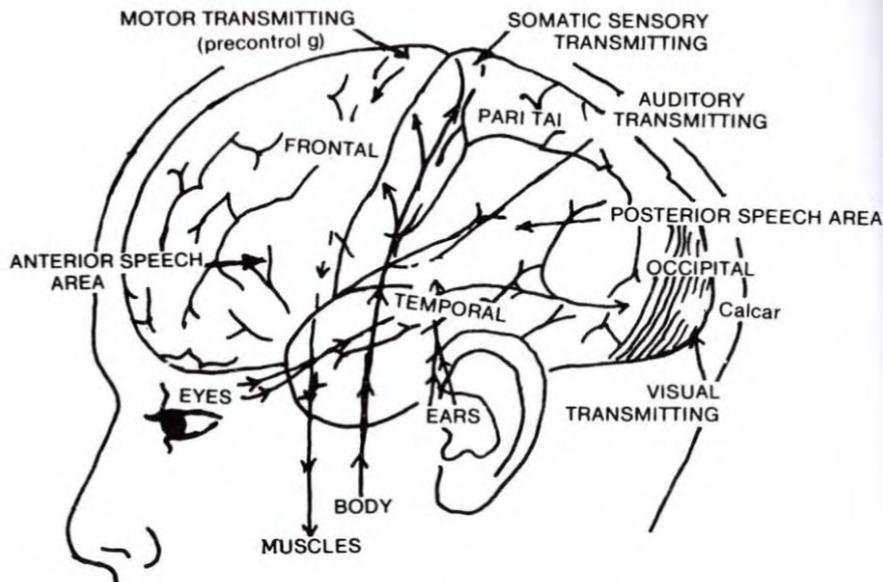
Memory is one of the functions in which the cerebral cortex plays a part. Cerebrum's **limbic system** (Fig. 3, page 108) also known as the emotional brain—plays a key role in memory retention and recall memory.

Hippocampus (which is a part of this limbic system) is very important in this respect, for it has been found that when this is removed, a person loses his ability to recall new information. Again, the limbic system is also known to play its part in subjective experience and objective expression of emotions—such as fear, anger, pleasure, sorrow, etc. The limbic system, it may be noted, has its primary connections with amygdala and the **hypothalamus**.

The right and the left hemispheres of the human cerebrum do not function identically. Each hemisphere has specialities of its own. The left hemisphere is known for its speciality in language and expression of thought and for dominating the control of skilled movements.

Certain areas of the cortex in each hemisphere engage in a particular function. What this function is depends upon, from what cortical area it receives impulses. Some of the areas of the cortex are known as '**somatic-sensory areas**' because they receive impulses from receptors, stimulated by heat, cold, touch, etc. located in almost all parts of the body. Another area is known as the '**motor area**'

(Fig. 2. cerebrum and general location of motor areas, associated with specific body functions. The extreme posterior segment of the occipital lobe has nerve centres that control vision, parts of the temporal lobe control the sensations of hearing, smell and taste. The frontal lobe areas are concerned with reasoning, judgement and abstract ideas. Just anterior to the central fissure are motor centres that control muscles of the leg, arm, neck and head. Posterior to the central fissure are Sensory centres for sensations received from the leg, arm, neck and head. This shows that there should be one centre which co-ordinates and commands and is the seat of the soul).



(Fig. 1. The motor and sensory transmitting areas of the cerebral cortex. The approximate motor transmitting area is shown in the pre-central gyrus while the somatic sensory receiving areas are in the central gyrus. Other primary sensory areas shown are the visual and the auditory. Also shown are the speech areas of Broca and Wernicke.)

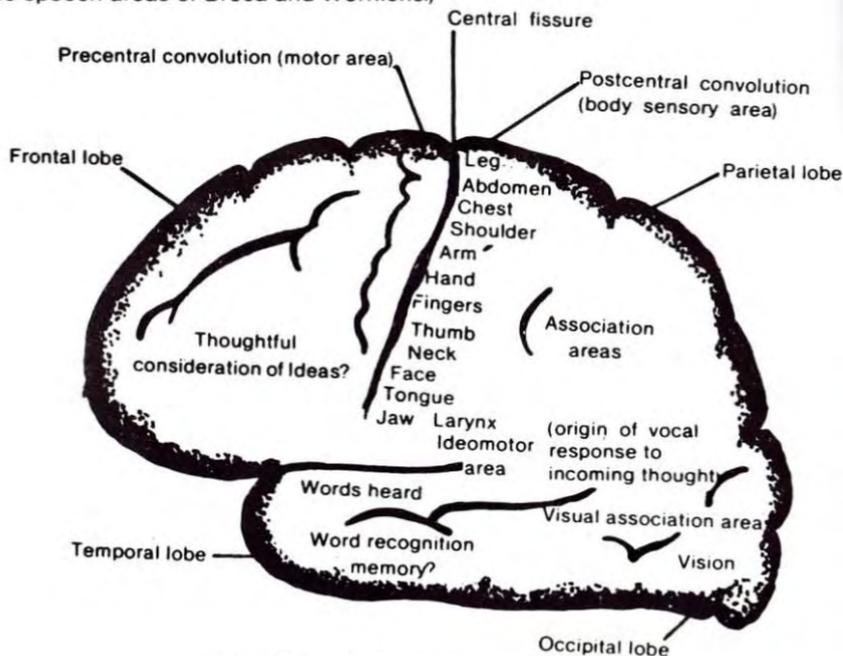


Fig. 2 (See explanation)

because it sends out impulses to stimulate skeletal muscles. Other important areas are the '**Auditory area**' and the primary visual area.

Another important thing to note is that, at the synapses in the brain, many important chemical transmitters, such as serotonin, are there.

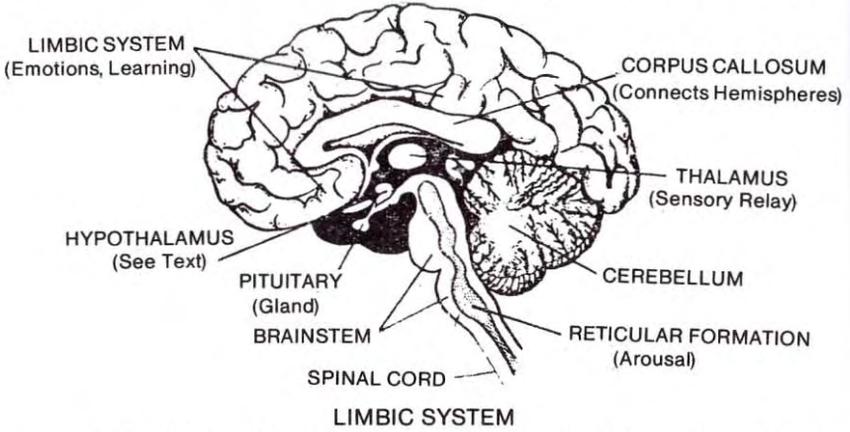
The relay station for sending impulses to the cerebrum is the Thalamus

Having given, in brief, the special functions of the cerebrum, we want to point out that important though these functions of the cerebrum are, the relay station for sending sensory impulses (which are the basic material for function of large part of the cerebrum) to the cerebral cortex is the Thalamus. Large number of axons conduct impulses from the cord, and the brainstem, to the Thalamus. Again, according to latest researches, the basal ganglia and the cerebellum (the hind-brain) also send impulses to the Thalamus which, it is now believed, modifies this information before transmitting it to motor areas of the cerebral cortex. *This means that the point of highest command for movements is not the motor cortex of the cerebrum but the centre of Will of command or perception lies somewhere near the Thalamus.*

Again, one known fact about consciousness—which is a prerequisite for perception of sensory-information—is that its manifestation in the neurons of the cerebral cortex is linked to the impulses conducted to it by a relay from the Reticular Activating System, briefly known as RAS. (See Reticular Formation, Fig. 3, page 108) The reticular activating system consists, in the brainstem, reticular formation that receives impulses from the cord and relays them to the Thalamus and

(Fig. 4 it shows the general location of endocrine glands. These secrete the hormones which have very important role. Pituitary is considered as the Master gland which controls all these. But Pituitary is controlled by hypothalamus which is a part of the brain.

The posterior pituitary is an outgrowth of the hypothalamus and the hypothalamus is now regarded as the basic co-ordinating centre in the body. The area of the stalk of the posterior pituitary and of hypothalamus is an area where many of the signal impulses, going to and coming from the brain and then to the tissues, are co-ordinated for specific actions. It is also an area where there is specific co-ordination between neural and chemical functions. The anterior pituitary secretes eight important hormones, one of which is known as 'the Growth Hormone', for it is essential for normal tissue development in the earlier period. The pituitary gland secretes at least 15 important hormones.



(Fig. 3. A midline view of the right hemisphere with the major areas and their functions is shown here. The reticular formation, Thalamus, corpus callosum, pituitary, hypothalamus, limbic system and brainstem have been shown.)

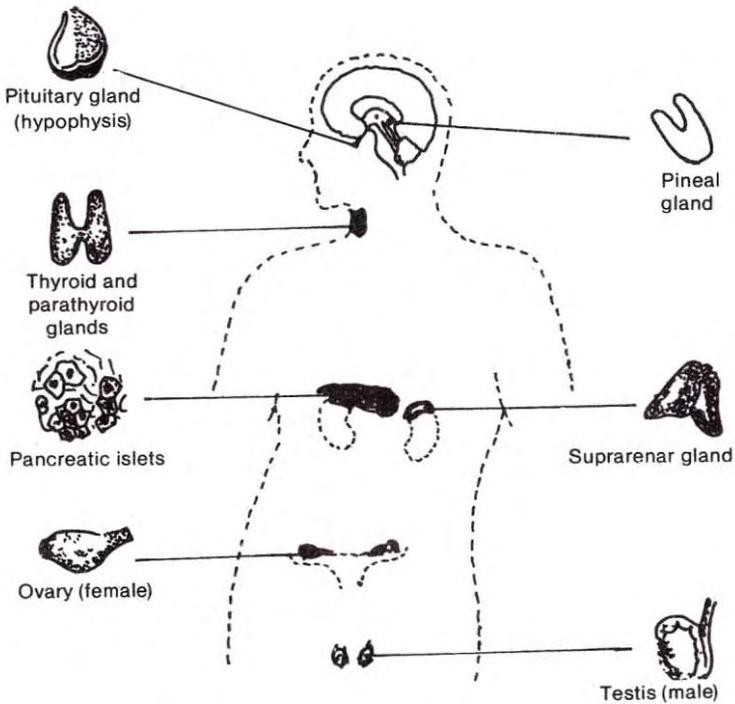


Fig. 4 (See explanation on opposite page)

from Thalamus to all parts of the cerebral cortex. *Without continuous excitation of neurons in the cerebrum, by impulses from the reticular activating system, an individual is unconscious and cannot be aroused, alerted or awakened.* It has been found that drugs that depress the reticular activating system, decrease alertness and induce sleep. Barbiturates act in this way. On the contrary, another drug, Amphetamine acts to stimulate the reticular activating system and, thus, it has stimulating effect on the cerebrum. These facts clearly point out that Consciousness or Mind has its centre of location not in the cerebrum but at a point which is linked to the Reticular Activating System, the Brainstem, the Thalamus and the Cerebrum. This point, as we will show later, is the Hypothalamus. Now let us take up another division of the brain, namely the Diencephalon.

2. Diencephalon

The diencephalon is the part of the brain that is located between the cerebrum and the mid-brain. Although the diencephalon consists of several structures, the main ones are the Thalamus and the Hypothalamus.

Functions of the Thalamus

As briefly stated earlier, the Thalamus relays sensory impulses from the cord, brainstem, cerebellum and ganglia to the cerebrum. Impulses from receptors, upon reaching the Thalamus, produce conscious recognition, such as that of temperature, touch, etc. and in co-ordination with the hypothalamus and the RAS.

If centres in the cortex, for the perception of pain, touch and pressure are destroyed, the Thalamus is capable of making the body aware of these sensations, although in a crude manner.

It is an important region in determining the sleep, wakefulness or arousal state of a person.

It also plays a part in the mechanism responsible for emotions by associating sensory impulses with feelings of pleasure or pleasantness and unpleasantness. It is also involved in mechanism that produces complex reflex movements. Superior cerebellar peduncles (rope-like structures) which make tracts through the 'red nucleus' of the mid-brain, are connected to the Thalamus. From this, it is clear that *Thalamus is a point of great importance for passing on sensory information, modifying the information, acting as a centre for connecting the motor cortex to cerebellum and thus functioning as an*

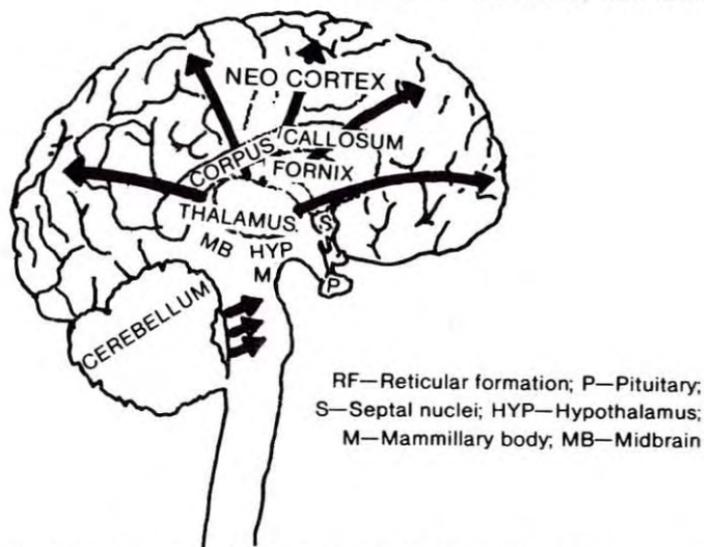


Fig. 5 [This side-view of the brain from the inside with super-imposed deeper structures in relation to the surface of the brain, shows that the Thalamus plays as a relay station. It also shows the reticular formation (RF), Mid brain (MB), Mammillary body (M), Hypothalamus (HYP), Fornix, and the Neo-cortex.]

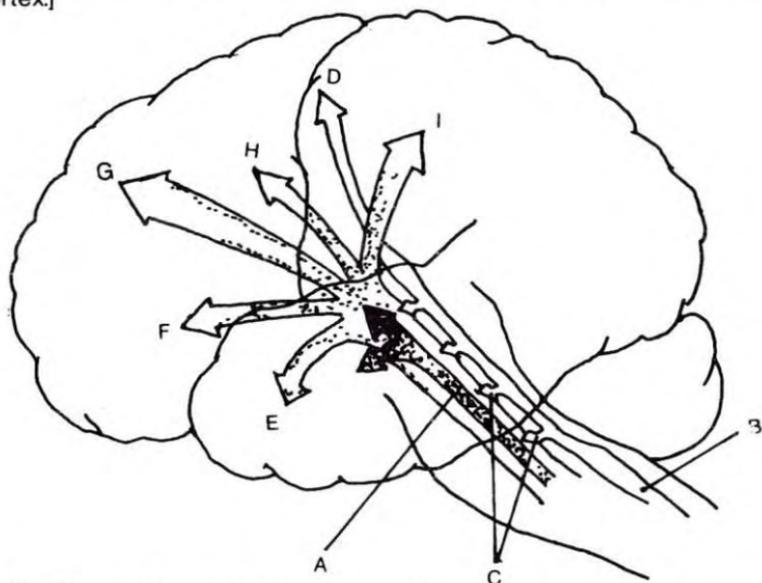


Fig. 6 [The impulses from sensory pathways (B) are received by the Reticular formation. Passing by the brainstem, they move upwards to the sensory receiving area in the cortex. Thalamus and particularly, the Hypothalamus plays very important role in this.]

exchange and also lending its hand in keeping the cerebral cortex alert and awake. All this means that the centre of consciousness should be located in a point which is intimately connected with the Thalamus.

Hypothalamus

Though Hypothalamus is a small, nuclear area of the brain, it performs many functions of the greatest importance, both for survival and enjoyment of life. It is located just beneath the Thalamus. It consists of several structures, prominent among them being the stalk of the pituitary gland (hypophysis), the posterior lobe of the pituitary gland, the mamillary bodies, the supra-optic nuclei and the paraventricular nuclei. It has areas which act as pleasure centres for the primary drives such as eating, drinking, procreation, etc.

The hypothalamus also functions as higher autonomic centre. Axons of neurons, which lie in the hypothalamus, extend both to parasympathetic and sympathetic centres in the brainstem and to the cord. Thus, impulses from the hypothalamus extend both to parasympathetic centres in the brainstem and to the cord. So, the impulses from the hypothalamus can successively or simultaneously stimulate and also inhibit few or many lower autonomic centres.

It is important to note that Hypothalamus has centres that can both stimulate and inhibit specific body-functions. For example, one centre may increase heart-beat-rate, thus increasing blood-pressure, while another area may inhibit it, and decrease heart-beat-rate and lower the blood pressure. Thus it also helps control and integrate the autonomic activities and the responses made by visceral effectors or motor nerves all over the body. It is directly responsible for controlling most of the body's so-called vegetative responses, including the temperature-regulatory one.

Again, Hypothalamus is the major relay station between the cerebral cortex and the lower autonomic centres. Impulses from various centres in the cerebral cortex come to the hypothalamus and, from there, these are conducted to the autonomic centres in the brainstem. **Thus it acts as a link between the psyche (Mind) and the soma (Body).** (*See fig. 6 on page 110.*)

Further, Hypothalamus provides the important part of the route by which emotions can express themselves in changed bodily functions

Moreover, it is a very important relay station in the neural Pathways, that makes possible the mind's influence on the body so

that it can lead to producing psychosomatic diseases if other contributory factors are there.

Furthermore, some neurons in certain nuclei of the hypothalamus synthesise certain important hormones and thus work as endocrine gland. They pour these hormones, into the posterior pituitary—the Master gland. The act of releasing these hormones, controls the release of certain hormones by the anterior pituitary and thus it controls hormone-secretion by sex-glands, thyroid gland and the adrenal. Thus, indirectly, i.e. through the pituitary, hypothalamus helps control the functioning of every cell in the body. Human reproduction, body growth, etc. are, directly or indirectly, under its control.

Again, the supra-optic and para-ventricular and nuclei of the hypothalamus synthesise the hormones secreted by the posterior pituitary also. One of these hormones affects the volume of urine excretion and thus plays an indirect but important role of maintaining water-balance.

In fact, hypothalamus is so intimately connected to the pituitary gland whose slender stalk forms the mid-portion of the hypothalamus that not only the two work in concert but one might say that *the division between hypothalamus and the pituitary gland is somewhat arbitrary, for the posterior lobe of the pituitary is a part of hypothalamus.*

Another important function of hypothalamus is that it regulates many activities by the judicious application of '**feed-back**', i.e. feeding back the information of its effective working to its ownself so that it can modify its action if need be. It is because of this special ability that it is able to work for keeping the appropriate amount of water in the body and to do so many other very important functions.

Of greater importance is the function of hypothalamus in maintaining the waking state. There is clinical evidence which shows that somnolence is due to some hypothalamic disorders.

Yet another essential function of hypothalamus is that it forms a part of the mechanism of regulating appetite and also the amount of food-intake and it is also part of the mechanism that has the crucial function of maintaining the bodily temperature.

Thus, on all accounts, hypothalamus seems to have justification for being the 'brain centre'. It seems to be the only viable candidate, supported by the Thalamus and brainstem, to be the seat of Mind or the

Soul or the point of interaction of Consciousness and the body. The Pituitary, whose stalk forms part of the hypothalamus, is located just close to the optic chiasma and has thus a claim to be the place of the 'Third Eye', i.e. the Eye of the Mind, without the attention or function of which the two eyes also can do no function. It is also the centre of command or what, in *Hatha Yoga*, is called 'the *Ajna chakra*. The Pituitary Body and Hypothalamus may be called the 'miniature body' (*Sukshma Shareer*) for the soul. It may also be called *Hrit* or *Hridaya*—'the Heart' or 'the cave of the Heart' where the soul resides, for it is almost in the centre (heart) of the brain which is like a cave, near the Third Ventricle. It may be said that this is the '*Hridaya*—the 'Heart', referred to in the scriptures, for it is the heart of the brain. (Fig. 4) It plays an important or main role in senseperception, emotional experience, thinking, willing, etc. But we will defer the judgement, for we have not yet considered the case of Cerebellum and the Brainstem.

Cerebellum

The cerebellum has three general functions. These are mainly the control of skeletal muscles. The cerebellum acts with the cerebral cortex to produce skilled movements by co-ordinating the activities of groups of muscles. By controlling skeletal muscles, it maintains equilibrium; it helps control posture. It functions a little below the level of consciousness to make movements smooth, instead of jerky, steady instead of trembling, and co-ordinated instead of awkward and uncoordinated. Thus, it performs the synergic control of muscle action, excitation and inhibition of postural reflexes and maintenance of equilibrium. Impulses from the cerebrum may start the action but those from the cerebellum synergise or coordinate the contraction and relaxation of the various muscles once they have begun.

Thus, summing up, we can say that the main, if not the sole, function of the cerebellum is to co-ordinate the action of various muscles and the maintenance of equilibrium and this is not enough reason to consider it as a seat of Mind or Consciousness.

3. The Brainstem—Medulla, Pons and The Mid-Brain

Medulla—As was said on page 104 Medulla, Pons, and Mid-brain constitute the Brainstem. As the spinal cord progresses upward immediately through the foramen magnum, it expands into a bulb of triangular mass of tissue; this is Medulla. Nuclei in the medulla contain

a number of reflex centres. Some of these centres perform functions so necessary for survival that they are called the 'Vital Centres'. They are the cardiac, vasomotor and respiratory centres.

The cardiac centre in the Medulla serves as the centre for various reflexes, controlling the heart's beat (slowing of the heart-beat), the vasomotor is for controlling the diameter or size of blood vessels. As is well-known now, there are many factors in the environment that require blood-vessels to change their size. This and the resulting blood-pressure is controlled by another centre in the Medulla. The respiratory centre in the Medulla controls the number of breaths taken in and exhaled per minute. If there is deficiency of oxygen being breathed in or excess of carbon dioxide in atmosphere, the medulla is stimulated by the blood-chemistry and sends impulses that control breathing, such as the diaphragm and the intercoastal rib-muscles to speed up their rate of contraction and relaxation. Similarly, when we undergo a physical exercise, we tend to breathe faster because muscular activity creates a higher concentration of waste products, including carbon dioxide, which must be removed at a faster rate. Thus increase in the carbon-dioxide in the blood stimulates the medulla which, in turn, initiates impulses to the respiratory muscles, causing an increase in breathing rate.

So, because of these centres, the medulla is, no doubt, one of the most vital parts of the entire brain. It is so vital that injury to or disease of the medulla often proves fatal. For example, a blow at the base of the skull causes death if it hits the respiratory centre in the medulla by interrupting the conduction of impulses to the vital respiratory centres.

Again, all projection tracts between the spinal cord and the brain have to pass through the Medulla. Therefore, the Medulla functions in a great number of sensory and motor mechanisms. Fibres of the cortico-spinal tracts cross from one side to the other in the pyramids of the medulla and it is this which explains why one side of the brain controls the other side of the body.

An important thing about the Brainstem is that its upper part serves as conduction pathways between the cord and other parts of the brain.

Besides, the medulla contains some centres for many non-vital reflexes, such as vomiting, sneezing, coughing.

Next, we consider another part, Pons, of the Brainstem.

(ii) Pons and (iii) the Mid brain

Just above the medulla lies the Pons. One important reticular nucleus in the Pons is called the pneumotaxic centre. This also functions in the control of respiration. Nuclei of the 5th to 8th cranial nerves are located in the upper part of the Pons. The pneumotaxic centres in the Pons help regulate respiration,

The Midbrain lies below the inferior surface of the cerebrum and above the Pons. Certain auditory reflex centres and visual centres lie in the dorsal part of the mid-brain. An important nucleus in the midbrain reticular formation is the *red nucleus*. Fibres from the cerebellum and from the frontal lobe of the cerebral cortex end here whereas fibres that extend into the ribospinal tracts of the cord have their cells of origin here. Nuclei of the third, fourth and fifth cranial nerves also are located deep in the midbrain. Thus Mid-brain is the right name for this part and it has connecting links (because of the rope-like formations, called cerebral ponsicles) between the forebrain and the hind brain with the under-surface of the cerebral hemispheres and with the cord. Its importance is, therefore, evident.

The functions of the medulla, pons and mid-brain, constituting the brainstem, as briefly given, are significant. Because of the cardiac, vasomotor and respiratory centres in the Medulla which have a vital role in controlling the heart-beat rate, the size of blood-vessels and the respiratory rate, are very important indeed. Because of all the projection tracts between the cord and the brain, passing through the medulla and because of other specialities of the mid-brain, the brainstem is no doubt very important. *But, one point to be noted is that it is not a place of command, Will, perception, etc. which are necessary characteristics of Consciousness of Mind. However, any other point which is the seat of Mind must be one which has connections with the Brainstem, i.e. Medulla, Pons and the Mid-brain besides having connections with the Thalamus and the Cerebral cortex and that point is Hypothalamus, as we shall explain later.*

Before arriving at the final judgement as to the Seat of Consciousness or Mind, let us have a brief look at the Reticular Activating System, the Somatic nervous system and the Autonomic nervous system so as to have a total picture of the co-ordination and organisation of these, for then only we will be in a better position to decide the question where, in the total picture, is Mind, Consciousness or Soul located in it as a separate entity.

The Reticular Activating System

The Reticular Activating System is located along the axis of the brainstem. It is a finger-sized mass of tissue which functions to maintain vigilance. When it is absent, drowsiness, sleep or coma ensues. It regulates the general activity level of the cerebral cortex with a stream of impulses which arise from far down in the brainstem and bombard the thalamus and cortex. When a sensory message goes up along the sensory pathways, it branches off its stimulation, on its way up, to the reticular formation in the brainstem and this, in turn, stimulates, non-specifically, large areas of the cortex. If there are any lesions in the RAS of an animal, it goes into a state of stupor. It can be momentarily aroused by a loud noise but it would again lapse into perpetual sleep. On the contrary, stimulation of RAS increases the brain's sensitivity and alertness. The RAS functions as a kind of a general regulator of behaviour by 'grading' or 'toning' the state of alertness and it also works as a kind of a traffic control centre for the brain.

Again, RAS also seems to govern, in a subtle way, processes which seem very much like 'attention'. Since one pays attention to things and events which have some novelty or which raise our curiosity or which are important or essential for us in one way or the other, it shows that some process of selection is involved and cognition and judgement is required as to what is important or essential or novel. Now this kind of thought-process, which involves selectivity, occurs at many levels in the nervous system, as for example, in the Thalamus, Hypothalamus and, as many neuro-scientists believe, in the cortex. But, one particularly important group of attentional mechanisms is intimately related to the working of the RAS, for it is found to be inhibiting its function of arousal when an event is a routine-event or is being repeated or is neither novel nor important. Now, it is found that it is the cortex which builds up a 'neuronal model' or an event being repeated and this enables it to get habituated to the event and this habituation or building up of a 'neuronal model' sends a signal down to the Thalamus which inhibits RAS to send impulses of arousal upwards.

This inhibition of the RAS function of arousal by parts of the cortex or by Thalamus shows that the reticular activation system itself is influenced by the Thalamus, the Hypothalamus, or by the cortex through the Thalamus.

So, summing up the case of the Brainstem and one of its special features—the RAS, we should say that any point, in order to be a seat of Consciousness or Mind, has to be one which is connected with RAS. On all these accounts, it seems that Mind, Soul or Consciousness should be located in or near the Hypothalamus.

Now let us take a hurried view of the somatic and motor nervous system.

Somatic nervous system

The somatic nervous system may be discussed under the head 'Sensory pathways' and the '**Motor pathways**' and how they work in concert with the system.

The sensory neural pathways consist of relays of sensory neurons that conduct impulses from any part of the body to the Spinal Cord or brainstem and, from these lower levels of the central nervous system to Thalamus and from Thalamus to the Somatic sensory area of the Cerebral Cortex.

For the most part, the sensory pathways to the cerebral cortex are crossed pathways so that each side of the brain registers sensations from the opposite side of the body.

The neural pathways conduct impulses that produce sensations of touch, pressure, pain, heat, cold, two-point discrimination, weight-discrimination, size, shape, texture, precise location, vibrations, etc., etc. which are essential for being aware of an object, touching the periphery or within the field of its senses. But, as has been pointed out earlier, these are linked to the Thalamus and the medulla in the brainstem and the Thalamus and the Brainstem are linked to Hypothalamus. The importance of Hypothalamus is, therefore, evident.

(a) Somatic Motor pathways

Somatic motor pathways consist of motor-neurons that conduct impulses from the central nervous system to somatic effectors, i.e. to the skeletal muscles.

The motor pathways also work out relays between motor areas of the cortex, basal ganglia, thalamus, cerebellum and brainstem as had been said about the sensory pathways. This means that the pathways are *just pathways*, which though essential for the cortex, thalamus, etc. for performing their functions, are not the seat of consciousness which is noticed at the level of the thalamus, hypothalamus or the brainstem.

Now let us have a look at the reflex actions.

(b) Reflexes

The spinal cord functions in all reflexes, except those mediated by cranial nerves. The term 'reflex centre' means literally the centre of a reflex arc or the place in the arc at which incoming sensory impulses become outgoing motor impulses. Grey matter of the cord contains many reflex centres. Some reflex centres are merely synapses between sensory and motor neurons whereas others are the inter-neurons interposed between sensory and motor neurons.

A reflex action is a response to a stimulus which may or may not be conscious. Usually, the term is used to mean involuntary rather than the voluntary or directly-willed response, i.e. the reflex action does not generally involve the activity of the cerebral cortex.

A reflex action consists either of muscle-contraction or glandular secretion. 'Somatic reflexes' are contractions of skeletal muscles whereas 'autonomic reflexes' or 'visceral reflexes' consist either of contractions of smooth or cardiac muscle or secretion by glands.

This brief explanation of the reflex arcs or reflex actions leads us to the importance of the cord and the brainstem indirectly because of their being associated with the spinal cord or the cranial nerves.

Also, the functioning of the somatic-sensory pathways, the motor pathways and the reflex arcs also gives us an idea of how the central nervous system works in concert with other systems, leading us ultimately to the point of Consciousness being located in or near the Hypothalamus which is connected with all these.

(c) The Autonomic nervous system

The body has only one nervous system. But it has two major divisions:—

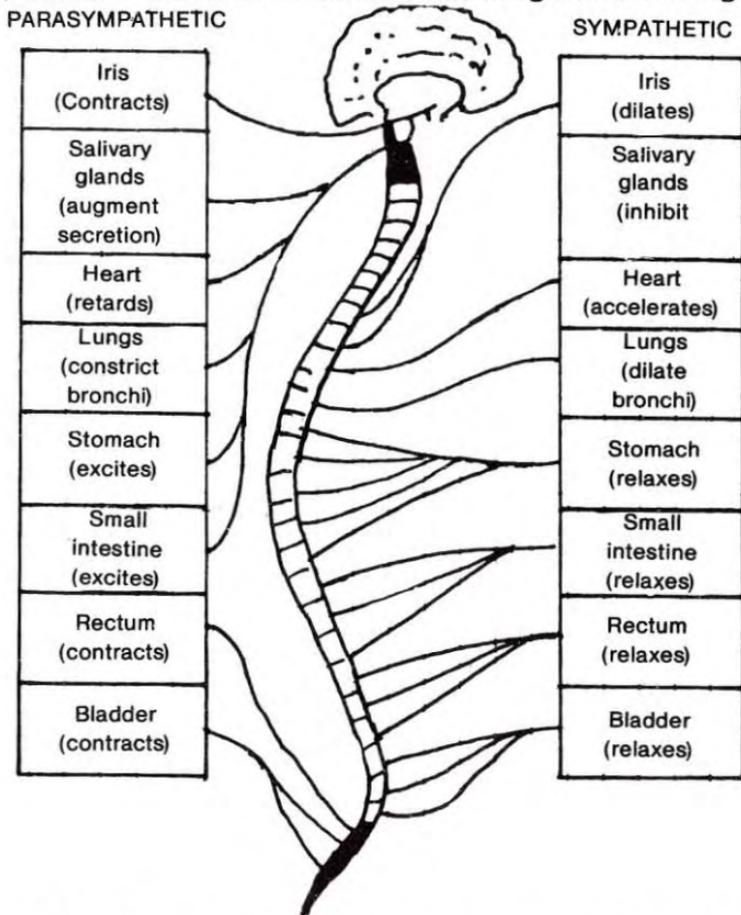
(i) the somatic nervous system and (ii) the autonomic nervous system. The somatic nervous system has already been explained on page 117

The part of the nervous system that 'autonomically' controls such activities as smooth muscle contraction, cardiac muscle contraction and glandular secretion is referred to as 'The autonomic nervous system.'

The autonomous nervous system consists of motor-nerves that conduct impulses from the central nervous system to visceral effectors

which consist of the heart, blood vessels, iris, ciliary muscles, hair muscles, various thoracic muscles and abdominal organs and body's many glands. All these are innervated involuntarily, i.e. without our willing them to and without being conscious of them much of the time.

This part of the nervous system is further divided into two segments—the **sympathetic** and the **parasympathetic**. The autonomic nervous system is not a separate system but a part of the over-all system and both the kinds of nervous system integrate many activities of the body's working parts. Fig. 6 illustrates the structures controlled by autonomic nervous system. Impulses are generated within the viscera (heart, blood vessels, iris, etc.) and are transmitted to the spinal cord, then to brain for co-ordination and integration. The higher brain



(Fig. 7 It shows two components of the autonomic nervous system and their action on various organs. The sympathetic and parasympathetic system have opposing effects.

centres then send impulses back to the viscera to correct or influence that particular organ.

The two divisions—the sympathetic and para-sympathetic have opposite actions. In other words, when the sympathetic stimulates a particular organ (as for example the heart), in most cases the para-sympathetic has the opposite or the inhibiting action on that organ (it slows heart-rate).

The sympathetic nervous system can be thought of as that part of the nervous system that produces protective reflex actions. This protective nature may prepare the body by providing it with energy so that it may meet emergency. The reactions that result from the stimulation of the sympathetic nervous system are paralleled almost exactly by the effect of hormones from the adrenal glands.

There are some general principles about the autonomic nervous system. One is the Principle of sympathetic dominance under stress conditions. Under stress conditions, from either physical or emotional causes, sympathetic impulses to most visceral effectors increase greatly. In fact, one of the very first steps in the body's complex defence mechanism against stress is a sudden and marked increase in sympathetic activity. This immediately brings about an entire set of physiological changes. All are related to making the body able to cope strenuously with the stress situation. They change the usual normal metabolic state of the body to a hypermetabolic state that enables it to put forth its greatest physical effort and expend its maximum amount of energy. Together, this group of changes, so rapidly induced by increased sympathetic activity, constitutes an 'integrated response', known by such descriptive names as the sympatho-adrenal response, 'the defence-alarm reaction' or, borrowing Cannon's classic phrase, the 'fight or flight' reaction. Particularly notable among them are a marked increase in the heart-rate, blood pressure, oxygen consumption, respiration, and, frequently, a feeling of tenseness and being "uptight."

Sympathetic impulses usually dominate the control of most visceral effectors in times of stress, but not always. Curiously, the 'autonomic system' is not entirely 'autonomic'. *Neurons located at higher levels of the central nervous system function in its control.*

The above bird's eye view of the autonomic system which is very important for its own protection and preparedness as also for the

inhibition of the excessive preparedness, shows that *without the co-ordination and integration at the brain level, it cannot work, which, in other words, means that the centre of judgement, preception or co-ordination, i.e. the Centre of Consciousness lies not here but in the brain.* Again, it helps to do something with the function of glands which are, initially, stimulated by the pituitary and hypothalamus.

Thus, a study of various parts of the brain and their respective functions, shows that (i) though each part has a specific function yet all parts work in co-ordination and (ii) Hypothalamus is that part of the brain which, through the Pituitary, controls all the endocrine glands and the secretion of hormones and it also controls the state of awakening and sleep in conjunction with the RAS, and acts for expression or inhibition of emotions in co-ordination with the Thalamus and the Limbic system and works for sense-perception and other mental actions. Seated here on a throne as it were, located at a place between the two eye-brows, the soul acts through the mechanism of the brain and the body. That is why, the devotees apply a sacred mark or dot here, for it is symbolic of the soul's location at this spot, knowing this truth, we should now become soul-conscious and use brain and body-senses as our servants and not as our masters.

We will now show by way of schematic drawings the connection of Body and Mind and how the soul, seated in the Hypothalamus, acts and reacts through the body. Then, in the next chapter, we will discuss how the functions of brain cannot be understood without bringing in the concept of the existence of soul.

Footnote Contd. from page 122

Window from which the soul 'sees' the world. It is the safety vault or the casket in which soul, the greatest of all treasures, lies. Soul is the highest executive running and organising the most complex system known.

Though the soul is not a spatio-temporal entity and, being infinitesimal, need not be pin-pointed in the brain, yet, by indicating the place of its inter-action with body-mechanism, we can show that (i) the soul exists (ii) that the soul is not identical with or omnipresent in the body but it acts through a control system and (iii) that it is not located in the heart muscle but in the heart of the brain and (iv) that it is here that it acts through the body. The understanding of this will help one in his belief in the existence of soul. On the basis of this we can explain physiology of Meditation.

The following two diagrams also illustrate how hypothalamus serves as the seat of the soul.

How Mind acts through the Body?

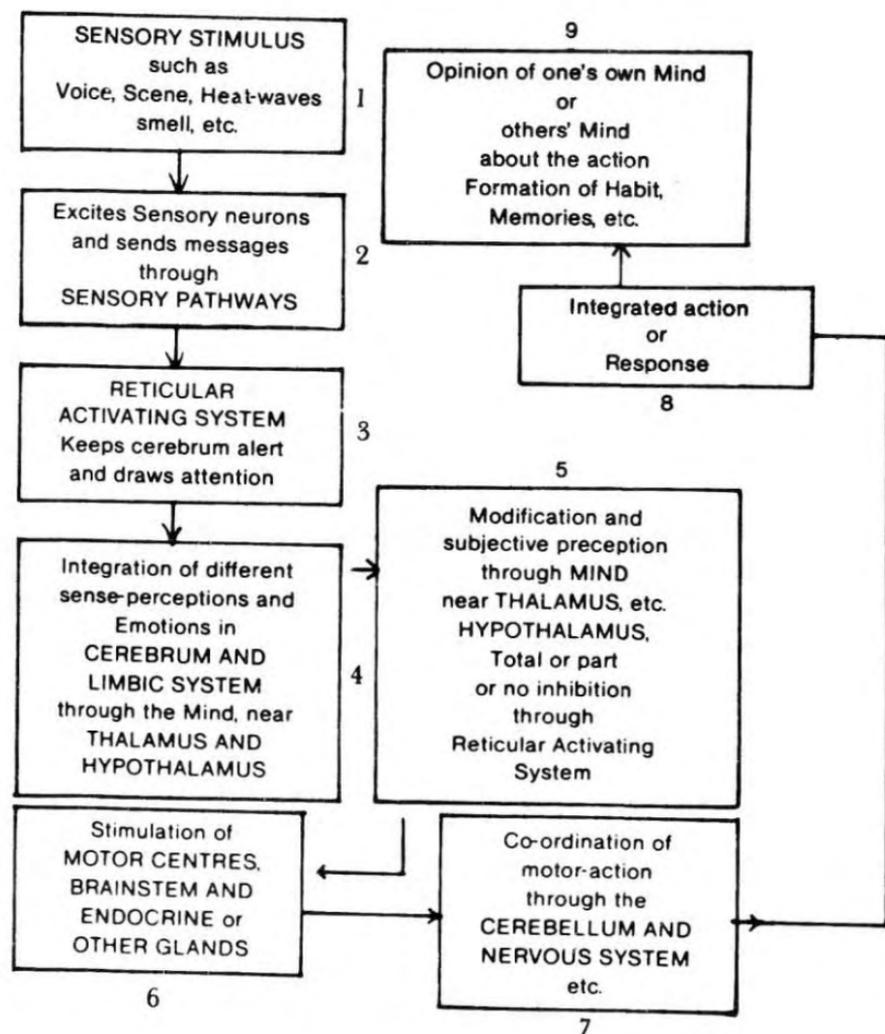


Fig. 9 The above scheme shows the inter-action of Mind and body and the sequence of stimulus and response. Some neuro-scientists say that there is time-lapse of a couple of seconds (or even a split second) between the sensory message perceived (see stage 4) and the triggering of action (stage 6 onwards) and thus we can conclude that, at stage 5, the decision to do or not to do or how and when to do is taken and, therefore, this is what explains the existence of Soul here. This is the place or *The Akal Takht*, from where the timeless Soul rules the metropolitan city, called 'The body'. It is the

Hypothalamus is the Locus of Consciousness

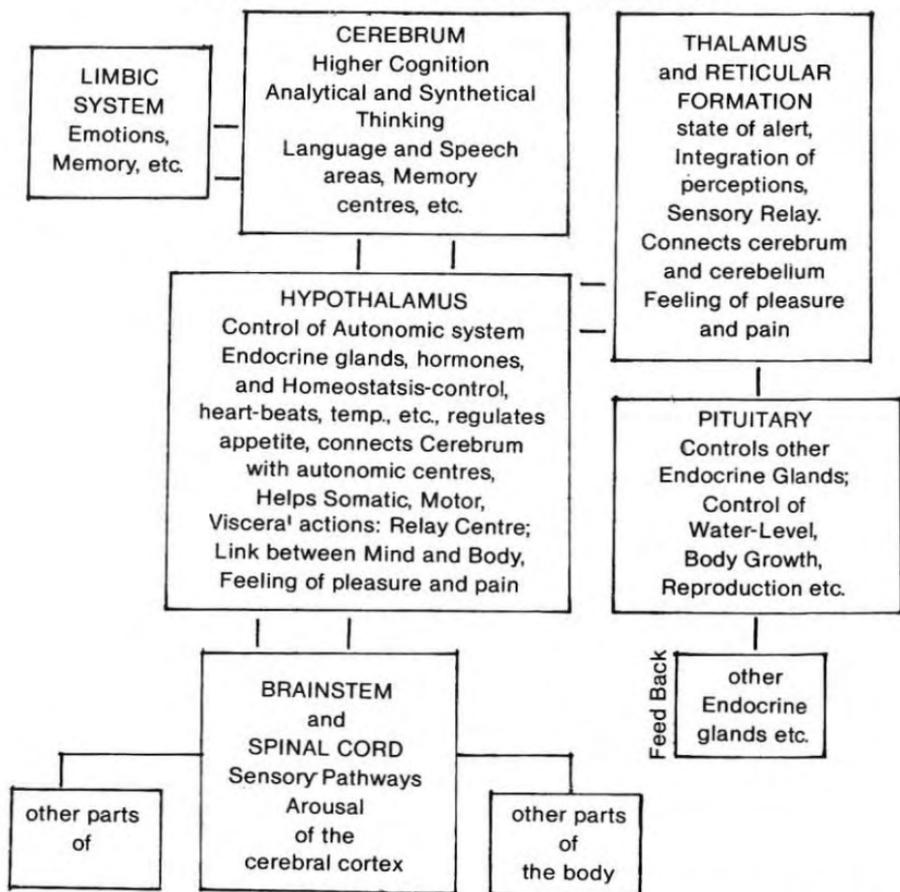


Fig 8 [This proves the most important position the Hypothalamus has.]

As shown in the above scheme, the soul, by virtue of its location in the hypothalamic area, is capable of influencing all the important parts and functionaries of the brain and the nervous system and is also capable of perceiving their 'effects' or changes. It is only here that the soul can manifest its consciousness in the form of (i) Cognition or understanding through the Cerebrum, (ii) Emotions through the Limbic System (iii) Will or Desire and (iv) the feeling of pleasantness (pleasure) and unpleasantness (pain) through Thalamus and Hypothalamus and (v) the state of being alive (awake, asleep, drowsy, in coma or under the effects of Samadhi, hypnosis or anaesthesia) through the Reticular Activating System etc. and (vi) perform reflex actions or Autonomic actions through the centres in the Spinal cord via the Hypothalamus and (vii) Perform Homeostasis and to fight stress, etc. through the Pituitary and the nervous system. Thus it may be noted that, according to Indian philosophy, Will (Ichcha), Feeling of pleasure and repugnance (Dvesha), Effort (Prayatna, i.e. Action), are the characteristics of the soul. This shows that the soul is located in the brain, near the Thalamus and the Hypothalamus, for it can manifest its consciousness in these forms here only. This is how and where the soul interacts with the body.

Mind or Soul

IS ESSENTIAL FOR PERFORMANCE OF BRAIN-FUNCTIONS

“Seated in the brain, it is the soul which receives information and understands it and perceives objects through the senses. It is the soul which makes judgment and takes action through the appropriate mechanism of the brain and the body. So, as a soul, you should judge between right and wrong and do only righteous actions.”

—God

In the light of the explanation about the functions of various parts of the brain and nervous systems given in the foregoing pages, it is clear that some of these parts are used for bringing in sensory messages whereas others are used for blending these into a coherent picture, some others are used for storing memories or for emotion— exteriorisation, or for keeping the brain in a state of alert, etc. and Hypothalamus is the central point interlinking all these functions. But the question arises who is it that uses the Hypothalamus as its seat and experiences the pleasure or pain or uses its Will and command to continue with that experience or to get rid of it? Who is it that decides to use the facilitatory mechanism of the Reticular Activating System and the Thalamus and the Hypothalamus when it decides to keep alert or awake and uses the inhibitory mechanism when it decides to go into sleep? Who is it that chooses to neglect the external stimuli (that can otherwise be a source of distraction) and instead continues to pay attention to objects which, at the moment, are not in close or remote contact with its senses? Who is it that wants to get rid of certain memories when they get aroused or who tries to control certain emotions when these get stirred up? Who is it that wishes to continue to live and preserve its body or who, in some rare cases, even decides to put an end to its brain, body and all? In other words, who is it that uses its discretion or Will to use, abuse, misuse, not to use or to put out of use anyone of its senses or brain-parts? One will

have to admit that such a function is of an entity which is not of any part of the brain but of an entity which, by its very nature, is sentient and is different from the brain. It is this which we call by the name 'Mind' or 'Soul'.

Again, consider the following findings of neuro-surgeons who have done lot of research in relation to the brain. The experiment of Penfield and others are clear medical evidence that lead us to two conclusions. One of these is that various parts of the brain are only instruments and there is an entity ensconced in the brain which uses these parts. The other is that this entity which uses the brain is different from it and is metaphysical in nature and it is located not in the cerebrum.

**Penfield's experiments show that cerebral cortex
is not the seat of Mind**

Penfield's experiments have shown that even massive removals of cerebral cortex do not seem to completely abolish awareness, whereas, small lesions in the brainstem produce irreversible coma. Penfield and another neuro-scientist, Heranadoez-peon, have also pointed to the evidence from those unfortunate human beings who are born without any cerebral cortex and are called '*anecephalic monsters*' in scientific jargon because they are not capable of much learning and of understanding their environment. They do have sleep and wakefulness alternating each other and, when they are awake, they can smile or cry also. Similarly, newborn normal babies, whose cerebral cortex is not yet functional, show brief periods of wakefulness during the day. *The case of these anecephalic monsters' implies that while the two cerebral hemispheres are responsible for higher thought-processes and for understanding the language code and expressing thoughts in language, etc., these are not the seat of Consciousness or Mind* for the Consciousness in these anecephalic monsters is still there though they do not have any cerebral cortex. In other words, it means that a man can live and have consciousness even if he does not have the two cerebral hemispheres.

Further Penfield performed thousands of such experiments. He has documented them. He stimulated thousands of sites or points on the brain. Stimulation of motor cortex produced only bodily movements, as for example the movement of a hand, but it did not produce any conscious effects. It just stimulated a mechanical or motor action

and the patient's Consciousness felt that it was being done *without his will which means that Conscious Mind is not located in motor cortex also though the motor nerves which trigger the motor action are located there*. This also shows that the cerebral cortex and the motor cortex are only the instruments and the conscient being who uses them is different from these.

Penfield is known for his finding that memories can be activated by an electrode placed on the temporal lobe or some other part of surface of the cortex. But, actually, the locus of the memories was in the upper brainstem and the Hypothalamus.

Again, the stimulation of sensory areas of the cortex resulted in hearing, seeing or feeling something depending on which cortical area had been stimulated, but the sensations which resulted from this were not well-knit perceptions like we normally have of visions of tables, chairs, etc., but rather these sensations were just in the form of bits of flashes of memories or sensations; they were only bits of perceptions, not well-integrated and, as we have said before, the locus of these seems to be near the brainstem.

Further, stimulation of the rest of the cortex, which is known as the 'uncommitted cortex' did not produce any conscious effects. All this leads one to the conclusion that the neo-cortex or the cerebral hemispheres are not the seat of Consciousness or Mind which, according to the available evidence, seems to be in or near the Hypothalamus which has connection with the Thalamus and the Brainstem.

Similarly, the Mexican neuro-physiologist, Raul Herandez-Peon, through his experiments, came to the conclusion that Reticular Activating System (RAS) of the Brainstem *is the gate through which go the sensory impulses to the cortex and that it is the regulator of 'attention'*. And we all know that 'Attention' and 'Consciousness' are closely related. Students of psychology know that attention is essential to all learning and experience which is a work of Consciousness or Mind. This too shows that Mind, Consciousness or Soul should be located in the Hypothalamus, near the upper part of the Brainstem which has the Reticular Activating System. The above facts are further proved by experiments of the famous physiologist and neurologist, Dr. Sperry.

The right and the left hemispheres are not the Seat of Mind

Until only recently, it was believed that the right hemisphere had no specialised functions of its own but it was capable of taking over the functions of language and other thought-processes if the left hemisphere was damaged. In other words, the right hemisphere was considered to be like a spare tyre. The reason for this is that it was found in many patients that, if any damage occurred to the right hemisphere, the damage did not produce such disorders of Thought-processes as are characteristic of aphasia, i.e. block-age of the function. So, it was thought that all higher mental activities took place in the left hemisphere. Because of this belief, the right side of brain was designated as the 'non-dominant' or 'minor' and the left hemisphere, as the 'dominant' or 'major' hemisphere. But during the last half century, this view has changed considerably through observation of the result that followed the surgical separation of the right from the left hemisphere. Perhaps the first operation to separate the two hemispheres was performed, in the year 1960, on a small number of patients, suffering from severe epilepsy. The operation involved the severing of all direct connections between the two hemispheres by cutting all the cables of nerve fibers which connect the corresponding parts of the two hemispheres. The connection between the two hemispheres is there because of the *corpus callosum* which is composed of about 200 million nerve-fibers and nerve-cells which normally function to transmit information between the two and coordinate their motor activities also. Since 1960, till date, many such operations have been performed. One of the pioneers in this field is Roger Sperry of the California Institute of Technology who has been awarded the Nobel Award for this work in Physiology. Some of his findings, relevant to our present topic are:—

1. Even after removal of one hemisphere, a person is alert, responsive and intelligent and a casual interaction with such a one would not reveal that he or she differs from the rest of the humanity because of commissurotomy, i.e. the surgical operation separating the two hemispheres though there are certain deficiencies noticeable because the sensory information that goes to one hemisphere is not passed on to the other hemisphere. *Since one hemisphere can do without the other, this clearly shows that neither of the two hemispheres is the seat of Consciousness or Mind though both of these are used by Mind.*

2. It was observed that when the left hemisphere of a patient was totally removed for treatment of a large brain-tumour, despite the loss of language capability which is known speciality of the left hemisphere, the patient had all signs of intelligent and active behaviour. It is clear enough that the right hemisphere is capable of sensory and motor action even in the absence of the left hemisphere which, until only a few decades ago, was wrongly considered to be the seat of the soul or Mind.

3. Further, it has been found that the right hemisphere excels in both the perception and expression of music and in visuo-spatial or pictorial thinking and in synthesis whereas the left hemisphere excels in human speech, abstract conceptualisation, logic, mathematics and in analytical thinking.

The Mind is a psychic reality, located outside the two hemispheres

Now an important question related to the above findings is: "Who is it that manipulates the information from these two hemispheres which are characterised as analytic/synthetic or logical/dreaming, etc.? In other words, since the operations separating the two hemispheres have made it clear that there are two different kinds of brains, or, let us say, there are two different kinds of brain-codes operating to give each hemisphere its characteristic mode of thought, who is it that decides which hemisphere should take precedence over the other at any given moment and under a given situation? Who decides that this problem requires analytical thinking, logic, etc., and, therefore, the left hemisphere should work on this, or that the other problem is spatio-visual in its nature—as an artist's job is—and that the right hemisphere should take over this job?"

Evidently, the Consciousness, Awareness, or Mind which decides and uses either of the two hemispheres, is separate and apart from these two and is located at another site. In fact, in patients who have split brains, the Consciousness seems to be manifesting separately through the two hemispheres which clearly shows that the point-source of consciousness is somewhere outside of these two hemispheres.

In this connection, an incident reported by Sperry would be worth citing, for it would provide an additional confirmation of our stand that the Mind or point-source of Consciousness is metaphysical

in its nature and is an entity apart from the brain and located outside of these hemispheres.

Sperry says that he was flashing pictures to one or the other hemisphere of a patient under-study. The patient was a woman. In the series of pictures was a picture of a nude. This picture was shown to the left eye of a split-brain patient i.e. a patient who behaved as if she had two brains. Now, since the left eye is connected with the right hemisphere (and the right eye with the left hemisphere), it means that the picture was shown to the right hemisphere of the split-brain patient. On seeing this nude pin-up, the patient blushed and giggled, but when asked what she saw, she replied that she had seen just a flash of light and nothing else. (Evidently, she felt embarrassed to see a nude picture and felt shy to say that it was a nude pin-up). When she was asked why she was laughing if she had seen only a flash of light, she at first seemed confused because she could not decide what to say and, after a little pause, she laughed again and said, "Dr. Sperry, you have some machine."

Pointing this incident, neo-scientist and psychologist, David Galin, says that the explanation of this incident, according to Freud, a well-known psychoanalyst, would be that she had felt embarrassed at the sight of the nude picture and had kept it from consciousness by a process of repression.

Now, to Freud, the 'unconscious' which repressed the perception of the nude pin-up in the above incident, was an independent realm of mental activity. He has said that the unconscious is the "true psychic reality" because its urges were not censored by the do's and don'ts of the society of the day. But, we may ask who or what was it that suppressed the patient's perception of the nude or the expression of what she had seen? *Does it not show that the real point of 'conscious perception' or 'unconscious repression' lies outside of the right and the left hemispheres though it manifests its ability of preception, expression, repression or inhibition through various parts of the brain or the body-mechanism?*

Further, does this incident not point out that the response of the brain and body to external stimuli is *not merely mechanical*? If it were merely mechanical, then the patient should have said plainly what she had seen but, instead, she repressed it, implying thereby that there are other factors, such as *a person's own subjectivity*, (her cultural

background in this case) involved. This shows that the body's response to the stimuli cannot be completely understood in terms of electrical impulses or field circuits or in the form of bio-chemical changes but there is also a psychic or spiritual factor involved and it has its own overriding significance. This factor is the Mind, the Psyche, the Consciousness or the Soul and that this Mind, is located in the brain but not in the two hemispheres or in the sensory and motor cortex—as these have their own specialised functions?

Thus, considering the over-all picture, we can say that the centre of Consciousness or Sentience, i.e. the Mind, should be located in the Hypothalamus (part of which is the posterior Pituitary stalk), which interacts with the Thalamus, the Mid-brain, the Brainstem and the Reticular Activating System and the basal ganglia. This location is very unique, for it would enable it to be linked to all parts of the body and to have perceptions and sensations, and to 'issue commands' for motor actions. The area of the Thalamus, the Hypothalamus and the Brainstem is very important one, and the place of Hypothalamus in this is the most unique, for it is connected with these parts of the brain and, through the pituitary it can affect all the glands and control the hormonal secretions, it is also connected with the somatic nervous system through the Thalamus and with the autonomic nervous system through the Brainstem and has, in fact, control over every part of the body.

So, seated at this place, the Soul or the Mind works like a unique magnet or as a *psychic* electro-magnetic entity. This magnet is different from the gross, natural or artificial or electro-magnetic devices we have, because it is *non-physical*, non-material, subtle and, above all, it has the qualities of perception, understanding, feeling, experiencing, etc. So it can perceive, in effect, the sensory messages or the impulses bombarding the Hypothalamus or the electro-chemical changes taking place and can also understand or modify the information received and can, through various appropriate mechanisms, such as of the glandular action, autonomic system, and motor pathways, etc., trigger of the action, it decides. Without the soul being there, this most complex of all systems—the body—cannot function as it does, for there must, of necessity, be some judge, some arbiter or some high executive who can decide and take the action. Further, it is from this point that the soul or

Mind can also perform the function, called 'Homeostasis'¹. Furthermore, the state of sleep, and other altered states of consciousness also show that Mind is a metaphysical entity, located in the Hypothalamus. We shall explain this in the next chapter. We have shown in the diagrams (on page no 95) the unique importance of Hypothalamus and how, seated here, the soul functions. □

We will now give further evidence to establish the existence of the soul. It will be found, by a perusal of the next chapter, that Altered States of Consciousness and the effects of Stress, and of the practice of Meditation also show that soul exists on an eternal metaphysical entity.

We will now explain further, analysing our thought-process, how it is necessary to believe in the existence of soul in order to understand the functioning of the brain.



Born with no Brain

Two-month old Andrew grabs the finger of Barbara Stanley, his foster mother at her Roanoke Country, Va, USA. Andrew, according to doctors, was born without a brain. The doctors theorize that his brain failed to form when a cyst developed over the baby's brainstem. The brainstem provides Andrew with the automatic functions such as breathing. (Courtesy: The Jakarta Post, Oct. 5, 1984). The case shows that there can be a living being without a brain. However, the feelings on the face are evidence of the presence of a conscient being—the soul.

1. A study of human body and its various systems and their functions enables us to know that all processes in it must be controlled within certain limits, otherwise death will result. There has to be regulation of Metabolism, i.e. the processing of the raw material that we take, the distribution and storage of energy and the maintenance of a stable internal chemical environment. There has also to be the regulation of the process of protection and immunity and also of the hormones. There has also to be regulation and co-ordination of the nervous system. The word 'Homeostasis' is used for all this regulating process.

Meditation, ASC and Stress also indicate the existence of the Soul

"Meditate lovingly if you aspire for deep bliss and lasting peace and a state of higher consciousness." — God Shiva

IN order to understand the nature of consciousness and the place of its location, it may be of interest to study, briefly, "the Altered states of consciousness". Certain variations in the levels or states of consciousness are normal. All of us, for example, experience different levels of wakefulness. At times, we are highly alert and attentive. At other times we are relaxed and non-attentive.

Altered states of consciousness (ASC) also occur under certain other conditions, for example, the one produced by anaesthetic drugs. Disease or injury of the brain may also produce a type of ASC, called the state of comma. A notable feature of all these states, as discovered by the neuro-scientists, is that, in one way or the other, *all these different states are connected with the reticular activating system, the brainstem and finally, with the hypothalamus.*

Meditation indicates the existence of Soul in the Brain

Particular mention must be made here of the altered state of consciousness, obtained by practising Meditation or Raj Yoga. This ASC may be a state of ecstasy, of special trance, or of deep peace and relaxation. Meditation brings about an alteration in perception, feeling or experience and in thought—sometimes quite profound. It also brings about useful physiological changes, as for example, it lowers oxygen-consumption-rate, heart-rate, blood pressure, etc. and increases resistance of the skin and effects great relaxation. The state of relaxation is known by means of what is called Electro-encephalogram (E.E.G.). Let us understand the use of EEG a bit clearly.

Most of us to-day, have heard about the Electro-encephalograms (EEG). Physicians now make use of these as aids for diagnosing

certain altered states of brain-functions and even for establishing death. These are the record of the cerebrum's or brain's electrical activity. A number of electrodes are placed on different regions of the scalp, and the 'brain-waves' (as they are called) are recorded. Brain waves have different patterns depending upon the mental or psychic state of a person.

Four types of Brain waves are recognised: Alpha, Beta, Delta, and Theta. This difference is based on two aspects—(i) how many times the waves occur per second, and (ii) what is their voltage. **Alpha waves** are moderately fast (8 to 13 per second) and are relatively high-voltage waves. Normally, the EEG records these waves *when an individual is awake, has his eyes closed and is in a relaxed, non-attentive state and his cerebrum is 'idling', so to say.*

Beta waves are comparatively faster (13 to 25 per second) but, in amplitude, they are lower voltage waves in contrast to the Alpha waves. Beta waves are obtained when an individual is awake, has his eyes open, and is in an activated or attentive state, that is to say, when his cerebrum is not idling but is busily engaged with sensory stimulation and mental stimulation.

Delta waves are the lowest (0.5 to 3.5 per second) brain waves and they have a high voltage. They are recorded when an individual is in deep sleep. Because of this fact, the physiologists refer to deep sleep as slow-wave sleep. (SWS).

Theta waves are moderately slow (3 to 7 per second), low-voltage waves that predominate when drowsiness descends.

If the EEG indicates that the cerebrum is producing no brainwaves, it is called a **flat EEG** and is considered to imply that the individual is dead.

Now, it is a point worthy of note that when a person is awake and has his eyes open and is busy—his cerebrum working—the **EEG** gets Beta waves from him but, paradoxically, when a person is in Meditation or Yoga (even though his eyes are open and he is mentally active), we get **Alpha** and some **delta** waves from him! Alpha, as said earlier, is normally obtained from an individual when his eyes are closed and his cerebrum is 'idling' and Delta waves are recorded when a person is in deep sleep. So, the neuro-scientists are unable to explain why we get Alpha and Delta waves from a person who is in Meditation.

Not only this, we also find many physiological changes: a great

decrease in the concentration of lactate in the blood, a dramatic decrease in oxygen-consumption, in respiratory rate and volume, a moderate slowing of the heart, and, low, almost unchanging blood-pressure and a rapid and marked increase in the electrical resistance of the skin. Now, this is exactly opposite to the 'fight or flight' response which one generally has in an alert or alarm state !

Meditation indicates the existence of Soul in the brain

The physiologists, psychologists and neuro-scientists say that meditation implies a quiescence of Mind and of the sympathetic nervous system. They also say that it is an integrated response. Now, since the stress stimulates the Hypothalamus directly or indirectly in order to prepare the body for its defence—for fight or flight—the Meditation also must produce the above changes through the Hypothalamus. Again, since we, ordinarily, get Alpha waves when a person is relaxed and his cerebrum is idling, *the state of Meditation shows that there is a conscient being, call it Mind or soul, which may think and be active and yet not use the cerebrum or the reticular activating system for sense perception so that we get waves which represent relaxation, coupled with the state of high thought-activity.* So, this clearly indicates the existence of the soul which uses the brain and the rest of the body.

The conclusions drawn from the effects of Meditation

Let us state this point thus. The practice of Spiritual Meditation, which consists in contemplation of self as a soul, peaceful and pure in its original nature, etc., brings changes which, in fact, cannot be explained on the stimulus-response basis as is usually done in psychology or physiology. Modern Chemistry and Physics also cannot explain this phenomena. How physiological changes occur simply by contemplating that "I am a soul, different from the body. . . I love God fondly", etc., etc. is as yet an inexplicable wonder to the neuro-scientists. The reason for this is that the person who practises contemplation is not a material entity and, while practising Meditation, it lays at rest most of the usual activity of the senses and is, let us say, dis-engaged from the body. However, since its locus is the area of the brainstem, the Hypothalamus, etc., its own altered state produces effects on this area and, through this, in all parts of the body. An understanding of the Altered States of Consciousness in this perspective leads us to have a confirmation of the existence of the soul and its location in the area described above.

Altered States produced by drugs

Certain drug-induced states and hypnotic states are also 'altered states of Consciousness', but they differ greatly from the state of Meditation—Psychically and physiologically. As for example, one who uses LSD (Lysergic acid di-ethylamid) may experience an altered state of consciousness or, what in drug culture is known as 'a trip', but there is a lot of difference between this altered state and the one that is produced by Meditation. For example, one who takes LSD, he also gets distortion in sense-perception and *has loss of touch with reality*, but one, who practises Meditation, *realises reality* and the efficiency of his sense-perception and his cognitive faculties increase. He is not cut off from reality. Again, while one who has taken LSD, feels dizziness in his consciousness and nausea before perceptual alteration and his 'Trips' may be pleasant or unpleasant, the person who Meditates, invariably feels exhilaration and bliss when he is in Meditation and also at the start and after the practice. A person under the effect of LSD has the danger of *uncontrolled behaviour* whereas a person practising Meditation has *control over his behaviour, better than before*.

Hypnotic state is also obtained by extreme suggestibility. A hypnotised person may have increase or decrease in his sense-perceptions. He may also have hallucinations, i.e. he may see things not there or he may not see things that are really there. He may be able to recall forgotten memories of his childhood days or he may be able to have effect on his physiology, as for example, he may be able to raise blisters on an area of his skin, by having the hallucination that a burning match-stick is inflicting a burn.

Altered states of consciousness (ASC) also occur under certain other conditions, for example, the one produced by anaesthetic drugs. Disease or injury of the brain may also produce a type of ASC, called the state of coma. A notable feature of all these states, as discovered by the neuro-scientists, is that in one way or the other, *all these different states are connected with the reticular activating system, the brainstem and, finally, with the hypothalamus*.

Thus it points out to the truth that this area is the seat of the Consciousness or the point of inter-action of the psyche and soma, for it can effect, as happiness in Meditation or hypnotism, or it can also effect the Mind through LSD. Producing blisters on the body through hypnotic state of hallucination, or producing physiological changes

through Meditation, shows the effect of Thought or Mind on body whereas the effect of LSD on Mind shows the effect of chemical changes in the body or the Mind—the locus of interaction of these two being the area of the Mid-brain and the hypothalamus.

Understanding the Stress

Our understanding of the mechanism of the body which regulates its systems under conditions of stress will also facilitate proper understanding of the question of existence of soul and the location of the Mind. Stress, as explained by the modern neuro-scientists, is any stimulus that directly or indirectly stimulates neurons of the hypothalamus to release cortico-releasing hormone (CRH) into the pituitary portal blood. Indirect stimulation of hypothalamus can result in impulses conducted to it from the limbic or other parts of the cerebral cortex.

Stress may be physical; it may also be psychological. Psychological stress is anything that an individual perceives as a threat either to his survival or his self-image. This causes feeling of anxiety. Other emotional reactions, such as anger, hate, depression, fear and guilt are also common responses to conditions of psychological stress. Fidgeting, criticising, quarrelling, lying, crying, etc. are some of the other responses. It has been found that psychological stress is related to physiological stress. Both accompany each other in some degree. This fact also shows that the point of inter-action of the Mind and body is the hypothalamus area and the brainstem area.

Further, since, stress also results in reactions in the form of fear, hate, anger, etc, which states are overcome by Meditation, i.e. contemplation, *viz.* "I am a soul, pure and happy in my original nature," it shows that there is an entity present in this area which is non-physical and is related to these psychic states, emotions, feelings and experiences. This is what we call Soul. So, it also confirms the existence of the Soul and Consciousness, located in the Hypothalamus.

Now having been proved by Science and by practice that Meditation eliminates stress and brings about a state of deep relaxation and quiescence, and takes one into high bliss and lasting peace, one should find time to meditate, for when the soul is linked to God, the Ocean of Peace and Bliss, it experiences a great ecstasy and joy which cannot be had from sense-objects. □

Sleep and Dream also indicate the existence of the Soul

“Give up the slumber of ignorance and the somnolence of body-consciousness! Arise and march towards your goal with zest and zeal, for it is now Amrit Vela—the Time to wake-up and drink the nectar of Godly knowledge”.

—God Shiva

Whatever may be the factors that bring about the condition of sleep, the general belief about sleep is that it enables the body to recover and recuperate from fatigue and from other effects of hard work and also from the troubles, the Mind faces during the state of wakefulness.

It has been found that the vital centres such as the centres of respiration, in the Medulla Oblongata, continue to carry out normal functioning during sleep. In fact, the whole autonomic nervous system continues to function during sleep in much the same manner as during the waking period, except that during sleep, there is a little more of parasympathetic activity and less of sympathetic activity. The muscles used in rhythmic respiration also work almost in the same manner as before.

Sleep brings rest to certain parts of the body

But there is clear evidence that it is the skeletal musculature which is reduced to a state of comparative rest. It has also been found that, in the main, it is the activity of the higher parts of the brain especially the cerebral cortex which are found to be in reduced or modified activity or in a state of relative inactivity. It has also been observed that the discharge from the motor cortex is held in abeyance during sleep.

Kleitmen, who has performed experiments in connection with sleep, suggests that sleep is due to fatigue of the neuro-muscular mechanism, concerned in the maintenance of the muscle-tone. Though this mechanism is, by its very nature, such that it operates in a manner

specifically suitable to avoid fatigue yet, after a period of work, muscles get fatigued. That is why the muscular relaxation helps in bringing the state of sleep. Kleitman and Camille also concluded on the basis of experimental tests, that decorticate dogs and cats, i.e. those animals whose cerebral cortex has been removed, also sleep.

Body-mechanism that underlines sleep and arousal

So, it can be said that though it is generally known the functional state of the cortex (by means of the EEG or the corticogram) that we can determine whether a person is asleep or awake, yet it is (the caudal part of) the Ascending Reticular Activating System which is the factor of the first importance in evoking the state of arousal or in facilitating the onset of wakefulness or in the maintenance of the state of awakening. It has been found experimentally that interruption of the Reticular Activating System causes a living being to behave as if it were deeply asleep or anaesthetized. However, the cortical electrical activity of such a living being shows the signs of normal sleep. It has also been clinically observed that awakening, in the behavioural as well as electro-encephalographic (EEG) sense, is mediated through this corticopetal pathway. There is clear evidence that sensory stimulation cannot bring about state of arousal of the cortex through the ascending sensory pathways but it is the Reticular Activating System which does this. Experiments make it amply clear that wakefulness, if it were to be judged from the state of the cerebral cortex, depends on the Ascending Reticular Activating System first and foremost.

But so far as sleep or somnolence is concerned, it has been found by experiments performed by W.R. Hess and others that sleep can be produced by excitation of certain brainstem areas. The inhibition of certain brainstem centres shows loss of muscle-tone, relaxation of skeletal muscles, drooping of the head, sagging of limbs and the handling of the body limply. But, as has been explained in the preceding chapter, the reticular formation which is found in the pyramidal tracts in pons and medulla or in the brainstem and in the tegmentum of the mid brain has its connections with the Hypothalamus. The retico-spinal fibres connect the brainstem with the spinal motor-neurons and these paths, which are facilitatory as well as inhibitory, are connected with the Hypothalamus and, through the Hypothalamus and the Thalamus, to the cerebral cortex also and there is conclusive evidence to show that *Hypothalamus is the main area*

connected with the phenomenon of sleep. That is why it is found that growth in the thalamic and the hypothalamic regions frequently shows hypersomnia or stupor. Damage to or pressure upon the midbrain area, particularly involving the hypothalamus, shows the most marked effects of increased sleep. Even extensive involvement outside these areas may have little effect on sleep.

Clinical evidence shows Hypothalamus as the area regulating Sleep

Again, clinical observations made in the case of an infectious disease, called 'Sleeping Sickness' also indicate that Hypothalamus is intimately connected with the phenomenon of sleep. 'Sleeping Sickness', also called '*encephalitis lethargica*' is invasion of the central nervous system by a viral infection. This infection has a particular affinity for the hypothalamic region. There have been a number of epidemic outbursts of '*encephalitis lethargica*' or 'the sleeping sickness.' There was a particular severe outburst of the infection in Italy in the Winter of 1919-20 and in St. Louis in the mid 1920s. Von Economo also performed many experiments during the epidemic of 1916-17. Von Economo claimed that the study of this disease demonstrates the existence of sleep-regulating centre in the caudal hypothalamus and the rostral portion of the mid-brain. Lhermittee and Tournay also, on the basis of clinical studies, came to essentially the same conclusion.

Moreover, it is common knowledge that neuroses or anxiety, in many cases, causes insomnia or lack of sleep because neurotics (i.e. persons deeply troubled by their inability to cope with persistent pressures and conflicts) are constantly afraid of results. Sleep is again and again seen disrupted by real, imagined or exaggerated responses of such a person to his environments or problems which seem to him to be a threat. Similarly, the maniac depressive psychoses also sharply disrupts sleep. But, as we will explain in the next chapter, the central mechanism for the exteriorization of emotions is in the hypothalamus.

The phenomenon of sleep indicates the existence of the soul in the brain

Now an important point to be noted in the case of a normal person's sleep is that when he intends to sleep, he reduces or eliminates the sensory impulses. For example, if there is noise outside, he closes the door of his room. If a radio was previously on, he now switches it off. If there was bright light in his bed-room, he puts it off. If there is

excessive heat, he presses the button of his cooler. But, again, if the room becomes too cool to work as a sensory stimulus, he uses the regulator to put the cooler on a low key so that the sensory stimulus in the form of cold may be removed. Similarly, he uses all means whereby his muscles can be relaxed and thereby the proprioceptive stimulation can be diminished. If he relaxes in this way then sleep can be easily induced even if the person is not fatigued. People use soft pillows, double-foam mattresses and cushioned easy chairs to feel relaxed and, when they do this, they easily fall asleep. In short, we may say that one tries to minimise the sensations of sight, hearing, smell, taste, touch, etc., in order to facilitate the onset of sleep. That is why one lies down in a quiet, darkened room. *We ask who decides to remove the sensory stimuli and to sleep? Who decides to inhibit the rousal of the cerebral cortex and the Reticular Activating System?* As the experiments conducted by means of a corticogram show, the cortex stimulates the Thalamus and the Thalamus, in turn, stimulates the cortex and thus there is a continuous stream of electrical waves and the cycle continues, but it gets arrested in deep sleep with the consequent cessation of cortical waves because of somekind of inhibition at the Thalamic and hypothalamic level, this cycle is resumed on waking. *We ask, "Who cuts this otherwise continuous cycle?" Evidently, it can be neither the cortex nor the hypothalamus which are part of that cycle but someone who uses both these mechanisms.* Now this someone who intentionally eliminates or reduces the sensory stimuli and who arrests or halts the cycle of excitation or cortex by Thalamus and *vice versa*, is the entity that is different from these and is the Soul. The soul, considering that the body is in a fatigued state or that the various parts of the body may rest so that they get renewed to work efficiently on the next day, uses its will and decides to cut the cycle of stimulation and 'detaches' itself so that the body may relax. It is as a driver, thinking that the engine has become too hot or that the petrol is about to run out, puts the car to a halt.

Consider another case. A person is feeling fatigued. He thinks that if he lies down, he will fall asleep but he has not to sleep for another hour because he has to perform his duty of a watchman. So, he attempts to prolong his period of wakefulness by walking to and fro, for he knows that by indulgence in muscular activity, sleep can be avoided. *Now, while the skeletal musculature needs relaxation and rest and the sleep mechanism in the hypothalamus (or the brainstem) is indicating*

the onset of sleep, who is it that intervenes and decides to make attempts to ward off the sleep by taking to muscular activity and keeping the cerebral cortex also alert and aroused by engaging himself in talk with a fellow-watchman? Evidently, it is someone who is different from the cerebral cortex, the hypothalamus, the brainstem and the skeletal musculature, for all these are sleep-prone at this moment.

Take the case of a student preparing for a final examination. He is studying late in the night. He feels that the sleep is about to chain him down but that he must keep awake for he has yet to go through a few more pages of a course-book. He, therefore, does not go to the comfortable bed, which is there just by his side, even though the *physical* urge for sleep is there. We should know that the sense-organs in muscles which respond to stretching show little adaptation but when a person lies down on a comfortable bed in a relaxed position, the sensory impulses from muscle-proprioceptors get slowly reduced and this tends to bring sleep and therefore if this man had gone to bed he would have gone to sleep. But this student does not go and relax in the bed because he knows that this will induce sleep. Now, who is it that is *intentionally* warding off the invasion of sleep by sitting upright in a chair? Is this one not different from all the body and brain mechanism which, it is using and intends to use for some more time before going to sleep?

Another example will, perhaps, make it more clear. A mother is feeling drowsiness. She is waiting for her child to come up. She has the idea that she will go to sleep when the child has returned from the movie. But the sleep overtakes her. Now, though she is asleep yet she has a *patchy* sleep because she is anxious about the child's safety. Even the slightest sound is enough to awaken her today because, to-day, she is awaiting her child. Now, while the process of internal inhibition (to use the words of Pavlov) is at work, it seems that one analyser is relatively free, for the sleep of the anxious mother is not 'full' or 'deep' as it normally used to be on other days. *Now, who is it that keeps one analyser free? Who is it that is anxious and awaiting even in sleep? It is the metaphysical entity, called the soul.*

**Cases of sleep-walking and sleep-talking indicate
the existence of soul**

Again, take the case of sleep-walking or what is called

somnambulism (*somnus*=sleep *ambulus*=walk). During a sleep walking episode, the person has low reactivity to the environment around him which shows that he is asleep. It is difficult to wake him up when he is walking; this also shows that he is asleep. When we wake him up, he gets confused which shows that he was, while walking in sleep, in a different (internal) world and has now been pulled out of it into this world of wakefulness. This man, on being woken up, does not remember any dream which shows that he was in deep, slow-wave, sleep and not in dreamful of R.E.M. (Rapid-Eye-Movement) sleep. Some persons do the sleep-walking in very small periods; they just get up from the bed, stand briefly, walk a little and then return to the bed. In the case of others, this period and the activity is extended. Some of them may even go to the door, open it and go out and, after a little walking, return to the bed, (and yet not remember the whole episode next morning). Others may go and even try to open the door of their car. Now we may ask: "The mechanism of sleep being at work, who is it that is using the motor cortex and the limbs in walking even in the state of deep sleep? Evidently, it is someone who is not affected by sleep and is still thinking, willing and acting though it has put some body-part under the course of sleep. This someone is soul.

Similarly, sleep-talking also provides us an avenue to view the consciousness. Sleep-talking may occur in REM sleep also, though in most cases it occurs when a person is in the borderline state between sleep and waking. In the latter case, he is particularly awake and we can talk with him. When a person talks while he is in REM sleep, it is found that he shows, during that period, an emotional quality, and, usually, there is no reference point in his surroundings. When we wake him up, he tells us that he was in the dream state.

Evidently, this also shows that though the inhibitory mechanism is at work, there is someone who has detached itself from the senses, though not totally; and this someone is different and separate from the facilitatory and inhibitory mechanism or the sleep and arousal mechanism of the body. This indicates the existence of soul.

Sleep and Soul

When a person sleeps, it is thus said of him, in Sanskrit language: '*Svapiti*' (In Sanskrit: *Svam apito bhavti*). It means: 'the person has dived deep into the self'. This then explains, what in metaphysical

terms, we mean by 'sleep'. According to the esoteric sciences, sleep is withdrawal of the soul from its environments, from the senses and from its contact with the external world. In this state, the soul lets alone the motor cortex, motor nervous system and also, in general terms, the sensory nervous system and rests in itself. When it does so, it finds that the body is relaxed and is now fit again for efficient functioning. The same can be done by Meditation. Meditation is akin to sleep in certain respects and is widely different from it in many other respects. One factor which is common to both, to sleep and to Meditation is, that in Meditation also one withdraws from motor action and rests in the self. The major difference between the two is that, in Meditation, the self having withdrawn from the thoughts of the world is now engaged to the spiritual truths. The motor nervous system and the sense organs etc. having been left to themselves, the self finds the body greatly relaxed when it returns to its work-a-day conditions. Its efficiency has, therefore, been increased. Now, if we understand sleep in this light, we will come to the conclusion that the condition or state, called sleep, cannot be explained without positing the existence of the soul because it is the soul which gets dissociated with the arousal mechanism either on its own or through certain drugs.

The Dreams and the Soul

It has been found by the E.E.G. and eye-movements that dreaming occurs in all human beings a great deal of time each night. Sigmund Freud asserted that all dreams are meaningful and that they reflect important aspects of an individual's psychodynamic needs. Freud was of the view that various objects seen in the dreams were symbols. We can know the core of the problems of a person if we decode these symbols. Some other thinkers say that dreams are different planes of reality or that they represent co-reality with waking life. Still others say that, in dreams, we perceive the impressions left by the original events after they have passed off from our state of being awake.

Now, whichever view, out of many, about dreams we accept, one thing is clear. It is this that, during the state of dreaming, the Mind or Consciousness is functioning though it is detached from the environment and the outside world and from the motor system of the body. In dream, there is self-awareness also. So, conclusively, the Mind or Consciousness is a separate entity which can think (or dream) even

without the sensory input. The Mind or the Intellect, during sleep, is not working together with the senses but is functioning without these. Its attention from the external stimuli is, for the time of sleep, withdrawn and is now involved with what occurred in its past. The dream is partly reminiscing, partly ventilating one's suppressed feelings or emotions, partly trying to discover solutions of its problems, partly suffering for one's misdeeds or enjoying because of one's good deeds.

From whatever angle we consider Dream, we come to the conclusion that there is a conscient existence in the brain which indulges in any one of these while motor and sensory mechanisms of the body are at rest. This leads us to conclude that the soul is there in the brain which is ruminating the cud of thoughts, emotions and memory, so to say, when the behavioural mechanism is in sleep.

Further, psychoanalysis has established the fact that every dream is linked with one's past. In a dream, the soul brings to surface the memories of certain past events. It, therefore, shows that, while the body has grown up and chemical and biological changes have occurred, there has remained in the body, an entity which can recollect the past and can correlate it with the present and can have the feelings. This then establishes the truth that soul exists.

So, knowing the self to be an entity different from the body and the brain, we should give up the slumber of ignorance in the form of body-consciousness. We should now become soul-conscious, for it is now the time to wake up, drink the nectar of Godly knowledge and march towards our goal. □

Is there a metaphysical Mind or Soul in the brain?

"It is the soul that has the interest, the choice and the conscious will. It is the soul that evaluates its own thoughts and appreciates and enjoys. Knowing this, enjoy the bliss, appreciate the virtues, have strong will to root out the evil and choose to be a yogi and thus will you be emancipated."

—God Shiva

WE have explained in the preceding chapter that the Soul is different from the brain and the body, yet there are people who believe that the Thoughts are the result of the response of our neuro-physical system to the external stimuli. They are of the opinion that, besides the body and the brain, there is no 'Soul' or 'Self-conscious Mind'. So, we will examine, in this chapter whether all our mental events can be satisfactorily explained on the basis of the functions of various areas or parts of our brain, working in concert with our various senses, our central nervous system, our sympathetic nervous system, our endocrine glands and other parts of our body. If we find that these are utterly inadequate and that we require the involvement of another non-physical, non-material or transcendental entity to explain many (if not all) mental and physical events, then we will have to believe in the existence of the soul. We will now discuss this by taking up some concrete examples so that our discussion becomes clear.

Let us take the example of the sight of a falling apple which Newton saw, or of the shaking lid of the boiling kettle which James Watt, the inventor of Steam Engine, saw. Biologically or neurologically speaking, these sights would have reached, through the optic nerves and the retina, to the visual cortex and been integrated and synthesised into a picture there; that is all. If the brain, like a computer, had been fed with the instructions about what to do in these cases, one would have, like a robot, picked up the apple or removed the lid, for that is the function of the senses and the sensory and motor cortex of the brain. Or, whatever else might have been the reaction of the sensory and

motor mechanism of the body, the brain, in any case, could not have taken upon itself the search for solution to the riddle of the falling apple or the shaking lid, for the stimulus did not necessarily demand this reaction.

But, as we all know, these sights did not end with the removal of the lid or picking up of the apple but went beyond that. They roused curiosity in the minds of Newton and James Watt respectively. There was a spate of questions; some of these were: 'Why did the apple fall down? Why did it not go up?' Or, 'Why did the lid move?' The curiosity was so deep that it led to deep thinking, exploring the possible causes, finalising the conclusions, evaluating the findings and then theorising and formulating the laws. Evidently, the stimuli did not draw merely mechanical, electro-chemical, bio-physical, or neurological response but a response which shows that there is some such entity, ensconced in the brain, which is not physical, chemical or biological in its nature but is metaphysical and has (i) a will of its own and (ii) can formulate problems if it so chooses and (iii) can decide to work for achievement of the solution of those problems, which can go beyond the stimulus. This entity we call: Soul.

All would agree that the questions raised are, *prima facie*, not the creation of the visual stimulus in either of these cases. Our study of various bio-sciences informs us that the stimulus in the form of the falling apple or the shaking lid, would, if the person is attentive, change into coded electrical impulses, or into chemical changes in the RNA or the molecular changes of the neurons and the connectivities, and would result into some motor action, or would leave behind it some memory traces. But, in no explicable way could the stimulus, set up an equation which, in quantity, quality, nature or form, could produce response leading to a discovery, i.e. a response which depends mainly on the will, the choice, the selective attention of the viewers—these being Newton and James Watt respectively in the present cases. If Newton and James Watt had not paid special attention to the said happenings or had not taken any deep interest or exercised their Will or chosen to pursue the investigation, the matter would not have gone thus far, for, the brain cannot transcend itself; it cannot cross its own biological or bio-physical limits. This shows that there was another entity in the brain and that entity has Will and it was that entity which took interest and pursued the matter.

Well, if someone still believes that the formulation of the abovesaid problems and the decision to search for the force that caused the fall of the apple were functions of the brain-tissue, then it rests on him to explain these on the basis of the bio-chemistry or on the basis of the laws of physics or the science of neurology or, for that matter, any other science. But one cannot satisfactorily do this. Let us take up Genetics for instance. If someone says that the genetic instructions, coded in the brain of these men, who were genius, were such that they responded in this special manner, or that their social environment, their up-bringing, their hereditary and inherited factors were such that they were capable of thinking thus, then this one, who thus explains the response, should well realise that the *ability to do* a thing is different from *doing* the thing. Doing a thing does not require merely the ability but also the *interest, the choice, the conscious will*, etc. which, in no way, can be explained as the products of the brain—its hereditary or genetic abilities included. So, on the basis of the genetic coding, one can only say that Newton and James Watt had some special faculties of the brain but one cannot explain why they exercised their Will to go into the causes of these happenings and how this single stimulus led to *sustained interest* and effort on their part and who is it that exercises the *Will* and has *the interest or intention* if it is not a metaphysical entity, called the Mind or the Soul?

The brain cannot act beyond the stimulus

Again, the brain, being a material entity, cannot transgress laws of Nature. The laws of chemistry and physics or Bio-chemistry and physiology state that the reaction will be equal to the action, and we know that, even in unbalanced equations in organic chemistry, the laws of conservation of Mass and Energy are not violated. But, in the instances of the falling apple and the moving lid, cited above, there is a definite indication that there is, in the brain, a metaphysical entity who has a Will so that it has decided to sustain and continue the thought-process and efforts beyond what the original stimulus warranted and produced. This continuing of search, after the stimulus had ceased, clearly shows that this extension is not what the stimulus, by its own nature, would, on the basis of physical and chemical laws, demand or produce but it is the result of *'the intuitive'* or *'contemplative'* nature of another entity there who is interested in this problem and this

metaphysical entity, who has a Will and an interest and an intention, is what we call *Mind* or *Soul*.

**Who exercises the will to act beyond
what the stimulus warrants?**

Take another example. A man goes to attend a religious congregation. There he listens to a very inspiring and stimulating discourse. Now this auditory stimulus does not end with the voice of the orator going to the auditory areas of his cortex and getting synthesised and decoded there. Not only is the listener absorbed, of his own sweet *Will*, in listening to the discourse when it is on but, after the discourse, i.e. after the stimulus has ended, he reflects over it and reflects again and over again. Deep curiosity has been roused in him to discover the meaning and the purpose of life. "What is this world and what is it all for?", he asks himself. "What is the nature and purpose of my existence? Is there a world beyond and is there life after death?"—he wants to know and he now gears his efforts to know the answer to this.

Now, by giving this example, what we want to point out is that the events occur not merely at the level of our senses or nervous system or brain but there is another entity besides these which exercises its Will, selects things which interest it, gives sustained attention to these selected things, formulates certain problems which are of its own seeking, reflects on these problems and their possible solutions even long after the original stimulus has ceased, forms concepts or arrives at new ideas or makes some discoveries.

Evidently, in the example we have cited (of the man listening to a discourse), the sensory and motor actions, or the perceptions are not what ordinarily would be or should be if we consider the stimulus and response merely in biological or neurological terms, for curiosity, exercising will, seeking answer to a problem, formulating a theory, etc. cannot be explained as biochemical or biological processes but rather these transcend the physical or material. If there were no transcendental being in the brain, the discourse would have been received in the auditory areas of the brain and, from there, triggered some motor action and would have, at best, left some 'memorytraces'. But since the sensory messages are decoded, interpreted and then there is the process of selection and use of the Will, and there is awareness of all this and also self-awareness, there is a transcendental, self-conscious entity there who keeps up the processes of thoughts and exploration—

further beyond what the stimulus would require—to attain its selected purpose or its decided goal. And, this transcendent and self-conscious entity, we say, is the Soul or the Self-conscious Mind.

Who channelises the brain activity into the desired direction?

Let us explain this dichotomy of the neurological machinery and the self-conscious Mind or Soul in another way.

When our senses get a stimulation, they send messages through the ascending pathways to the relevant parts of the brain. Then the messages, received due to stimulus provided to the eyes, the ears, the nose, etc., are synthesised by the neuronal machinery. The process up to this point, i.e. up to the formation of a neurally integrated ensemble is no doubt a physiological one and can be explained on that basis. But our point is that there are certain happenings in the brain which go beyond the data presented by way of sensory message. So, we have to conclude that there is someone seated in a liason area of the brain (Hypothalamic area) who 'reads' this neurally integrated ensemble. It gets to read, from instant to instant, the complex neural or sensory input and gets engaged in a subtle and transcendent operation of interpreting or decoding, judging, selecting, blending, etc. *Further, it exerts upon the brain-events its own will and may even decide to change the brain-activity into another direction from the one to which it is presenly engaged*, in order to bring about the desired result. For example, if you are telling me how the other man behaved with you yesterday and what he told you about me, I may interrupt you in your speech and may ask you to wait a minute. I may, while receiving the auditory information provided by your talk, into the temporal lobe of my brain, instantly decide to put a stop for a while; then divert my attention and channelise neuronal activity to the past in order to recover from my memory the record of an event (which seems to me to be relevant) even as someone scans the book-shelf in a library to get the book on the required topic and then, having retrieved the memory of the relevant event, I may use the language areas (the Wernicke's area etc.) of the brain to express my views in an appropriate and effective manner and yet all this may be done in almost no time. Thus, it is not only the neurological machinery working over there but there is someone else also over there who works upon the neural site, selects some of the neural events (in which it is interested), uses its own Will

and choice and it modifies or criticises the neural read-out, recollects some past events from its memory and correlates them with these present ones and decides what to do. It may even withdraw neural activity from one direction and channelise it into another or may withhold all neural activity for sometime and put the senses to rest and take itself a holiday and relax. This one, who has a Will, has a steering wheel and a brake and also has a personality, an ethos and a moral character which the neural ensemble does not have. The former, which has a will is called 'The Soul', the 'Self-conscious Mind' or 'The Self'

Who evaluates one's own thoughts?

Without recognising the active role of this soul, our thoughts and actions, which seem to have no direct bearing on the sensory data reaching our brain, cannot be satisfactorily explained. Take, for example, the process of evolution of one's own thoughts and ideas before one makes a new discovery or hypothesis. Who is it that critically examines one's own thoughts, disapproves and rejects some of them, then thinks again, forms a new concept, achieves a breakthrough and sets for itself a particular result to be obtained? Who is it that assesses the good and bad points of one's own speech and says, "I have a good brain but I am not a genius." Evidently, it is **a self-aware entity**, different from the mechanism of the brain which it makes use of. The brain is not a self-aware entity. In fact, nothing made of matter is self-aware. Matter has nothing to bother about a good or a poor performance or about success and failure.

Similarly, when a person says, "I am in two minds," what he actually means is that the sensory data, and perhaps the stored memory also, lead him to one conclusion but the self-conscious Mind, who has a Will or a choice, does not accept the view presented by the integrated sensory information. This, evidently, proves that, besides the neuronal apparatus, there is the conscient soul or Mind which checks up the sensory information and may agree with it or not. It is this which works even beyond what the sensory data warrants, as for example, in the direction of discovering a new truth or finding a law, underlying certain kinds of happenings which we usually observe. This leads us to the necessity of believing that all processes in the brain do not involve only the sense and the neuronal network but there is, besides these all, a conscient entity anchored in the brain which makes research work, etc. possible. *Upto the brain-level, the processes are, in*

a way, mechanical or automatic or as based on the genetic instructions, wholly or partly, but, higher up, when we are engaged in decoding the sensory messages, in deep thinking, discovering, inventing, problem solving, revising, critically appreciating, theory-making etc., the processes involve 'The Soul' or 'Self-aware Mind' which transcends the brain and the senses and has these faculties.

Mind or soul produces changes in the brain

So let us state the conclusion : Admittedly, the genetics and the integrated neural pattern play their own part but this is not the whole story and the importance of the 'actions' of the conscious entity or person, seated there, cannot be over-emphasised. The neural machinery is there only as the medium or instruments for this conscient being. In fact, the neural machinery of the brain is acted upon by this metaphysical self-conscious entity. You can say that there is a feedback. The Mind, the Self or the Soul does not only receive the sensory messages through the complex neural processes in a spatio-temporal pattern to be read by it but it also gives something to the brain in the liason areas and, in this way, it produces changes in the performance of the brain; it is a factor in the development of the brain we should say. Without accepting this dichotomy of the brain and the Mind or Soul, it would be impossible to explain who it is that makes all the theories, discoveries, inventions, etc., etc.

Experiential and operational unity besides neurological unity is due to Soul

Now let us discuss the question of sensory stimulus, thought, perception and Will from another perspective. The whole process of perception consists not of one step but a number of steps. First, there are stimuli and then sensory messages. This sensory input of millions of neurons is integrated by the neuronal machinery in the brain. Now this is one level of integration. This results in the synthesis or unification of the messages from various senses. This unity is because of the neuronal machinery so as to enable us to give appropriate unified response. But we should note that, besides the biological unity of the whole organism and the neurological unity of the brain, there is another kind of unity which you may call the 'perceptual unity' or the 'experiential unity'. This is different from the other two. This last one is because there is anchored in the brain another single conscient entity which experiences the integrated sensory messages so that we notice, as a

result of this, the behavioural unity or the operational unity of the person. The experiential unity pertains to the soul which *subjectively* correlates the past with the present and thinks of the future. This experiential unity is of the soul which has a *Will and choice and interpretation* of and *attitude* towards the events. Out of tremendous sensory stimulation coming to the brain, the self-conscious Mind can select some and experience it and overlook, neglect or reject the rest.

Who uses the pronoun 'I' for the self?

It is this self-conscious person who uses, for the self, the pronoun 'I' everytime when he refers to himself. *The 'I' is central to all observations, sensations, perceptions and thoughts.* The messages carried by the sensory nerves over the sensory pathways come to me (This I) in the first place—"I know this", "I have observed this". "I experience this."—this is how we always say and this implies that 'I' is the self-aware person or Mind whom all the thoughts and events of our life relate to. No doubt there are certain regions of the brain which have some specific function, as for example, the limbic region is associated with the emotions and also with the memory, the Wernicke's and Broca's areas are associated with the expression or understanding of language but 'I' it is which makes use of all these areas. Our present observations or experiences are stored in our brain as our memory-records but it is 'I' who has *experiential remembrances* and who uses the neurologically stored or accumulated memory as someone uses the tape-recordings or video-tapes or the files. It is this I who interprets it under various situations. So, this 'I' is central to my own experiences and interpretations. This 'I' has to be primary in the whole action, sensory experience and to the whole in-coming load of information that is pouring in by its sense-organs and that has to be interpreted in the light of the past recorded memory. If my past interpretation of certain observation has been wrong, I even consciously modify or set right my memory in the light of new observation and experiences. Of course, the senses are important, yet there is this 'I' which is more important, for it does the trial and error and making and matching of sensory data with the past memories. So, *senses are not primary to learning, this I is more important for, after observing something, it makes hypothesis, then it tries to match it to the incoming information and if it fits in, it selects it, learns it, or else it modifies or rejects it.* In this way, this process of making (hypothesis) and matching it (with new information) goes on and this is how man ('I') learns. If this 'I' leaves the

body then no one remains there to experience or to interpret the sensory information and if the body-systems fail to keep the brain in the proper functional form then this *I*, the soul or the Mind, leaves its seat in the brain, thinking that the neurological machinery is now fit for no purpose, or it may stay on in a state of coma for a period. It is as a driver leaves the car when it thinks it has become mere scrap or he stays on for some time if he feels that it may be set in working order again. It is this *I* which, when present in the brain, makes all this sensory information, memory, learning, re-thinking, etc. coherent, relevant and meaningful. It is the central actor, in the whole story or the hero of the whole drama of life.

Who is it that enjoys and appreciates?

There is another angle from which we have to look at the sensory information, function of the brain and this central person. Let us explain this by means of an example. Someone is dancing in rhythm with exquisite music and wonderful tunes. Now our visual and auditory systems come into play. Millions of visual cells and nerve fibres in our optic nerve get stimulated to carry visual sensations over the visual pathways to the visual areas of the brain. These are brought together on the basis of the neuronal connectivities to form a mosaic. Similar processes take place through the senses and pathways in the auditory areas, in the right temporal lobe. There is analysis and synthesis of the performance—the melodies, the harmonies : the time sequences, the rhythm and all and there are incredibly complex neuronal operations going on and our past learnt abilities, recorded in certain brain areas, being brought into play in the appreciation of this. All the relevant parts of the brain, or the whole brain, genetically built in a particular way, is being put into service so as to evaluate it.

But the question is : 'Who is it that decodes, deciphers and blends these neurological impulses or events so that we feel a real-world experience and, moreover, *who is it that experiences the thrill? Who gets the enjoyment out of it?*

Another instance may be given of a beautiful rose. We do not only get its image on our retina and the sensations of its nice smell in the relevant parts of our brain but, besides blending the sensations of its design, colour, smell, touch etc., *WE appreciate, enjoy and love it.*

So, we come to the conclusion that our perceptions are not merely interpretation or understanding of the sensory data but that

there is another side to this all. There are certain sensory data for our aesthetic appreciation and *enjoyment* and this is not for the millions of neurons of which the brain is constituted of but for someone else sitting over there. Again, our reaction to the sensory data is not always in terms of learning skills or recording our perceptions in memory-circuits but also in terms of appreciation and enjoyment—enjoyment of the Soul. So, all these arguments and many more reasons lead us to conclude that there is seated in the brain a metaphysical entity called the Soul. □

Brain, Memory and Soul

"It is the soul which remembers through the mechanism of the brain. If one's memory is associated with good and happy events, one gradually becomes of good and happy nature and if, on the other hand, one recollects again and again events that are associated with evil or sorrow, one becomes irritable, short-tempered and despondent by nature. One should, therefore, have only a short memory of such events and should better not hold these in one's brain".

—God Shiva

Memory is an essential pre-requisite of all learning. If a man cannot retain in memory any information received by him, he cannot learn. Moreover, memory is an important faculty of the Mind which gives to it continuity and unity of personality. If Mind had no 'Memory', it would behave as a different person every moment, for it would be cut off from even its immediate past. But we all know from our experience and observation that Mind continuously behaves as a unified person, which is aware of its past and has hopes and expectations for the future. So, it is an important question whether the Mind which learns and which has the faculties of retention, or attention and memory, and has a continuity and unity of self, is non-different from the Brain or it is a metaphysical entity, apart from the body and the brain.

Neurobiologists and psychologists generally classify 'Memory' under three heads: (1) *Short-term Memory* (2) *Long-term Memory* and (3) *Sub-conscious Memory*, *Unconscious memory* or *Implicit Memory*. We will briefly discuss all these three and will see whether the explanation of Memory on mere physiological grounds is adequate or whether the processes of learning, retention, memory-storage and memory-retrieval lead us to the conclusion that there is a metaphysical Mind or Soul involved in these processes.

Short-term Memory

Memory, which lasts for a few seconds or for a few minutes, is called: 'Short-term memory'. For example, after searching a telephone number from the Telephone Directory, we generally hold that number into our memory only for a shortwhile because that number will not be of frequent use to us in future.

Neurobiologists say that this kind of memory is effected by the neural events, continuing during the 'rehearsal', so to say, of the telephone number. In the present case, for example, neuronal activity continues as a circuit so as to hold that telephone number into our attention all the while between the time of looking up into the directory and the time of dialling. Similarly, circuits of neural activity in the brain continue to hold for us, for a short while, names or facial pictures of some persons which we would forget soon afterwards.

Obviously, Memory, according to this explanation, is brainbased. There can no be denial of the fact that neuronal activity takes place during the processes of learning or memory-storage. But, there are also other sides to this phenomenon which are generally overlooked.

For example, a deep reflection would bring this fact into focus of our attention that, after all, it is the Mind which *intends* to hold that bit of information for a short while only and, therefore, it hyperactivates the neuronal mechanism of the brain for only that much duration and not longer and, then, leaving that number there, it attends to another thing or another piece of work. *In other words, it is the Mind which held in memory that telephone number with the help of the neuronal machinery as one holds the Directory with the help of one's hand in front of one's eyes and it held it in memory only for the time it needed the number.* Therefore, as hands are one's instruments of action, so are brain-cells or neurons also tools which the Mind employs.

Further, we notice that if and when that telephone number slips from our memory, we clearly feel, at that point of time, as though our brain (or memory) has failed us or that this particular ability (short-term memory) of our brain has weakened. On such occasions, we feel as we do when, due to non-availability of a balpen or a pencil, we, while talking to someone on the 'phone write a telephone number on a piece of paper with the blunt edge of anything that comes handy at that moment and then experience difficulty in reading it, as it was not legibly and clearly scribbled. This analogy brings out the fact that though it is

the brain which, like a piece of paper, has bits of information as 'memory-traces' yet, as the scribbled number is read by man who requires it, it is the Mind which reads out that piece of information as and when it requires. It is the Mind which calls to action the neuronal machinery of the brain, for it is the Mind which is *interested* in that bit of information even though for a shortwhile. Decidedly, therefore, Mind which *wills* to hold something in memory, even though for a few seconds or minutes, and *intends* to forget it and be free of it after that, is a separate entity. We actually know by experience that, after dialling that number, when the Mind puts back the receiver and *decides* to attend to another piece of work, the relevant neuronal mechanism of the brain is 'relieved', as it were, of the charge of holding that number to our attention. Our such-like acts, which require short-time memory, therefore give us a subtle experience of the fact that the will, the intention, the choice and the decision are of the Mind whereas the neuronal mechanism of the brain acts as an instrument. This Mind is self-conscious; it feels, though in a subtle manner, that it is using the brain, which either has good ability of retention or has amnesia or has lost this faculty totally because of some injury, trauma, disease, aging, or surgical removal of certain parts. This self-conscious Mind which either appreciates the faculties of the brain or regrets for the loss, is called : *Soul*.

Long-term Memory

Memory that endures for days and years is called : 'The longterm memory. There are many theories in vogue regarding this kind of memory, the chief among these being 'The electrophysiological' or 'The Synaptic Theory' or 'The Growth Theory of Learning'. There is another theory of long-term memory which says that memories are encoded in specific macromolecules ¹, in particular in RNA (Ribonucleic acid) in the brain. But this theory has failed for various reasons.² There is yet another theory—'Chemical Theory' which says that learned bits of information can be transferred from animal to animal by way of injecting certain chemicals which are related to

1. Hyden H: 'Biochemical Changes Accompanying Learning', in Quarton, Melenchuk and Schmitt (eds), 1967, pages 765-771. According to this, each memory is associated with unique macromolecules.

2. Eccles J.C. : 'Facing Reality' : Philosophical Adventures of a Brain Scientist', Springer-Verlog, New York, 1970, page 210. Also Szentagothai J. : 'Memory Functions and the Structural Organisation of the Brain', in Aam (ed.) 1971, pages 21-25

transmitting substances.³ But, the generally accepted theory now is 'The Synaptic Theory' or 'The Growth Theory of Learning'. According to many Brain scientists⁴, long-term memories are somehow encoded in the neuronal connectivities of the brain. When the process of learning or memory-storage takes place, micro-growth of synaptic connectivities of nerve-cells in the brain also takes place. What happens is that, as a result of sensory stimulus, the information, in the form of electrical waves, goes to the brain through the sensory-pathways where it results in synaptic activation of neurons. This leads first to the synthesis of RNA (Ribo-nucleic acid). RNA manufactures in the brain, by a special kind of metabolism, proteins and other macromolecules which are required for the micro-growth of the synapses connectivities of the nerve cells and for increase in membrane and chemical transmission. Thus the existing synaptic connectivities become hyperactive and more efficient, or there is micro-growth of new synapses. Memory is encoded in these synaptic connectivities. There are, in this way, structural and functional changes and it is estimated that the synaptic micro-growth and the process of encoding of memory takes from 30 minutes to 3 hours.⁵ This information, coded in the synaptic formation, serves as the data-bank of memory.

There is remarkable evidence that hippocampus participates in the consolidation of the memory by virtue of the operation of electrical circuits—from prefrontal lobe to hippocampus and back again to the neo-cortex. It is found that hippocampus is not the seat of the memory-traces but the hippocampus is merely instrumental in laying down of

3. Ungar George: "Molecular Coding of Information in the Nervous System". Stadler Symposium, University of Missouri. page 6. Also Hyden Holger: Changes in RNA content and base composition in cortical neurons of rats in a learning experiment, involving transfer of handedness". Proceedings of The National academy of Science, 52, pages 1030-35.

4. Lashley K.S.: "In search of the Engram", symposia of the Society for Experimental Biology, 4, 1950, pages 454-482. Also Adrian E.D. The physical Background of Perception, Clarendon Press, Oxford, page 95. Also Sherrington C.S.: Man on His Nature, Cambridge University Press, London, 1940, pages 413. Also Szentagothai, J. Memory Functions and the Structural Organisation of the Brain, 1971.

5. Barnodes S.H. 'Multiple Steps in the Biology of Memory' in Schmitt (eds), 1970, Vol. 2, pages 272-278.

the 'memory-trace' or 'memory engram'. Patients, whose hippocampi were bilaterally removed, suffered a tragic loss of memories. There was no obvious impairment of their intellect or personality, despite the acute failure of the Memory.⁶ They either lived in the immediate present or from remembered experiences from before the time of surgical removal of the hippocampus.

Penfield's⁷ experiments also provide information as to where the 'memory banks' in the brain are located. Penfield gave gentle electrical stimulation on the surface of brains of unanaesthetised patients of epilepsy. The preferred areas were largely in temporal lobes, particularly in the right hemisphere. During the continued gentle electrical stimulation of sites on the exposed surface of their brains, the patients reported experiences that they often recognised as being recalls of long-forgotten memories. The most common experiences were visual or auditory or visual-auditory.

Physiological experiments have also indicated that the modifiable synapses, which could be responsible for memory, are excitatory and are there in great majority in the cerebral cortex and the hippocampus, the granule cells of the hippocampus and the Purkyne cells of the cerebellum. These are concerned with learning. There is also evidence that these synapses regress during disuse.⁸

Is the soul engaged in memory process ?

Now the main question before us is : In the light of the above-mentioned evidence from neuro-biology and neuro-surgery which

6. Milner B: 'Disorders of Learning and Memory after temporal lobe lesions in man', *Clinical Neurosurgery*, 19 (1972) pages 421-446. Also his book: 'Amnesia Following Operation on the Temporal Lobes', in Whitty and Tangwill (eds) (1966), pages 109-133. Also Kornhuber H.H. "Neural Control of Input into Long-term Memory: Limbic system and Amnesic Syndrome in man", in Zippel (eds), 1973, pages 1-22.

7. Penfield W. and Perot P. "The Brains" record of auditory and visual experience", *Brain*, 86, pages 596-696.

8. Valverde F.: "Structural changes in the area striate of mouse after uncleanation", *Experimental Brain Research*, 5 (1968) pages 274-292.

explains how synaptic connectivities work as data-banks and which parts of the brain are used for memory storage, what evidence there is that leads us to believe in the existence of a metaphysical entity, called Soul or self-conscious Mind ?

An answer to this can be found by thinking over the processes of memory-retrieval. If we do some introspection on how we call, on demand, the name of a man or some fact stored in our 'databanks', we will be able to discover the truth.

Memory-retrieval

It will be observed that whenever we want some information from the data-bank, we begin to search, so to say. We make a search for synonym, for an appropriate word that can express our idea in a better way, or the name or telephone number of a person who met us a number of years ago. The Self or the Mind, does some sort of probing into the brain so as to retrieve, from these, something which it desires. It requires the brain to deliver the memory to it. During this process of racking our brains and succeeding or failing to get the goods delivered, we always experience a very strong dualism involved, we observe that the self or the Mind is separate from the brain which is like a library, a storehouse or a computer, from which we are trying to have some stored information.

It will be noticed that when the Mind is searching to recover memories, as for example, of words, proverbs, ideas, events, pictures, tunes and melodies, etc, it is actively scanning through the memory store-house. Sometimes it may be easy and, sometimes, difficult to recall a desired bit of information to our memory. In this attempt, the Mind plays backward and forward, looking for the desired answer. Not only that, the retrieved information—a word, a telephone number, the name of a man, a figure, etc. is critically scrutinised whether it is accurate and suitable or not. When it gets a delivery from the data-bank, it may judge it to be erroneous—there may be a slight error in the name or the proverb, or the synonym may not be suitable. So, the self or the Mind makes a renewed effort at retrieval. It may again judge the retrieved memory as faulty and, so, it may make yet another attempt or it may decide to abandon the attempt.

This scrutinizing of the retrieved memory clearly shows that there are, in fact, two kinds of memory—(1) *the memory stored in the brain*, in the synaptic connectivities or the macromolecules and (ii) the

Recognition Memory which is applied by the self or the Mind in its scrutiny of the retrievals from the brain-store. The conscious self which judges and evaluates the correctness and relevance of the data, delivered to it from the stored memory, is because of its recognition-memory, superior to the brain, for it acts as the judge, the assessor and the arbiter; it can accept or reject the data from the stored memory and can also modify it or use it or put it back into the storage

We can clearly observe both these types of memory at play. We notice this more clearly when, at times we feel that the Mind is under a challenge to recall the desired memory. Physiologically speaking, the Mind, when looking for a bit of information, is trying to discover the appropriate modules or synaptic connectivities, in the brain. It is thus clear that it is the Mind which gets the delivery whereas it is the brain, where the Mind searches for the desired information.

Mind adopts tricks to retrieve data from the brain

The difference between the two becomes more clear when we observe the Mind adopting some strategies or tricks to discover the required information from the stored memory. The Mind says to itself: "The name of that man was in some way similar to *Castophene*." Then it says to itself, only seconds afterwards, "yes, yes, it is *Christopher*; now I remember. It would make use of the psychological law of Association and other methods, many of which are given in articles on 'How to improve your memory?'" On such occasions, when it applies these tricks and strategies, it becomes obvious that the Brain and the self-conscious Mind are two different entities—the former is like a data-bank and the latter uses it as it likes.

Feeling of satisfaction or disappointment is Mind's

Another thing which points to the difference between the two is that the Mind, after making efforts at recovery, or after watching the delivery, either feels satisfied or happy or even astonished as one feels when one is able to get a desired piece of information from a book, a file or a diary.

Moreover, it should be noted that the continued activity of the synaptic connectivities or the modules can be secured only by the continuous interest or reinforcement by the Mind. As soon as the self or the Mind engages in some other work, requiring another, different piece of information, the earlier search for a data ceases and the new one begins so that another pattern of neuronal connectivities in the

brain begins to be scanned. This clearly shows that it is the Mind or the Self which, being *interested* in some information, starts activation of the synapses and which makes the search, which sustains it and stops it as it wills. The duality is thus obvious.

Function of selection and rejection of memory-data pertains to Mind

It should also be realised that it is the Mind which decides which bit of information is to be stored. Our brain is being continuously bombarded by the stimuli and our sensory pathways carry a continuous flood of information most of the time. It is the self which *attends* to some, *neglects* the others and is *interested* in storing some data and rejecting or forgetting the rest even as we keep some papers and throw away the rest. This job of selection of some and rejection of the rest is performed by the Mind or the self.

Mind not only receives but corrects the data

Moreover, when it is found that the memory, stored in the brain, is faulty, it is the Mind which corrects it. For example, when certain lines of a poem have been wrongly learnt, or the spellings of a word stored in the brain are suspected or found faulty, the Mind, after consulting the dictionary, decides to correct the stored information.

Thus, the Mind plays on the Brain, which is an entity apart from it. There is give and take between the two. Not only are the memory-banks at the disposal of the Mind for being read or used but the Mind, by use of its ability of scrutiny, imagination or judgement, modifies the memory and moulds the memory-circuits.

The fact that the two are different entities, becomes all the more clear from Penfield's experiments.

Penfields' experiments show that Mind is an observer

As mentioned earlier, Penfield performed experiments on 53 patients. He stimulated the cerebral hemispheres of these patients whom he gave local anaesthesia. During the gentle electrical stimulation of these exposed parts of the brain, the patients reported experiences which they recognised as being the recalls of long-forgotten memories. Penfield has recorded the account of the experiential responses of these patients. Penfield has commented that it is as if past stream of memories is recovered during the electrical stimulation of these parts. Some patients, suddenly recalled, because

of electrical stimulation, a whole song or symphony, heard quite a long time ago. It is noteworthy that, in summing up of these investigations, Penfield has said that the patient is an *observer*, not a *participator*. It can be concluded from this that the Self or Mind is an entity, different from the brain or from the temporal lobes, of which recall of memory was effected by electrical stimulation.

It would be worthwhile to end this chapter with a quote from Penfield, a world-famous neurobiologist and neurosurgeon :

“The physical basis of the mind is the brain-action in each individual; it accompanies the activity of his spirit, but the spirit is free; it is capable of some degree of initiative.” He further says : “The spirit is the man one knows. He must have continuity through periods of sleep and coma. I assume, then, that spirit must live on somehow after death. I cannot doubt that many make contact with God and have guidance from a greater spirit. But these are personal beliefs that every man must adopt for himself. If he had only a brain and not a mind, this difficult decision would not be his.¹⁰”

Soul and the Sub-conscious or implicit memory

We have already considered the ‘Short-term’ and ‘Long-term’ memory. Let us now consider the subconscious, unconscious and the implicit memory. This too will prove that the self is different from the brain : What are ‘sub-conscious’ or ‘unconscious’ memories ?

There have been innumerable small and big events in the past which have exerted their influence on our personality and have moulded our character but which we do not often recognise consciously. Their influences lie in overt or dormant form. These have become a part of our life. Our present attitudes, beliefs, fears, prejudices and all that gives us a pattern of unconscious or sub-conscious behaviour, has been formed of these. Even our obsessions, our temper, our life-style is because of these. Some of these memories can perhaps be retrieved under special conditions or with the help of hypnotism or drugs. These implicit or latent memories determine, in part, what we do, and these influence us all the time. It is this kind of memory to which Freud and psychiatrists of his school of thought give a very great significance. Comparing it to a glacier, which has 5/7th of its mass under water, these unconscious memories form a major part of one’s personality and a forceful factor that influence its behaviour

These bear heavily on one's self. *All brain-scientists, psychologists and psychiatrists, agree that it is this which gives continuity to one's personality. It is this unconscious memory which, in man's normal state of wakefulness, gives it a unified character or personality from moment to moment.*

Obviously, there is a self besides the brain which carries or bears these influences because the synaptic connectivities cannot explain the 'unconscious' or 'subconscious' influences. *Protein synthesis of new macromolecules and growth of synapses and the death of some brain cells does not give the brain a continuity which, in fact, is an experience of the self. It is the self which feels disposed to relive certain past experiences because of these 'unconscious' or 'implicit memories'.* In Sanskrit language, these dispositions or unconscious memories, which are the result of previous actions are called 'Sanskaras'. It is these which give unity of the self. The self it is that co-ordinates the information received from various senses into various parts of the brain and gives to it an experiential unity without which the encoded memory would be meaningless. Decidedly, therefore, reflection on various kinds of memory proves the existence of soul which uses the mechanism of the brain. □

9. Penfield W. and Perot P. "The brain's record of auditory and visual experience" *Brain*, 86 (1963), pages 596-696.

10. Penfield Wilder: "Science, the arts and the spirit". *Trans. The Royal Society of Canada*, 7 (1969) pages 73-83.

Soul and the Cases of Loss of Memory

"The soul, because of a certain kind of amnesia, one cause of which is Māyā, has forgotten its true identity and also the Soul World from where it has come. That memory is now being re-awakened. Now, know thy self and have fresh memories of the self, the Supreme and of the Sweet Home."
—God Shiva.

The truth that Mind and Brain are two different entities is further illustrated by cases of 'loss of memory' or by cases of surgical removal or resection of the hippocampi or the commissurotomy, i.e. surgical separation of the left and right hemispheres of the brain. Scoville, a neuro-surgeon, in treating a patient, suffering from incessant bilateral epilepsy, which could not be controlled by drugs, removed the hippocampus along with a small area of the temporal lobe on both sides. Since that time, this man suffered a severe loss of ability to lay down memory-traces. There was now an almost complete failure of memory for all happenings and experiences. In other words, he had now complete anterograde amnesia. Milner has recorded that his patient lives only with short-term memories of a few seconds duration and with memories of events that occurred before the operation. Milner¹ has given a clear account of memory-loss of this patient thus :

"His mother observes that he will do the same jigsaw puzzles day after day, without showing any practice-effect, and read the same magazines over and over again without ever finding their contents familiar. The same forgetfulness applies to people he has met since the operation, even to those neighbours who have been visiting the house regularly for the past six years. He has not learned their names and he does not recognise any of them if he meets them in the street."

1. Milner B: "America Following Operation on the Temporal Lobes", in Whitty and Zangwill (eds) (1966), Pages 109-133.

"His initial emotional reaction may be intense, but it will be short-lived, since the incident provoking it is soon forgotten. Thus, when informed of the death of his uncle, of whom he was very fond, he became extremely upset, but then appeared to forget the whole matter and, from time to time, on hearing a news of the uncle's death, he would show the same intense dismay, with no sign of habituation."

Milner has also given the patient's own comments, repeated at intervals during a recent examination in which the patient appeared. "Between tests", says Milner, "he (the patient) would suddenly look up and say, rather anxiously :

"Right now, I'm wondering. Have I done or said anything amiss? You see, at this moment everything looks clear to me, but what happened just before? That's what worries me. It's like waking from a dream; I just don't remember."

Above, we have given a case of amnesia—loss of memory—resulting from the surgical removal of hippocampus, but amnesia may also be caused by trauma, concussion—mechanical damage, giving unconsciousness, or from the convulsive seizures, resulting from electric shock therapy. One who suffers a trauma, has complete loss of memory for events that took place immediately before the trauma and his retrograde amnesia becomes progressively less severe for earlier and still earlier events. One may have retrograde amnesia, covering periods of minutes, hours, days or months, depending upon the severity of the trauma.

One thing, to be noticed in all these cases of amnesia is that the loss is like the loss of a part of one's store or the loss of one's notebook and diaries or tools of recording, like the cassettes. The above-given comments of patient himself clearly establish the truth that there is a conscious self, which says: 'I am wondering', 'everything looks clear to me'... 'It's like waking from a dream'... 'I just don't remember'... This conscious self is different from the brain, a part of which (hippocampus) has been removed and, so, the tool for memory-encoding has been lost. One who 'wonders', experiences its state as one experiences after waking from a dream, and even realises that 'I don't remember'—is not the brain but different from it and is the conscient self who had earlier experienced the state after a dream and who feels that, once upon a time, it had the ability to remember but now that store and tool has been lost. Loss of certain bits of memory also takes place because of

disuse. If we don't recall some encoded memories for a pretty long period, the synaptic connectivities get depleted or emaciated and one cannot recall data from them which they once stored. But, evidently, the Mind, which knows that now it can't recall because of disuse over a long period is different from the synapses. The faculties of that conscient being are intact; the only change that has taken place is that while most of these find manifestation, only some do not find manifestation because of loss of the physical substrate or medium of manifestation. □

Permanent Memory proves the existence of the soul

"It is the soul which has the conscient memory which is also associated with emotions. Every recollection stirs up or brings with it some emotions and some experience. One should, therefore, have constant memory of the Supreme Father and His Divine Acts and of the paradise, for these will give him a state of purity, peace and happiness."

—God Shiva

WHAT has been explained as 'Short-term memory' and 'long-term memory' in the previous chapters, should lead us to the conclusion that Brain acts as physical record of the memory-traces and that there is permanent memory in the soul wherefore the soul acts as a judge and as an assessor of the memory stored in the brain and either accepts it as correct, or doubts its correctness and tries other sources for its confirmation, or considers it as incorrect and rejects it as incorrect, or even modifies it in the light of new facts. The explanation of unconscious, sub-conscious or implicit memory, in the foregoing chapter, also corroborates the truth that the soul gets lasting impressions of events. The narratives of the cases of rebirth and after-death experiences further confirm that the soul has the conscient memory and that the memory stored in the brain is only as films or cassettes are, or a diary is to a man who is the thinker. Now we will consider his faculty of Memory further.

Memory is a wonderful ability or function of consciousness. Every conscient being, from amoeba to man, has memory. Many psychologists, such as Pillsbury,¹ are of the view that memory explains the *continuity of consciousness*, for if I remember to-day an event which had taken place, say, thirty years ago, it means that I am the same conscient being which existed thirty years before also. It is an agreed principle of philosophy that one cannot have identically the same experience as another person has. I cannot have identically the same

1. W.B. Pillsbury, *The Essentials of Psychology*, New York, The Mac Millan Company, p. 437.

experience as you have. So, I, who remember or recall the past experience which is thirty years old, must have *myself* existed then also because it was 'my' and not anyone else's experience and, so I say, I *myself* experienced it.

Nothing is forgotten totally or for ever

Now one important observation about memory is that it is *permanent*. The mind, in fact, does not forget though generally people think that we forget things. One comes across cases of people who had forgotten things but who suddenly remembered those things vividly. Dr. Winslow in his book² has given instances of people who, suddenly, had memory of past events which they, earlier, seemed to have quite forgotten. Here we quote two from his book :

1. A gentleman was thrown from his horse while hunting. He was taken from the field to a neighbouring cottage in a state of unconsciousness, and was, subsequently, removed to his residence. For the period of a week, his life was considered in imminent danger. When he was sufficiently restored to enable him to articulate, he began to talk in German, a language he had acquired in early life, but had not spoken for nearly twenty-five years.

2. A Gentleman had a serious attack of illness. When checked, it was found that he had lost all recollection of *recent* circumstances, but had lucid memory as to events that had occurred in *early period of life*; in fact impressions that had long been forgotten were again revived. As this patient recovered his bodily health, a singular alteration was observed in the character of his memory. He again recollected *recent* ideas, but entirely forgot all the events of *the past*.

Now this shows that the past memories can be, or do get, revived by certain factors. So, 'Forgetting' in the sense of total obliteration of the memory is not a fact. What is called, 'Forgotten' is not really destroyed; it merely sinks into 'the subconscious' or 'unconscious mind', to use the language of a psychoanalyst. There are many recorded cases of forgetting, partially or almost wholly, and subsequent memory-revival or memory-retrieval. In the second example, given above, the man, suddenly, had recollection of events of *early life* which were considered to have been forgotten. Then he had recollection of *recent* events and

2. Winslow: Diseases of the Brain and Mind.

'completely' forgot the *early events* which he had come to remember during illness. This shows that the events of *early or recent* life had not really got destroyed: they had become, what may be called, in the language of Physics, *dormant or latent*. In the Yoga Treatise of Patanjali also, it has been said that the past events leave their marks permanently and their re-arousal is called Memory³. Shankaracharya, the well-known recluse and scholar, also has said that learning or memory is retained in the form of *Sānskārs*. In the gloss, known as Bhamati, on his famous commentary, it is said that Memory is the knowledge aroused from *Sanskārs*.⁴

Penfield a famous brain-surgeon, who stimulated frontal lobe of the brain of patients, on whom he surgically operated, under local anaesthesia, also observed that forgotten memories were revived in them.⁵

Annie Besant has also quoted, from the book of Haddock and D.U. Prels's,⁶ many cases of dying persons to show how memory is revived and reconstituted just before dying. Here below, we quote two such cases:

1. Admiral Beaufort had fallen into water and had 'lost his consciousness'. In this condition, "thought rose after thought, with a rapidity of succession that is not only indescribable, but probably inconceivable a situation." At first, the immediate consequences of his death to his family-members were presented to him; then, his regards turned to the past; he repeated his last cruise, an earlier one in which he was shipwrecked, his school-days, the progress he then made, and the time he had wasted, even all his childish journey and adventures. Admiral Beaufort says: "*Thus travelling backwards, every incident of my past life seemed to me to glance across my recollection in retrograde succession, not, however, in mere outline, as here stated, but the picture filled up with every minute and collateral feature; in*

3. Patanjali Yoga Philosophy 1-11

Anubhut Vishaya sampramoshah smriti.

अनुभूत विषयासंप्रमोषा : स्मृति

4. संस्कार मात्रं हि विज्ञानं स्मृति

5. Penfield W. and Perot P: 'The Brains record of auditory and visual experiences, Brain, 86 (1963), pages 596-696.

6. Haddock, Somnolism and Psychism, p. 213, as quoted by Annie Besant in her book, Psychology, page 238.

short, the whole period of my existence seemed to be placed before me in a kind of panoramic review, and every act of it seemed to be accompanied by a consciousness of right and wrong, or by some reflection on its causes and consequence. Indeed, many trifling events, which had long been forgotten, then crowded into my imagination, and with the character of recent familiarity." In this case, only two minutes, at the most had passed before Beaufort was taken out of water.

2. Another instance is of a woman. Fechner has related her case. She fell into deep water and got nearly drowned. From the moment when all bodily movement ceased till she was drawn out of water, about two minutes elapsed, during which, as she later narrated, she lived again through her whole past, the most insignificant details of it being represented in her imagination.

Many others also have mentioned such-like experiences of after-life or during the moments just before death. For example, Arnold Toynbee and Arthur Koestler⁸, Thomas Moody, Rosalind Heywood, etc.⁹ have related such-like cases of people coming face-to-face with death and, in their these encounters, remembering with unimaginable rapidity, all the actions of their life-time, emerging before them as a vivid film of their past events and arousing in them a feeling or sense of whether what they did was right or wrong.

Some other famous books on this subject are: "The Evidence for life After Death" by Martin Ebon', 'At the Hour of Death' by Karlis Osis and Erlendur Haraldsson, 'Mysteries of the After Life' by Frank Smyth and Roy Stemmen, 'Life After Life' by Raymond A. Moody, Jr., and a book by Dr. Elisabeth Kubler-Ross, a Swiss-born Doctor in Psychiatry.

Memory of the 'forgotten' events is revived by means of Hypnotism also which shows that what we believe to have been forgotten is, in reality, not lost for ever because nothing in this world is, in reality, 'lost'. It merely sinks into the subconscious or the unconscious. In fact, everything that impinges on our consciousness leaves

7. From Du Prel's *Philosophy of Mysticism*, quoted by Annie Besant in her book 'Psychology', pp. 237-238.

8. Arnold Toynbee, Arthur Koestler and others 'Life After Death' Weidenfeld and Nicolson, London, January, 1977. Second impression, pp. 194-195.

9. Stanislav Groff, Joan Halifax, Elisabeth Kubler Ross, etc.

thereon its ineradicable trace. Only some impressions are above the 'threshold of consciousness' and can, therefore, be easily recalled whereas others are below the 'threshold of consciousness and are given the label 'forgotten' though these can be 'gotten' again. To use the language of physics, they go into 'potential form' instead of being in the 'kinetic form' but they are definitely there.

We have already given some cases of rebirth. The cases of children who relate the events of their past life is a further proof that nothing in fact is ever forgotten; it only goes into oblivion. Whatever is on the screen of our mind and within the focus of our awareness is known as 'remembered', and whatever goes out of focus from awareness is said to have been 'forgotten'

Memory is an ability of the soul and not of the brain

The story of previous life, as told by certain children, does not only show that memory is not lost and that events are not *totally* and forever forgotten but it also shows that memory is retained by man at subliminal or infraliminal level and is an ability of consciousness; it is not a faculty of the brain-tissue, for the previous body and brain having been cremated, the person is now able to relate, through the medium of the new brain, which is not yet even fully developed, events of an early life with emotion, feelings and cognition of relationship as in that life. Recall of events of past life has been made possible by means of hypnotism also. **Thus memory is, decidedly, the faculty of a metaphysical personality which survives the death and can remember the events of an earlier life. A clincher proof of this is that even amoeba and other unicellular living beings, who have no brain, do have the faculty of memory, however in a dim stage, and it is because of their faculty of memory that they can learn certain kinds of behaviour by repetition and remember to avoid situations, harmful to their existence.**

Furthermore, the example of the experiences of dying persons, two of which have been cited heretofore, are the clincher proof that Memory is not a function of a physical entity, governed by laws of physics and chemistry, because the memory of the events of a life-time appears so rapidly as if it is emancipated from Time. To have a review of all the events or of life of, say, fifty years of physical existence in a matter of only two minutes or less does not only show that memory is

ineradicably permanent but that it is a metaphysical function, for, not only is it associated with consciousness but is unimaginably fast and is colateral with awareness of whether what was done was morally right or wrong. Awareness, judgement and ethical consideration cannot be attributes and acts of a material or physical entity but of a spiritual person who has had continuity of existence and has been all through a witness to what he (or it) has been doing and is a conscious Energy which is not only indestructible, as all other forms of material energies are but is also non-transformable and is thus unlike other forms of energy, such as Heat, Light, etc., which can be transformed from one to the other kind. Being an energy, which has consciousness and is non-transformable and has also moral sense: it cannot be a phenomenon of the brain because the two are utterly incompatible in their very nature. When Heat, Light, Electricity, Magnetism, etc. are transformed from one to the other kind, they do not, as a result, acquire the attributes or faculties of awareness, understanding, will, judgement, etc. So, it would be irrational, arbitrary and fanatical attitude to say that permanent Memory is a brain-function when one cannot explain why amoeba, for example, has memory though it has no brain ?

Brain Dies but Soul lives

Again, biologists say that most cells in the body are replaced or regenerated if they are destroyed by disease or accident. But this is not true of the brain-cells. Once lost, a brain-cell is lost forever. One, therefore, feels alarmed to know that our brain cells die at the rate of 100,000 or so everyday after we reach the age of thirty-five. Fortunately for us, we start off with more than 100,000,000,000 brain cells. So, there is no danger of our running short of supply, though the efficiency of the brain's functioning does suffer.

Now those who say that consciousness is a product of the brain, have to answer how the consciousness remains when the cells go on dying? How would one retain permanent or lasting memory of the past if there is no eternal soul ensconced in the brain?

Memory is possible without brain

In his "Introduction to Logic", Joseph has said : "Nothing is the cause of a phenomenon in the absence of which it nevertheless occurs." He has further said : "Nothing is the cause of a phenomenon in

the presence of which it fails to occur,"¹⁰ Now, since amoeba has memory in the absence of brain and since man fails to remember certain things in the presence of the brain, it is clear that Memory is there even without the brain and is, therefore, not a faculty of the brain-tissue. If I speak when a microphone or a public address system is there, it does not mean that it is the microphone that speaks. That I can speak even when the microphone is absent should be a sufficient proof of the truth that it is I who speaks; though it intensifies and relays my voice.

What is sub-conscious Mind if there is no soul ?

If memory is a faculty of the brain then one would like to ask : What does 'unconscious' or 'sub-conscious' Mind mean ? The brain theory of memory cannot explain these aspects of memory. If we consider Memory as a faculty and function of the soul, then we can say that when the conscious personality has its memories at subliminal or infraliminal level then it can be designated as "sub-conscious" or 'un-conscious Mind'.

The role of brain in the function of Memory or memory-retrieval

Those who believe that Memory is an epiphenomenon of the brain, explain their standpoint on the basis of physiology and neurology. They say that the first thing that happens is that stimulus sets up a vibration via a sense-organ, say, the eye or the ear. This vibration, which is called a *nerve impulse* or a *neurokyme*, travels along the sensory nerves, from cell to cell, i.e. the visual or the auditory ascending pathway and the reticular activating system and then the impulse enters Descending Reticular Activating System as it now goes towards the central region of the brain, or to the 'appropriate' area of the brain. They say that the impulse arouses certain cortical centres in a given way and 'registers' itself there, thus producing in it a predisposition to act in a similar way in future. In technical terms, they call this predisposition as *perseveration tendency* which becomes stronger by repetition, and a stage is reached so that it can recur even in the absence of the external stimulus. It has now become 'a memory track', 'an impression', 'a memory groove' or 'a memory image'. They explain that whenever this particular cortical centre is stimulated to vibrate as it did under the original stimulus, the memory is revived. So, Memory according to them is "the re-arousal of the cortical structures, originally

10. H.W.B. Joseph. Introduction to Logic. Oxford. Clarendon Press, p. 403.

active.”¹¹

But, on close questioning, the view cannot be sustained. For, it has been found that even when certain parts of the brain, which are associated with specific functions, such as Memory, are removed, those functions are, after some period, performed again by what the neurologists call improvisation of methods in the absence of normal parts of the brain. Karl Lashley of America has demonstrated this fact by performing many such experiments on animals.

D.U. Prel, in his book, has given other arguments to prove the impossibility of brain being the conscious entity, having the faculty of Memory. We quote:

“On this hypothesis (of those who believe that brain has the faculty of Memory) memory would depend on material brain-traces, left behind by impression; by the act of memory such traces are continually renewed, re-chiseled as it were, so there arise wellworn tracks in which the coach of memory is conducted with special facility.

The deductions from this view had already been drawn by the materialists of the last century. Hook and others recognised that, since one-third of a second sufficed for the producing of an impression, in 100 years, a man must have collected in his brain 9,467,280,000 traces of impressions, or, reduced by one-third for the period of sleep, 3, 155, 760,000; thus, in fifty years 1, 577, 880,000; further that, allowing a weight of four pounds to the brain and subtracting one pound for the blood and vessels and another for the external integument, a single grain of brain-substance must contain 205,542 traces.

Moreover, our intellectual life does not consist in mere impressions; these form only the materials of our judgement. But these brainsatoms do not help us to judgement notwithstanding their magical properties, so that we must suppose that whenever we form a sentence or a judgement, the impressions are combined, like the letters in the compositor’s box, these atoms, however, being at the same time compositor and box.”¹²

Now, according to the above statement or comment, if we consider brain as the entity with the faculty of memory, then it would mean that each grain of brain has 205,542 clear pictures. Now this is

11. W.B. Pillsbury, *Essentials of Psychology*, p. 158.

12. Du Prel, *Philosophy of Mysticism*.

which cannot be explained by physics or chemistry and is an unacceptable and incorrect idea. In other words, it means that Memory is a faculty not of the brain but of a metaphysical entity, called the soul, because if memory-images are considered *metaphysical* then only the existence of infinite or such a large number of them, and that to in an ineradicable form, can be explained and believed.

Of course, it is true that certain parts of the brain are associated with memory. Experiments have been performed and it has been found that when those parts are electrically stimulated, the memory of certain events gets aroused. Some psychedelic drugs, brain injuries or diseases also revive certain memories. When electric shocks are given to certain brain areas, they lead to memory retrieval or even temporary forgetfulness. But that does not show that Memory is a faculty of the brain. Let us explain this by means of an analogy.

The master of an orchestra has, before him, in a musician's code language, the song of which the orchestra has to play a tune. He remembers the song and the tune but, just to facilitate his job or to assure its accuracy, he takes help from the written code in front of him. Even when he is not playing or directing the orchestra, this coded and written tune, if placed before him, revives his memory of the tune but, even without this, he may be able to remember and recollect it. Likewise, 'the brain traces' are 'the impressions' left by the events. These traces are like the coded tunes which are of help to the soul and which facilitate its work; these are like a map to a tourist who has already travelled along the routes delineated in the map or, these are like the notes to a student who is preparing for an examination; or, they serve as a diary of life-events, a file of proceedings of a meeting but they are not the person, i.e. the master of the orchestra or a student, or a diary-keeper, or a secretary of the meeting who uses proceedings. The conscious person of whom these 'brain traces' or 'memory tracks' or 'engrams' or axons and dendrites serve the purpose is the *soul*. The existence of the soul is thus a well established fact. □

Genetic system and re-incarnation of Soul

“A soul gets a particular body in a particular family, in particular socio-economic, natural environment on the basis of its Karmas and sanskars (tendencies). It can acquire new traits and alter the old tendencies by its efforts. If you make these efforts based on Godly education, you can elevate yourself into an angelic state.” — God Shiva

In the previous chapters we have given some instances of rebirth. Biologists explain birth of a human body on the basis of the fusion of male and female germ cells and the laws of heredity. But, it will be seen that these laws and the knowledge of the genetic code are insufficient to explain why, out of millions of possible unions, one particular union is consummated. This can be better explained on the basis of the Law of Karma and the truth of the existence of the soul and its re-incarnation based on the Law of Karma. We made a minor reference to the synthesis of a gene and a genetic code on page 15 but we will discuss it in some detail now.

Every child is born with a particular psychophysical constitution, different from the others. We find that, born of the same parents, one child has more interest in games than in studies whereas the other one has more curiosity to know and learn things and to study books and has comparatively less interest in games and the third one evinces his main interest in some skill or craft. The question arises: “What makes all these differences in aptitudes, abilities and the traits of small children who have not yet had any separate training in a special discipline? Let us first see how the biologists and psychologists explain these differences.

How scientists try to explain these?

The modern biologists say that the differences in physical constitution and psychic traits between individuals are due to two factors. One of these is (1) *The heredity* and the other is (2) the *Environment*. Their research work has led them to the conclusion that

some of the traits and characteristics are *inherited* whereas others are *acquired* by means of training or by reacting to the *environment*. These scientists do not feel the necessity of considering an eternal soul as the factor to explain this difference. What an Indian philosopher would like to explain by interposing the theory about the existence of a soul and of *Sanskars* and the law of Karma, is unacceptable to most of the biologists. The biologists say that it is not the *Sanskārs* and the law of Karma and of soul's re-incarnation, based on the law of karma, that operate in this case, but, rather, it is the *genes* which are responsible for these differences.

Obviously, these two views are altogether different. If we accept the explanation of the biologists, based on Genetics, we will have to reject the belief in the theory of the existence of a soul and *Sanskārs* and re-incarnation and all that goes with it, and if, on the other hand, we accept the Law of Karma and the soul's re-incarnation on the basis of its *Sanskāras* and previous Karmas, then we will have to point out what defects, shortcomings, inner contradictions, false assumptions or inadequacies there are in theory of genetic inheritance. Or, in other words, we will have to prove which of the two views solves this problem better.

Is heredity or environment the basic factor?

Before we consider the validity of above-stated conclusion of Biology, we will discuss which of the two factors—heredity or environment is *the basic one*.

In this connection, we would like to point out that, though the total development of an individual is the net result of the interaction between his inborn potentialities and the environmental conditions, yet his inborn and intrinsic nature and his inherent faculties are the prevailing force. The environment, no doubt, is an important factor but it is *not the basic factor*. The environmental conditions can only help or hinder and stimulate or obstruct his process of growth. Most scientists are now agreed that, out of these two determining factors, hereditary is the basic one. We quote E.G. Conklin in this context.

“Unquestionably, the factors or causes of development are to be found not merely in the germ but also in the environment, not only in intrinsic but also in extrinsic forces; but it is equally certain that the directing and guiding factors of development are, in the main, *intrinsic* and are present in the organisation of the germ cells, while the

environmental factors exercise chiefly a stimulating, inhibiting or modifying influence on development.”¹

This will be further clear from the following:

(a) Man can choose his environment, but his inherent nature already is what it is. Moreover, very often man chooses his environment also according to his inherent tendencies.

(b) Even if he cannot choose the environment according to his liking, he can greatly alter it. He can modify the environmental conditions.

(c) If he cannot modify certain conditions of the environment, he can safeguard himself from these or can use these to his best advantage.

(d) He can develop his mental and spiritual capabilities to a great degree so that he can rise above the environmental conditions or can over-rule them. For example, a yogi develops such mental traits and spiritual attitudes in himself as can help him remain unaffected by environmental conditions. There are many verses in Shrimad Bhagwad Gita which speak of this developed state of a yogi. For instance, the following verses would substantiate this view:

“He who neither rejoices nor hates, nor grieves nor desires, who renounces both good and evil and is full of devotion to Me, is dear to Me.”²

Further, “He who is alike to friend and foe, and likewise to honour and ignominy, who is alike to heat and cold, pleasure and pain, etc., and is free from attachment and takes praise and reproach alike, who is given to contemplation and is content with whatever comes unasked for, without attachment, that man is dear to Me.”³

So, it should be clear that, out of the two factors that determine human development, Heredity is the basic one. So, we now consider the Genetic Theory of Heredity and see if it explains our problem better than the spiritual theory.

1. Edwin Grant Conklin: Hereditary and Environment in the Development of Men, Princeton University Press, Princeton, pages 59-60.

2. Gita, Ch. 12, V. 17.

3. Gita, Ch. 12, V. 18-19.

The Genetic theory of inheritance

Before we examine whether the genetic theory of inheritance adequately explains the question of individual differences in aptitudes and abilities between different persons, let us first recapitulate briefly what this theory is:

As is now generally known, according to modern biology, the human body, like other multicellular living things, consists of innumerable minute cells and each cell is a miniature organism which is considered as a fundamental unit of life. New cells come into being by the division of previously existing cells and this is how an infant grows into a baby, a baby into a child and child into an adult.

Now other than the ordinary body-cells are the *germ cells* which have the ability and function of reproduction. The reproductive cell in the male body is known as '*sperm*' and, in the female body, is called '*the ovum*' or '*the egg*'. The common name for both the cells is *gamete*. Inside each reproductive cell, i.e. *gamete*, are thread-shaped entities, called the *chromosomes*. In each reproductive cell or *gamete* of the human species, there are only twenty-three pairs of chromosomes. On these chromosomes are located the material units, called *genes*. Each one of these genes, according to the biologists, is responsible for transmitting certain characteristics such as the colour of hair and eyes, which the new individual, born from the union of male sperm and female ovum, has to inherit. The biologists say that the qualities or characters, such as the colour, size shape, etc. are not present in the genes or the germ cells but something like a plan, which is capable of producing them in the new, coming, individual is '*coded*' in them. This is known as '*the genetic code*'.

The biologists further explain that, when a man and a woman physically meet for reproduction, the man deposits millions of sperms into the female. One sperm *per chance* meets one ovum and the former fuses into the latter to form a new cell, called the *zygote*—the fertilised egg. This develops into an individual in due course. Thus *zygote*, produced by the fusion of the nuclei of the male and the female reproductive cell, is the starting point of an individual's biophysical existence. This single cell is a minute but potent biophysical unit. It is too small to be seen by the unaided eye but is open to microscopic observation. Its potency is wonderful.

Now this fertilised egg, formed out of the sperm and ovum, contains twenty-three chromosomes from the male and twenty-three from the female parent. The genes, which are the hereditary units, of both the parents, lie within them.

Indeed, the only common link between the child and its parents or ancestors is this genetic material. The following paragraphs quoted from *'The Principles of Genetics'*, would substantiate this:

"The only material objects that one inherits biologically from one's parents are the genes, carried in the egg and the sperm cells from which the body originates.⁴

Indeed, the nuclei of the egg and the sperm—the tiny packets of reproductive substance—into which so much is packed and out of which so much emerges, are the most remarkable bits of living matter in existence.

So, according to modern biology, physical as well as mental traits of the parents are transmitted on to the offspring through the process of genetic inheritance. *But is this conclusion correct?*

Now, it should be understood here that the spiritual philosophy does not contradict the biologist's explanation of the process of human reproduction so far as the gross physical body of the offspring is concerned but its main contention is that the genetic theory does not explain the variation between the tendencies, aptitudes, etc. of any two individuals. *Had an individual been only or mainly a body then the transference of the parents' physical particles through the reproductive cells might provide a satisfactory explanation for his origination. But, undeniably, far more important than the body is the Mind or the self of an individual and, as should be clear from the previous chapters, the Mind or the self is not an inherited physical property but has an existence of its own. We will give here some of the arguments.*

1. How can the birth of a prodigy to mediocre parents be explained?

Nothing happens without a cause. As is the cause so is the effect. The effect corresponds to the cause. This law of 'Cause and Effect' is considered to be valid by the scientists also. Now, keeping this law in

4. Edmund W. Sinnott, L.G. Dunn, Theodosius Dobzhansky. *Principles of Genetics*, Fifth Edition, McGraw-Hill Book Company, Inc., New York, 1958, page 7.

5. *Ibid*, Page 17.

view, how would the biologists explain the birth of a genius to mediocre parents on the basis of genetic inheritance? Why are sometimes morons or idiots born to some normal parents or wicked children to saintly parents? How will a biologist explain the birth of sane children to insane parents or insane children to sane persons?

Now, according to the biological law of heredity, 'like begets like'. So, mediocre parents should give birth to a mediocre offspring. How is it that a prodigy is born to mediocre parents or a wicked child is born to saintly parents? We quote here-below the principle of heredity which says that each generation should be *like* its parents:

"Each new generation of organisms closely resembles its parents; the mating of two cats always produces cats and the mating of two Siamese cats always produces two Siamese cats and not a different variety. Certain distinctive characteristics appear frequently in successive generations of a given family tree. Man has been aware for many centuries that "like begets like". . . and that new types of animals and plants may result when unlike forms are crossed. This tendency of individuals to resemble their progenitors is called Heredity."⁶

Obviously, on the basis of principles of Heredity, the biologist cannot explain this anomaly of the birth of a genius to mediocre parents scientifically and satisfactorily. He says that the birth of a prodigy to parents of mediocre intelligence occurs by chance. Here we quote Julian Huxley:

"Egg and sperm carry the destiny of generations. The egg realises one chance combination out of an infinity of possibilities, and it is confronted with millions of pairs of sperms, each one actually different in the combination of cards which it holds. Then comes the final moment in the drama—the marriage of egg and sperm—to produce the beginning of a large individual. . . Here, too, it seems to be entirely a matter of chance which particular union of all the millions of possible unions shall be consummated. One might have produced a genius, another a moron and so on. . . with a realisation of all that this implies, we can banish from human thought a host of fears and superstitions."⁷

6. Claude A. Villee: *Biology*, fourth edition, W.B. Saunders Company, Philadelphia, 1962, page 452.

7. Julian Huxley: *What Dare I think* (This is quoted in 'Reincarnation: An East and West Anthology') compiled and edited by Joseph Head and S.L. Cranston, 'The Julian Press, Inc., New York, 1961, page 292-93.

Here is the statement of another scientist. Says Dobzhansky: "A child receives one half of the genes of his father and one-half of the maternal ones; which particular maternal and paternal genes are transmitted to a given child is a matter of chance. Which mutations occur, and when and where, is also a matter of chance."⁸

Obviously, to hold that the birth of a genius, a prodigy or a dullard is the result of a chance is tantamount to saying: 'I do not know the real cause'. On the one hand, the scientists profess that the cosmic order is regulated by the law of cause and effect and they try to explain actions in the domain of Matter on this basis and, here, in this case, they say that it is a matter of chance!

Now, we do not give up here the law of cause and effect. On the other hand, they apply this law here also. The law of Cause and Effect functions on the human plane as a moral law, called *The Law of Karma*. The law of re-incarnation, which regulates the birth of an individual, is based on this Law of Karma. The spiritual science states that every individual brings its Mind with itself and the Laws of Heredity apply only to the biophysical constitution of an individual.

The spiritual science explains that the extraordinary abilities of a genius are *not due to chance* union of gametes and to the heredity but due to these having been acquired and cultivated in former births of the self, which, according to him, is different from the body and does not die when the body dies. The spiritual science explains the reasons of this belief in the separate entity of the Mind or the Self (Soul).

2. Mind or Soul is a separate entity and is not inherited from the parents

The spiritual science says that the Self or Mind, which is the receptacle or vehicle of aptitudes, interests and mental abilities is different from the biophysical entity and has been in existence even before the union of the gametes or the sperm and the ovum and is, therefore, not inherited from the parents. Following are some of the arguments, relevant to the present context, given by Spiritual Science:

(a) A distinctive characteristic of the Mind or Soul is that *it is self-conscious and can transmit or manifest its consciousness*. The quality of consciousness is not intrinsic in the body or its organs. It is the self-aware Mind or Soul which transmits or radiates its consciousness to all the different parts of the body. Different parts of the body send only the

8. The Biology of Ultimate concern, by Theodosius Dobzhansky, The New American Library, Inc., New York, 1967, page 126.

messages to the Mind or Soul; they do not radiate consciousness; they do not transmit awareness to the Mind. A proof of this fact is that when the Mind is diverted from biophysical body, the body cannot perform any conscious or voluntary action; it cannot have will or volition or purpose or goal. The Mind, on the other hand, can continue to think, feel, imagine, experience or witness even when the body is not operating but is lying inactive.

(b) Mind may be conscious of an effect on any part of the body but not a single part of the body is *aware* of what the other is doing or how the other is feeling or how a third one is being affected. It is because they do not have an *inherent* quality of consciousness.

(c) The biophysical unit is ever-changing. It is the self-aware Mind or the Soul that cognises this. It is an unvarying principle that is witness to all the changes.

(d) It is the soul or Mind which integrates the various messages, passed on to it by various organs of the body, and makes these into a coherent whole, to give a meaning and to form a model for action.

(e) It is this self-aware Mind that gives direction to the whole biophysical entity as a unit to attain particular end or purpose. Here is what Edmund Sinnott says on this point:

“What pulls together the separate points and processes of. . . an animal and knits them into an organism, and what draws this organism towards a developmental goal, prefigured in its living stuff—these are the problems where the confident progress of biology has made but little progress.⁹

But the spiritual science says that the self-aware entity is different from body.

(f) No chemical analysis of the mind is possible.

(g) Mind cannot be split up and disintegrated as matter can be.

(h) Mind can go anywhere instantly but we cannot say this of the body.

(i) The mind functions even in the dream state when the body lies in rest.

(j) The amputation of any part of the body does not result in amputation or fragmentation of the mind.

9. Edmund W. Sinnott: *The Bridge of Life From Matter to Spirit*, Simon and Schuster, New York, 1966, page 128.

Similarly, many other arguments can be given to show that the mind is an entity apart from the body and is metaphysical in nature. Some of those arguments have been given in the preceding chapters.

It should, therefore, be borne in mind that hereditary transmission of the *mental traits* through the gamete is not possible, *because the metaphysical mind is not impartible nor is the parents' mind split-able. The child's mind is not a fragment of the mind of his mother and father nor does it arise from either parent's body, for, evidently, it is different from both. It is absurd to think that the self of the child emerges from the father's or the mother's self, which is indivisible and immutable.* What the child received from the parents are the ingredients or rudiments for its physical body. These serve as the carriers of only the *physical characteristics* of the parents of the offspring because, according to the Laws of Heredity, a living thing comes from another living one of the same species; it cannot arise from the lifeless matter. The Law differentiates a living thing from non-living Matter. We quote here the biologists' definition of heredity:

"Heredity, in the last analysis, is self-reproduction, the common property of all life, and the property that distinguishes living from non-living matter."

So, it should be noted that the mental¹⁰ traits which are the cause of the basic difference between one individual and another are not inherited from the parents. That is the reason why children have their mental traits, dissimilar to those of the parents. Even twin brothers widely differ from each other and from their parents so far as their mental traits are concerned. It is because, according to the law of re-incarnation, every individual brings his own mind though he inherits the physical characteristics. *Even the physical characteristics are not totally derived from the parents. Its roots are, in fact, to be traced in their past lives. Which sperm, out of millions, will fertilise the ovum, depends upon this factor. Which genes will finally come together to act as the building factors for the individual depends on the past Karmas of the Individual.* It would, therefore, be utterly wrong to say that a human being results from *chance conjunction* of the *physical ingredients* in the form of sperm and ovum. Even the physical traits, he inherits from his parents, are out of innumerable possibilities, which are

10. The word 'mental' has been used here not in the sense of cerebral but in the sense of that which pertains to Mind, as distinct from Brain.

merited by him as a result of his *Karma*. Without bringing in this conscient entity, the soul, the individual distinctiveness cannot be explained. A plan for physical development is no doubt immanent in the embryo but which one is required to be executed in this particular case, is dependent on the previous *Karma* of the individual (soul) for whom the body is intended. Its existence is antecedent to the existence of the body. It is the central principle in the human personality. It is because of the conscient entity that every individual knows spontaneously that he is, i.e. he is aware of his own existence. Its existence is self-evident, because, it is this entity which knows the existence of the body also. But since, its existence is outside the ken of the senses, some people do not believe in it. But this, in fact, is the real cause of variation in the mental traits of individuals and also why a particular sperm fuses into an ovum to form a particular kind of body. It is, therefore, wrong to say that it is due to chance. □

SECTION-III

You are a soul who can experience Peace and Bliss

It is the soul which experiences Peace or Bliss and it is the soul and not the brain which has the emotions of rage or anxiety. The brain and the body are the mere mechanism of exteriorisation or arousal of emotions. You are a soul who can get elevated by sublimation and redirection of your emotions.

—God Shiva

Physiology of Emotions

Emotions are an important aspect of our Consciousness and, therefore, it would be useful to investigate as to whether there is a soul which experiences and expresses emotions and also which part of the brain is involved in their arousal or manifestation, for that would give us a clue to the location of Consciousness or Mind itself. Emotions form a major factor of one's personality and behaviour and the latter have their source in cognitive, conative and effective sides of Mind; so the study of the parts of the brain involved in Emotional exteriorisation would help us trace the seat of Mind or the Soul.

In this connection, it is well-known now that the experiments performed by means of electro-corticogram in order to understand the physiology of the Suppressor Bands and the Excitomotor areas, have shown that the cerebral cortex is integrated with the Thalamus and that they function as one unit. It is also known now that lesions, whether they be in Thalamus or certain parts of Hypothalamus or the dorsal part of the midline region of the brainstem, result in loss of the emotional expression or what is called the 'emotional palsy' which shows that all three of them are involved in emotional exteriorization. But, our present effort is directed at finding the central actor, among all these actors, in the drama of manifestation of emotions. We want to investigate which of these is the main area of emotional arousal and the most important mechanism of its exteriorisation and whether there is a soul which plays a part in it.

In order to understand this, we have to study the physical side of emotions. In this connection, it should be noted that the physical side of emotions consists of changes in viscera and skeletal muscles; they involve co-ordinated activity of the autonomic and somatic nervous systems. *Sympathetic and para-sympathetic nervous systems get stimulated from their exteriorisation.* And, as has been explained in the chapter, it is the nuclei of the hypothalamus that control both divisions—sympathetic and parasympathetic— of the autonomic nervous system and also influence the activity of lower motor neurons which supply skeletal muscles. So obviously, **Hypothalamus is the most important centre in the efferent side mechanism controlling emotion-exteriorization.**

Physiological changes prove the point

If you consider the manifestation of certain emotions in respect of physiological changes, the importance of Hypothalamus will become more clear. Take for example the exteriorization of Fear. In fear, the heart beats quickly, the skin becomes pale owing to the vasomotor centre being affected in such a manner as to cause contraction of the small arteries of the skin. The hair on the skin stand erect and some muscles shiver. The breathing is hurried. The salivary glands act imperfectly and the mouth consequently becomes dry. The voice becomes husky or indistinct. In cases of grave fear, the eyeballs protrude and are fixed on the object of terror. The pupils get enormously dilated. Evidently, most of these physiological changes are due to stimulation of the sympathetic nervous system and, by means of the relevant diagrams¹ it is the nuclei of the Hypothalamus which control these.

Similarly, parasympathetic over-activity predominates many other emotions, as for example, in anxiety. The vagal innervation of stomach is stimulated in states of anxiety and resentment, leading to increased secretion of gastric juice, etc.

Next, take the case of grief. The chief feature of grief is its effect on voluntary movements. There is a feeling of weariness. Movements are made slowly. Man's voice is weak and without resonance; he prefers to sit still, sunk in himself and dumb, or he cries out. The tone of the muscles is diminished. The neck is bent and the head hangs. This weakness of the entire voluntary motor apparatus is only one side of

1. See Figs. 1 and 2 on pages 192 and 193

the physiology of grief. Another side belongs to the involuntary muscles. For example, vascular muscles become strongly contracted so that the tissues and organs of the body become anaemic and pale. The mouth in this case also becomes dry.

Thus it is clear that, in emotional states, the appropriate parts of the autonomic system—sympathetic as well as parasympathetic—are employed in co-ordination with the somatic nervous system—to produce the characteristic visceral reactions and, we have already explained in the previous chapter, that the sympathetic and parasympathetic actions have their intrinsic mechanism in the Hypothalamus. Over the past fifty years, many experiments—first started by Karplus and Keridi—have shown that sympathetic reactions can be elicited by stimulation of anyone of the points in Hypothalamus. The lateral hypothalamic area seems to be the region from which sympathetic discharges can be obtained most readily.²

The neuro-scientists have explored the hypothalamus and the adjacent areas of the brainstem in great detail by means of small stimulating electrodes, which can be inserted into any desired part of the brain and this sort of investigation has made it clear that very localised hypothalamic stimulation can produce almost every effect which peripheral sympathetic fibres mediate. It has also been conclusively found that the parasympathetic system has a definite representation in the Hypothalamus.

Further, it is now well-known that the Emotional states influence the ductless glands also. They influence the secretion of adrenaline and the antidiuretic hormone of the posterior pituitary and also affect the discharge of the anterior pituitary hormones. Emotional states, also in this way, affect the activity of the Thyroid and the adrenal cortex and the secretion of the hormones of the ovary and the testis. But it is now well-established that the posterior part of the Pituitary, namely the neurohypophysis, is under the control of the Hypothalamus. About

2. The Sympathetic discharges cannot be obtained by excitation of the fibres of the medial forebrain bundle originating rostral to the Hypothalamus, for, stimulation of the preoptic area, through which most of these fibres pass, does not produce sympathetic reactions. Ranson and Magoun, after many experiments, point out that, since Thalamus, the Fornix and the striatal complex, do not yield them, the sympathetic effect of hypothalamic stimulation are not due to the stimulation of the pathways which descend through or are close to the Hypothalamus.

1,00,000 fibres of hypothalamic origin enter the hypophysial stalk. The control mechanism arises from the supraoptic nuclei and also the paraventricular nuclei and from the regions close to the pituitary stalk. Many fibres of the hypothalamico-hypophysial tract terminate in the neurohypophysis. In fact, this structure is an embryological derivative of the floor of the third ventricle and there are physiological as well as morphological reasons for regarding their relationship as closely-knit. So, the importance of the Hypothalamus in influencing the pituitary is also evident and the over-all importance of Hypothalamus in emotion-arousal and exteriorization is also obvious.

Experimental evidence supports that hypothalamus is the seat of emotion-arousal

Moreover, studies of animals, such as cats and dogs, in which the cerebral cortex had been removed, show conclusively that the capacity to display anger or rage depends on central mechanisms which lie below the cortex, especially in the area of the Hypothalamus. Experiments performed by Bard, Masserman, Mountcastle, Ranson and host of other scientists, have revealed that the hypothalamus is necessary for the vigorous expression. In these experiments, the hypothalamus was stimulated in un-anaesthetized cats through electrodes which had been placed under ether. Stimulation of the hypothalamus and especially in the lateral or caudal hypothalamic area, produced a reaction quite similar to rage. The cats behaved as though they would have been threatened by a barking dog. The response was not obtainable from the Thalamus, internal capsule, septum or infundibular stalk. If at all some researchers found responses in the form of 'Sham rage' by stimulating thalamus, then it was found, on further investigation, that this was not because Thalamus has some such mechanism but because the electrical currents used were of such strength that they spread to hypothalamus.

Experiments performed by Hess, Brugger, Kelley, Beaton and others show that if one or more specific brainstem mechanisms are activated in such a way that somatic and autonomic activities are blended, then also we find that a pattern of aggressive or fearful or defensive behaviour is produced. But every student of physiology knows that there are efferent paths from the hypothalamus to the brainstem also. The Hypothalamus has the nuclei which are connected with the brainstem and also with the reticular activating system. So, the

conclusion is that the *central* mechanism or place of emotional manifestation is the hypothalamus which has connections with all parts of the brain.

In the forgoing pages, we have tried to explain that though the forebrain, the Thalamus, the Hypothalamus and the brainstem are

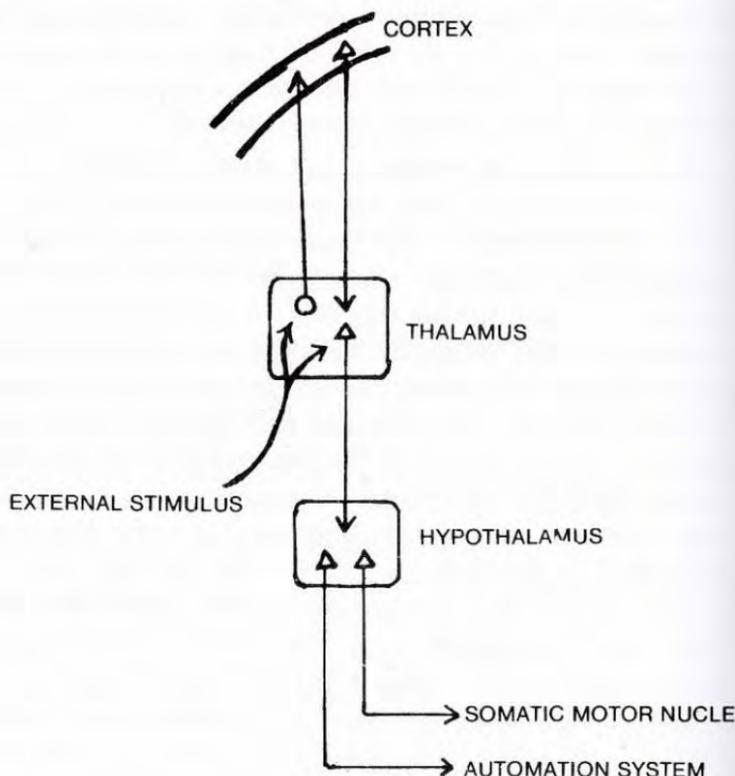


Fig. 10

involved in the manifestation of emotion yet Hypothalamus has the most important role.³ If despite this, one continues to assert that all these parts are of equal importance then we would say : All right, Let us at

3. As students of physiology know, two-way connections are present between the prefrontal cortex and the hypothalamus and fibres also pass both-ways between the Thalamic nuclei and the Hypothalamus and, from the Hypo-thalamus new relays pass (1) to the appropriate supraspinal autonomic centres (see fig. 1 above and Fig 2 overleaf) and to the reticular formation of the pons and medulla and, from these cells, relays pass to the appropriate cranial and spinal lower motor neurons. So, one can easily notice the importance and central position of the Hypothalamus.

least agree that this is the mechanism and that Hypothalamus has a special role in this if not the most important one."

The dissociation of physical parts from the feelings shows the existence of the soul

Now, let us see if we can understand the manifestation of emotion in this part of the brain without in any way believing in the existence of a soul or non-material Mind. For this purpose, let us consider the results of a few experimental cases.

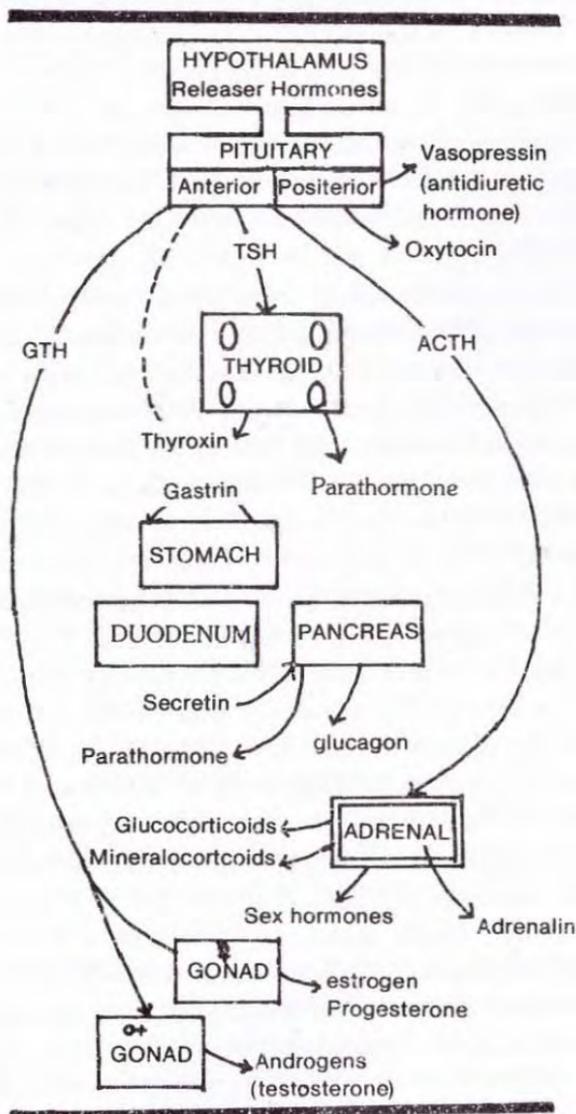


Fig. 11

In certain cases, it is found that *there is dissociation of the mental and physical side of the emotion*. For example, a certain patient may display prolonged fits of laughing, crying, frowning or scowling which he cannot check or control. There is instance of a patient who started laughing in this way, for no particular reason, at 10 a.m. and continued with few pauses till after midnight and, it is important to note that the patient did not experience that feeling which his face and body so dramatically exteriorized. Such patients act thus because of the lesions of the pyramidal tracts, especially in the cases of bilateral lesions of the cortico-bulbar fibres which control the motor cranial nuclei, skeletal muscles which are no longer responsive to voluntary control. Obviously, there was dissociation of the mental and the physical side of emotion, nay, the mental side was, in fact, absent in this case, Such behaviour is called manifestation of emotion which is not felt, i.e. **pseudo-emotion**.

Now, we may ask in reference to this pseudo-affective emotion; "Does this not show that body is only the *mechanism* of exteriorization or manifestation whereas there is another entity—a metaphysical personality—which **feels** the emotion?" If it were certain parts of the brain which felt the emotion—the rage, the anxiety or the grief—then the feelings and their manifestation through the body should have accompanied each other; they could not have been dissociated as they really are.

2. Who is responsible for the variegated pattern of emotional exteriorization?

Again, we find that emotional exteriorization normally varies so much in its pattern and is so nicely adjusted to the nature of the stimulus that it is almost in itself adequate evidence that there is a metaphysical or a psychical being there who adjusts it. Consider, for example, the situation when a man is abusing another man in a meeting. The reaction of one person to this is that he replies in the same coin with the emotion of rage. The reaction of another is that he is surprised at the attitude of this man who is abusing and, instead of resorting to a nasty reply, he keeps mum and feels hurt. The third man, in the same situation, does not keep silent but answers in a very forceful though civilised and cultured manner and with a touch of humour and satire. Even one same person reacts to the same stimulus differently under different circumstances. For example, a man who always challenges others to fight, does not do so when he finds that he is

confronted with the challenges by a stronger person or group of persons. So, while the scientific and clinical evidence, mentioned before, has made clear the role of the region of the Thalamus, Hypothalamus and the brainstem, particularly the hypothalamus, one does not find any explanation, coming forward from the physiology of emotions, which may reasonably satisfy us about 'who adjusts the response or emotional exteriorization to the stimuli?'

3. Who, excepting the soul, checks or inhibits the emotional exteriorization?

Further, sometimes we find that the situation is extremely provocative but the person who is faced with it adjusts his emotional exteriorization in such a way that the situation does not go from worse to worst. A materialist can say, in reference to this, that it is the cerebral cortex which checks, controls and adjusts but, on further analysis, one comes to the conclusion that it is the metaphysical Mind or the transcendental soul which introduces the element of adjustment, and greater variegation of pattern into emotional exteriorization.

As we have said before, it is indisputable that the clinical findings indicate that emotional exteriorization is essentially an *involuntary* act which can be mediated by subcortical levels but it is generally argued further that it is normally modified and inhibited to a considerable extent by cortical influences. Agreed, **But the question is that the Thalamus and the Hypothalamus being fired with rage-reaction or with anxiety or grief-stimulation, who uses the cortical mechanism to subdue, dilute or inhibit the emotional exteriorization?** There must be someone who understands the consequences of emotional outbursts in a particular situation and then *wills* and *decides* to check or hold or inhibit the emotional exteriorization and such a one who has cognition or pre-cognition of the consequences and has also *volition* or *will* and also the *affection* (for it seems to be itself fired with rage or charged with emotion of anxiety or grief) so that it inhibits the outer manifestation of the emotion and this one we say is the selfconscious Mind or Soul.

4. Who feels the emotion—the Hypothalamus or the Soul?

Furthermore, experimental evidence tells us that appropriate hypothalamic stimulation in the intact, un-anaesthetized cat produces exteriorization of rage and fear, but the question arises: Did the cat *merely express* the rage as a consequence of stimulation or it *really felt* the rage or frightened also? While we cannot ask the cat to answer this

question, we can find out the truth from the cat's reaction to the hypothalamic stimulation: On experimentation, it is found (1) that the ostensible aggressive activity during the hypothalamic stimulation is not directed towards specific objects in the cat's environment even when these objects appear to be related causally to its emotion. The cat just dashes itself repeatedly against the sides of the cage and neglects a ready avenue of escape. (2) Further, all the pseudo-affective bodily reactions, i.e. emotions of fear, etc. cease abruptly at the end of the stimulus without leaving any of the residual reaction (mewing, trembling, hiding, etc.) which is ordinarily observed after 'true' (really 'felt') emotion. Thus it is clear that the activity induced by hypothalamic stimulation seems to carry no greater emotional significance than would contraction of muscle, induced by stimulation of a motor nerve. **In other words, the animal was not feeling the emotion it was so graphically portraying.**

Again, if the hypothalamus is stimulated while the animal is behaving normally, its activities continue almost unchanged until mechanically interfered. For instance, during hypothalamic stimulation, an animal will continue, as best as it can, to lap milk, or respond to petting despite the appearance of the typical changes of "sham rage". This shows that there is a great contrast between the rage arousal obtained by the stimulation of the hypothalamus (i.e. the pseudo-rage) and the natural rage (a felt rage.) **It clearly shows that the Hypothalamus, the Thalamus, the Prefrontal lobes, the amygdala and the brainstem are merely the mechanism for exteriorisation or inhibition of the emotions but the emotion is really felt that intended to be exteriorized by the Mind or the Soul.**

In the end, we wish to draw the reader's attention, once again, to the fact that the clinical evidence makes it quite certain that the mental and physiological sides of an emotion can be 'completely' dissociated. A patient with emotional palsy may, for example, **feel** deeply but he **displays** no bodily changes and a patient with a pyramidal tract lesion **may manifest** the viscerosomatic changes which ordinarily accompany emotions but, in this case, the **feeling is absent**. Thus an actor may act as if he is feeling rage or fear and the feeling may not actually be there. This obviously points to the truth that there is, in the body, a psychical entity, called Mind or the spiritual being, called the soul, who **feels** the emotion and the body or various parts of the brain

and nervous system are the **mechanism** through which it manifests or exteriorizes the emotion.

Two types of mechanism—Facilitatory and Inhibitory—show that there is a soul which decides which one to use

Again, let us consider the whole mechanism of emotion-exteriorization from another angle, comparing it with a bicycle or a motor car. The mechanism of exteriorization is of two kinds—(i) **Facilitatory** and (ii) **Inhibitory**. One facilitates the manifestation of anger, fear, anxiety, etc. whereas the other inhibits or prevents it. The former can be compared to the pedals, the flywheel, the chain, etc. of the bicycle and the other to its brakes. Now let us consider the situation in which the rider of a moving bicycle suddenly finds that, just a few feet away and in front of him someone is crossing the road. He immediately applies his brakes to come to a halt. Now the pedals, the flywheel, etc. were all in a state of motion and were being kept in that state. There is someone on the saddle who, realising the danger ahead, decided to stop their motion and, therefore applied the mechanism. Without his doing that the brakes themselves would not have come into action to stop the motion. The same may be said of a motor car which has a starter, a steering wheel and gear. The driver it is who uses the brakes whenever he feels the need. Likewise, the very existence of the two kinds of mechanism—facilitatory and the inhibitory—leads us to believe that there is someone over there who decides to apply either one of these two kinds of mechanism and is different from the mechanism itself as the rider in the case of bicycle or driver in case of the car is. Moreover, the cycle or the car are meant to take the rider or the driver to a destination and so is the body and its mechanism meant for a **purpose** of someone, call it 'The Mind' or 'The Soul'. The destination or the purpose depends upon the will of the rider or the driver who is different from the mechanism itself. So, from this analogy, we come to the conclusion that there is a metaphysical Mind or Soul in the brain which uses the facilitatory and inhibitory mechanism of the body and its various systems for a purpose.

In the light of this, it should be clear that it is the soul which becomes corrupt and degenerate because of its negative and pain-giving emotions and it is the soul which gets purified and elevated and experiences peace and bliss. □

The Form of Eternal Soul, God and the Three Worlds

"The soul is an eternal and infinitesimal point of conscient and non-material light. It has a subtle aura or an oval-shaped effulgence—an orb—round it. It is like the minutest elliptical 'Light ball' which is subtler than Matter is, even at its subatomic level. When seen in a divine vision, it looks as a star appears from the earth. The soul is immortal. Its energy is inexhaustible. Know yourself as an immortal soul."

—God Shiva

TWO Indian physicists have theorised about a possible medium in which light can be made to go round and round in elliptical orbits without ever leaving the medium. This discovery has been made by Dr. P.K. Jena and Dr. T. Pradhan of the Institute of Physics in Bhubaneswar and their theory of 'confinement of light in a Medium' has been reported in December, 1981 issue of the leading physics Journal, *Pramana*, published by the Indian Academy of Sciences.

According to this theory, "light of selected frequencies can be confined within the material whose dielectric constant is spherically systematic but decreases radially outward, becoming negative after a certain radius." *Perhaps, that is the reason why quarks, the tiny particles, are confined within protons and neutrons. In other words, we can have spheroid or elliptical 'Light balls', so to say, which are eternal.* So, in a sense, what is true in physics, has its parallel in metaphysics or what is a fact of science about the ultimate form of matter may well illustrate a fact in religion about the ultimate geometrical form of soul or God—The Supreme Soul.¹

These scientists have further said that though any material, in Nature, possessing such a property, is not yet known, yet it may be

1. This will be further explained in third part of this book.

possible to create, in the laboratory, material with the negative dielectric constant. This, in other words, means that the validity of the theory can be demonstrated in the laboratory.

The form of the Cosmos or the Three Worlds

Drs. Jena and Pradhan have further said that the space surrounding the earth's surface has the required features for light-confinement. The atmospheric dielectric constant is spherically systematic, decreasing radially. So, the form of the cosmos and beyond, shown as spheroid or elliptical, in the figure opposite page 194 seems to be in accordance with this theory.

Soul and God are eternal Points of Light

But what I wanted to say in particular was that, if we apply the findings of physics to the entities of metaphysics, 'God' and 'Soul' can be such light as are 'confined' in their respective *oval form*—of course, the light is divine and conscient. Further, this Light could be eternal in this form not only because it goes round and round in elliptical orbits of infinitesimal size without ever leaving the medium but also on other grounds which I will now try to explain by quoting the following four authorities :

1. The book '*Dancing Wu Li Masters*' says : "... If there is any ultimate stuff of the universe, it is pure energy because subatomic particles are *not made of energy*, they *are energy*. This is what Einstein theorised in 1905; Subatomic interactions, therefore, are interactions of energy with energy. At the subatomic level, there is no longer a clear distinction between *what is* and *what happens* between the actor and the action. At the subatomic level, the dancer and the dance are one." This truth could explain why, despite spending energy, the soul-energy is not exhausted. It would also explain how *the Sanskārs* abide in soul, the doer and also the experiencer.

2. Physicists have found that if two particles are made to collide, they are destroyed and, in their place, two new ones are created. Both of these decay spontaneously into two additional particles, making them four. Of these four, two are those with which the experiment was started! Finkelstein, a well-known physicist, has stated this truth thus: "It is as though we fling two clocks together, they shatter and, out of them come flying not gears and springs but *more* clocks, some of them as large as originals." This shows that matter, at energy level, is

indestructible and the energy can act at its level not getting exhausted but only changing form and 'multiplying.'

This gives us a hint how, despite expending energy, the conscious energy of soul remains intact. If two sub-atomic particles, on colliding, give birth to two other particles, instead of getting destroyed, the soul too, which is minuter than even the sub-atomic particles, does not get destroyed. It is immortal, for it is self-conserving. The spending of its energy regenerates energy though its qualities or attributes may change. The soul, has, therefore, rightly been known as 'eternal'.

3. Further, according to Einstein, matter or mass causes a 'curvature' of space-time. Thus, in Metaphysics, this conscious energy, called soul, may have a curved form, like ellipse.

4. Again, Dr. Raja Ramana, Director of the Bhabha Atomic Research Centre, said on January 21, 1982 while delivering Dr. K. S. Krishnan memorial lecture at the National Physical Laboratory: 'If indications from current high-energy nuclear research are any guide, scientists may be on the threshold of discovering processes far more efficient than fission or fusion for producing atomic energy.' In his this lecture, he explained how the science-researches have brightened the prospects of having more energy from the atom. Thus, a small atom can have so much of energy. This means that, *in the domain of Metaphysics even though soul is very very minute, it can have tremendous conscious energy than people generally can imagine.*

5. Furthermore, the latest findings in Physics have revealed that even though bound neutrons (neutrons in the nucleus of a heavy atom) disintegrate yet its time of decay is 10^{31} years which is 1000 billion billion times the Age of the universe as calculated by evolution scientists. **Thus the neutron is almost eternal. So, if such is the final truth about Matter, it should not be difficult to believe that the soul also is immortal and eternal. Moreover, it is a fact of science that neutrinos have zero mass or they are almost massless. On the same lines, it can be understood that soul also has zero mass.**

Combining these facts of science, it should not be difficult to grasp the truth that the souls are massless, eternal and conscient beings which have an elliptical form. This infinitesimal form of soul is divine and unsplitable and can be seen by means of Third Eye or Divine vision. □

Souls come from the Soul World

far beyond the sun and the stars

"Beyond the sun and the stars, there is a Subtle World of Angels. Beyond that is another world where souls abide in the incorporeal, actionless, thoughtless and calm state. That world is the Soul World. All souls have come on earth from that world. That world is the souls' Sweet Home. The earth is a stage where souls play their part, taking body as a costume."

—God Shiva

THE flawless touchdown of Viking Lander-I on Martian soil on July 20, 1975 was a significant triumph of human mind and technology. The unmanned, three-legged Viking Lander took 11 months to traverse 700 million kilometres through planetary space to reach the oval-shaped Mars, called *Mangal* or *Bhoomiputra* in Indian astrology. This exciting high drama will rank among the most significant achievements of the scientists—aeronautical engineers, biologists, chemists, geologists, astronomers and others. The working of the Viking-I and its laboratory speaks eloquently of the abilities of the scientists.

A marvel of Science

The Viking mission was programmed and expected to carry out an unprecedented variety of complex exploration. For this purpose, it was equipped with a miniature laboratory—a cubic box, 30 cm. on a side. Cramped into this were three miniaturised biochemical laboratories, complete with a computer, oven, sun-lamp and a gas chromatograph. It had 43 miniature valves to control the flow of gas and nutrients, 40 temperatures control devices, 22000 transistors and 10000 other electronic parts. The whole mechanism was programmed to conduct a number of experiments with Martian soil and look for products of respiration, photosynthesis and metabolism. The Viking

was also to listen to Mars quakes. For this, it had a Meteorological package to take weather data. It had a chemistry laboratory to look for carbon molecule even if it was present in one part per million. It had cameras to send 3-dimensional pictures in colour, black-and-white or infra red, of the Martian landscape. To a common man, all these are a veritable miracle of science.

The versatility and 'intelligence' of these machines or these instruments and the human ingenuity and the organising and co-ordinating ability behind the experiment can be judged from the complexity involved and from the nature and subtlety of the experiments which it was programmed to perform. The relay, by its camera, of razor-sharp pictures of rock-littered Mars surface, the triggering of the dig into the Martian soil by a radio-command from the earth which is 214 million miles from Mars, the dumping of the soil, by the robot arm, into the box-like equipment, performing five separate tests into the miniature laboratory, and giving clear indication of oxygen, nitrogen, argon and carbondioxide gases, are really wonderful feats of science.

Even the way some of Viking failures were set right, were no less exciting and amazing than the science fiction of H. G. Wells. As is widely known, the vehicle's three-metre long automatic digger, designed to scoop up the Martian soil, had, at one stage, failed to work. The cause of this was thought to be a locking pin which failed to drop off when the arm's cover fell away. The scientists, later, successfully straightened this hitch by ordering the digger from this distance of 214 million miles to extend itself. The locking pin dropped off and lay on the Martian soil and it could be seen very clearly in the jet propulsion laboratory. All this is really a marvel of science.

The Dream of Scientists unfulfilled

But whatever the degree of perfection of the scientific instruments and however precise the calculation of the men behind these machines, the dream of the scientists to find signs of life, present or past, on Mars, has not as yet come true. The scientists had thought that there would be life-forms that had appeared on Mars when it had a milder climate and that these might still be hibernating there. They had expected a thriving population of microbes and macrobes (large organisms) over there. Some of them, they had thought, would be the

ice-eaters, some would be creatures with shell-like shield for protection against the deadly, solar, ultraviolet radiation. Their belief was based on the writings of Italian astronomer, Giovanri Schiparellis, who 100 years ago, had observed, by means of a telescope, what he thought were channels or canals on Mars. An American Astronomer, Mr. Percival Lowel, later confirmed these observations and said that there are 500 canals on Mars and he published a book, bearing the title: 'Mars as abode of life'. So, Viking-I was made to land in what is supposed to be a dried-up lake, with the hope that it would find some signs of life there. But these hopes proved only illusory.

In fact, the first results from three biology experiments, in which the soil was mixed with a high protein nutrient to test for possible interactions with microscopic forms of life in the soil, indicated the possibilities of some bacteria there. The Viking-I robot probe laboratory had detected nitrogen and argon gases on the red planet and had also discovered substantial quantities of oxygen and some carbon dioxide in the Martian soil samples. And, all this made Dr. Macel say, "If you look at what we need for life, we need energy, that we have, we need water, that we have, we need nitrogen, that we have, carbon, phosphates." Dr. Harold Klein also said that the laboratory involved the possibility of microscopic forms of life on Mars.

However, Dr. Norman Horewitz, incharge of the experiment, said, "The data we have, are conceivably of biological origin but the biological explanation is only one of a number of alternative explanations that have to be excluded." He further said, "*My reaction was of sheer incredulity.* I want to emphasise, we have not discovered life on Mars." He said so because further readings had shown that the emission of gases had been levelling off. Mature thinking had led him and other scientists to take the view that the discharge of oxygen could be due to a non-biological phenomenon. It could be due to high amount of chemical activity on Mars surface-material. So, the scientists clearly said in the end that they are not settled on an interpretation and are leaning towards a theory that the emission of the gases was not due to life on Mars but due to Martian soil chemistry. Thus, finally, the hopes of the scientists to find some traces of life over there, proved as illusory as the letter B or the digit 2, seen on rocks on Mars, had been considered to be optical illusions.

How long will this search continue?

Earlier, Russians had landed four of their craft on Venus but found no signs of life there too. Explorations on Moon, as we all know well, were the starting point in this story of search for extra-terrestrial life. There also man's hopes to find some living organisms had been belied. Now, it is being said that, after the Viking-II landing and exploration on Mars, Jupiter and some of its satellites are the possible candidates for life in the outer space. And, with that also the search for life will not end. 'It will continue', they say.

"But, for how long?", one may ask. America has spent one billion dollars on Viking-I exploration alone. And, according to a Harvard scientist, there are 100 million places just in our galaxy that might contain life. Since there are millions of other galaxies each with many more millions of stars, having their own planets, is it possible at all, one may ask, to conduct search for life in all those planets?¹ Can man afford to spend such astronomical amounts on this kind of research for an endless time? Will man be able to sustain patience and enthusiasm for that infinitely long period, for ought one know that each exploration requires considerably long time to prepare. Well, if our research in this case is based on our belief in the law of probability, then there would be no end to search for life in the outer space and man would not be able to know it for certain whether he has any extra-terrestrial kins. This, evidently, is not the solution to the cosmic riddle because of the time and money involved and because of almost infinite number of planets in the outer space.

The philosophical implications

The manned exploration of the Moon and the unmanned, robot-probe of Venus and Mars have some philosophical implications for man to understand. That, as yet, there has been no credible evidence of the existence of life on Moon, Venus, and Mars, should lead him to the conclusion that life, as the scientists know it, is not a cosmic phenomenon. It is not there on other planets in the universe that were hitherto considered hospitable to life. The supersensitive cameras of Viking-I have not come across any animal, dead or alive. It has not come across any ice-eating or rock-eating macrobes nor did it find creatures with shell-like protective form. The Viking itself might have taken some living or dead microbes from earth which a later exploration may find awake, active or hibernating over there on

1. The reader will find further discussion of the subject in part II.

Mars and these may multiply into trillions within days and some instruments in future may point out that there are bacteria or bugs over there. But one thing is certain that there is no man-like being over there² for it has neither been seen by the eye of the camera nor has any man on Mars rushed to where the Viking-I landed as man on earth would take notice of such kind of landings if there had been any. It is, therefore, a warning to man that such kind of research would not be fruitful for ought he know that man is a unique species of the earth alone.

But we do not mean that man does not have any kins anywhere else. No doubt, there are beings outside the universe but this cannot be known by sensory or electronic perception. Let the scientists know that science has its own limitations, for all science is a creation of human mind and man's mind itself has certain boundaries or limitations. Man cannot, therefore, know by application of science, what lies beyond, for the beings beyond the universe are not of gross form as we human beings are. The deeper mysteries of life can be known only by revelations of an extraterrestrial and divine Being who is free to go anywhere, and such a Being, who is the greatest of all scientists—present, past or future—is God.

Subtle World, beyond planetary space

And, let us announce to the world that there are sentient beings, beyond the planetary space. They are neither in the form of microbes nor in the form of macrobes which the scientists on earth are searching for. They are neither anthropomorphic nor anthropoid. They cannot be classified into any of the categories into which the biologists have divided living beings. Their presence over there cannot be known by mixing nutrients with them and observing whether there is any photosynthesis or whether there is any emission of gases.

Those beings who live beyond space—the space as scientists know it—have body, made of divine light. They are self-luminous. There is no sound in their region. They talk and make gestures but their voice cannot be heard though it can be understood. So, there is no noise-pollution or environmental pollution over there nor are there the problems of this world of ours. That region, which is beyond the play of the force of gravitation, is known as the Subtle World, Angelic World, or the Deity World. The existence of that world can be known by extra-

2. The reader will find further discussion of the subject in Part II.

sensory perceptions. The persons there can be seen by what is called 'trance vision' or 'third eye' and one can talk to them by divinised telepathy.

The Soul World

Beyond that World of Angels or deities is the World of Souls, also called 'The Soul World' or 'Brahmloka.' **There, the souls dwell in the incorporeal state. They are outside the domain of terrestrial laws,** as we know them, and above the play of emotions, as we find here in this world, and they are in perfect silence over there in 'rest and 'relaxation' in a unique sense. It is in this world that the Supreme Being, the Incorporeal Supreme Soul, Shiva, also abides. Knowing this, we should forge a link with Him, for He is the greatest of extraterrestrial kins and is also the source of true knowledge. He is the source of spiritual power, purity, peace and Bliss. Through Him, we can have eternal happiness. □

Souls can move at speed faster than Light

"Soul can fly to any place in an infinitesimally short time. When a soul leaves its body in one country, it can fly to another country in almost no time. Soul has also the wings of Thought. With the wings of Thoughts and Love you can mentally fly to the Soul World in no time. This flight is called the voyage to God on the spaceship of remembrance. Wish you this happy journey! Bon Voyage!" — God Shiva

If we had asked any scientist a decade earlier whether there can exist any particle, moving with velocity greater than that of light, he would have bluntly said: 'No'. Einstein's Theory of Relativity has laid down the velocity of light as the maximum limit. Einstein has given an important formula in explanation of this and has himself said, ". . . Velocities greater than that of light have no possibility of existence."

In practice also, we have not been able to find so far any material particle moving at a velocity faster than that of light. The speed of light in free space is known to be very close to 3×10^8 m/sec. The speed of fastest rocket that scientists have been able to make is 2×10^4 m/sec. The speed of planets and meteors in the solar system is not beyond 10^6 m/sec. Only very small particles, such as electrons move at a velocity, approaching the speed of light. Protons or neutrinos may be said to have velocity equal to the speed of light.

If that be so, then the souls would, perhaps, take hundreds of years to come from the Soul World to the earth. But, in practice, that is not a fact. Souls move faster than photons or light. They can reach anywhere in billioneth part of a second, in almost infinitely short time if they will. To-day, some physicists are saying that even Tachyons, which, according to them, are superluminous particles of matter travel faster than light.

Though the Theory of Relativity, which has revolutionised the progress of science and which has unique position in physics, leads to

the conclusion that the speed of light is the upper limit to the speed of material objects or particles yet, to-day, there are scientists who believe that the usual objections to the possibility of existence of faster-than-light particle in relativistic quantum theory could be overcome. In 1969, O.M.P. Bilaniuk and E.C.G. Sudarshan predicted, on theoretical grounds, that a particle can move faster than light. G. Feinberg named this superluminal particle: **Tachyons**. So, now, according to physicists, there are three types of particles. Those which have a positive physical mass and which move at a speed far less than the speed of light are known as *Tradons*. Secondly, there are particles which have velocity equal to the speed of light and which possess zero rest-mass, are called photons or *Luxons*, etc. Thirdly, there are those particles which travel with velocity greater than light and have *imaginary* rest-mass. These are called Tachyons. The relevant formula explaining this is:

$$m = \frac{m_0}{\sqrt{1-(v/c)^2}}$$

where m_0 is the rest-mass of the particle, v is its velocity and c is the velocity of light. From the above equation, it is clear that if v increases, m will also increase. An important point to be noted in this formula is that if v becomes equal to c , i.e. if the velocity of a particle becomes equal to the speed of light, the formula would be

$$\begin{aligned} m &= \frac{m_0}{1-(1/1)^2} \\ &= \frac{m_0}{0} \end{aligned}$$

It shows that if the velocity (v) approaches (c), m approaches infinity (∞). It was on this basis that Einstein stated that the velocity of a particle cannot be greater than that of light, for if velocity becomes greater than light ($v > c$), then the mass and momentum of the particles would become imaginary.

Now scientists state that these objections can be overcome, for they say that if a particle is at one time moving with its velocity less than that of light ($v < c$), no doubt its velocity cannot be raised to be greater

than that of light because for that we would require infinite energy¹ but they say that if there is an object which already has a velocity greater than that of light ($v > c$) then that can possibly exist. for its velocity cannot be gradually decreased. Secondly, they say that the mass (m) that appears in these equations¹ refers to the particle at rest and, consequently, is measurable only when $v = 0$, but this is a situation unattainable in the case of a Tachyon because it has velocity faster than light and it cannot be gradually brought to rest. Therefore, they lay down the hypothesis that there are possibly in existence particles faster than light.

No doubt scientists have not been able to develop such experimental conditions in which they may be able to detect Tachyons. But this does not deter them in believing in the existence of such particles on theoretical grounds.

Further, we know that the velocity of a particle gradually decreases because of the presence of other particles of the medium through which it passes. Thus, while the velocity of light in vacuum is 3×10^8 , its velocity in water is 2.25×10^8 m/sec. But as we have pointed out earlier, the speed of a Tachyon cannot gradually be lowered by any means.

Infinite or un-imaginable speed of light

Now if that be possible, then who can deny that the soul which has less than zero mass, i.e. imaginary mass, can move with a velocity faster than light because, it being a non-material entity, other particles in the atmosphere or in bodies cannot lower its speed. Thus a soul would take almost no time to leave one body and incarnate into another at a very great distance. It can also go to the Soul World, which is at an inconceivably great distance, in a flash.

Again, the theoretical discovery should make scientists re-think about the time taken by light coming from the stars to this planet. Hitherto, they have been postulating that the Age of the world is trillions of years and one argument they have been making in support of this was that light travels at the speed $= 3 \times 10^8$ m sec. and that it takes light, millions of years to travel from a distant star to earth. But now with the discovery of Tachyons, their hypothesis or theories relating to this

1. The relevant formula is

$$E = \frac{Mc^2}{\sqrt{1-(v/c)^2}} \quad p = \frac{mv}{\sqrt{1-(v/c)^2}}$$

will have to be revised, particularly if the scientists succeed in detecting Tachyons and in measuring what has come to be known as Cerenkov radiation².

It would be of interest to note, in this context, that scientists are already finding it difficult to explain the results of the observation of radiation from quasar 3c-279 without assuming its velocity to be greater than 10 times the velocity of light ($v < 10 c$).

Whatever be with Matter, the soul can fly infinitely fast for other reasons also. The soul, it should be remembered, is a meta-physical entity and, as such, nothing physical can hinder its flight or lower its speed. Gravitation, friction, particles of Matter or forces of Nature cannot affect the *incorporeal* soul. Its speed can, therefore, be almost infinite.

An indirect corollary of this is that the soul can know the present, the past and the future, or, at least, it can know what is happening in a particular part of the world at present, for it can 'reach' there in no time. But, for this, the soul has to be free of metaphysical pull ie attachment with or of others, and has to have its metaphysical mirror, i.e. Mind, clean, or its Intellect divinised. There is, thus, a vast scope for developing Mind. But, these arguments from metaphysics apart, Einstein has also said that if one can travel faster than light, one can know three aspects of Time. God does know because He can 'travel' at infinite speed, which is called, 'God speed', and has no mental attachments or impurities. □

2. In 1934, the Russian physicist P.A. Cerenkov reported that transparent substances, such as water, glass and also mica, emit a weak bluish white glow when exposed to gamma radiation. The light is emitted mainly in the direction of the beam of gamma rays. Radiation arising due to this effect was called Cerenkov effect. An explanation of this effect by two Russian Scientists, Fronk and I. Tamm was that Cerenkov radiation is due to a kind of electro-magnetic shock-wave effect like the effect produced by the French supersonic jet aircraft Concorde. The Cerenkov radiation arises when an electrically charged particle travels through a transparent medium with a velocity, greater than the velocity of light in that medium. 'Cerenkov radiation' is emitted by atoms of the medium. It is thought that the energetic charged particles, through the medium, displace electrons in some of the atoms along its path. The electromagnetic radiation emitted by the displaced atomic electrons combines to form a strong electromagnetic wave which is like the shock wave. In the atmosphere, Cerenkov radiation is produced by cosmic rays and can be observed as large light pulses. The important relevant fact connected with Cerenkov radiation is that it is thought that the charged particles radiate electro-magnetic radiation when their velocity is greater than the velocity of light in the medium through which they are travelling.

Experience of soul as a separate entity

"The soul is an entity, who has existence separate from the body. But, it has committed the error of identifying itself with the body. If however, a person acquires the rational knowledge of the soul and practises soul-consciousness, he can experience withdrawal from the body and also his separate existence."

—God Shiva

It should be clear from the foregoing pages that from one's childhood, one has been brought up and pampered on false values.

From the day, a small baby is first trained to talk, he is told that so and so is his papa or mamma or that he is a *boy* or that she is a *girl*. When a small boy is exposed to informal or formal education, he is instructed that he is an Indian or American or a Britisher. He is told of the age of his *body* as his age.

Instead of being told the truth that one is a soul and has come from the Soul World, one is bombarded, from all sides, with wrong information so that one, unwittingly, identifies oneself with his *body*. "Your name is Jagdish, you belong to Multan, you are an Indian and a male"—one is told this so many times that one gets brain-washed early. One is taught these very things in one's school and college and on playground so that one becomes an embodiment of perverted knowledge which is worse than ignorance about the self.

Thus, because of this kind of conditioning, man identifies the self with his body though the fact remains that the consciousness is an entity by itself. 'Consciousness' is not the name of the blood and bones or eyes and ears, rather it is that which is aware of these as well as of itself. This self-aware entity, which is capable of thinking, understanding, and judging, is not material in its nature but it understands Matter and things which are material. The eye, the ear and the heart can be transplanted and, even if much portion of the brain is surgically removed, the consciousness of the being which uses the words '*I am*', still remains.

However, man, because of his ignorance and wrong conditioning has come to identify himself with his body. Because of this, he is now unable to comprehend the truth of his being. Moreover, this wrong identification has led to vitiated thoughts and actions, resulting in pain and sufferings.

How has body-consciousness led to vitiation of thoughts and to sufferings?

This wrong identification of the self with the body, and the consequent vitiated thoughts are the underlying causes of all sufferings of individuals and the society, for it is body-consciousness which is the root of the six major evils which spoils and vitiates man's relationship with others and break the norms that are essential to the maintenance of personal and societal peace. A few examples will illustrate this.

Suppose a small boy talks to his father in a childish manner though not with the intention to show any disrespect to him. The father takes offence, gets flared up into rage and, out of sheer contempt and hate, admonishes and slaps the boy, forgetting for a while that the boy's unthoughtful prattle was not aimed at insulting him. He loses his balance and peace because he becomes *angry* and gets occupied with thoughts of physical *violence* and he gets angry because, on the basis of body-consciousness, he feels that, in physical age, he is much elder and the boy younger and that the boy should not, therefore, have transgressed the limit imposed on him by his age. Evidently, it is the body-consciousness which created this unhappy situation, for, if the father had been soul-conscious, he could have maintained him cool by thinking that, in the tender body of the boy, was a soul who had its own nature and proclivities and that, from the point of view of souls, all were brothers, and that all being children of God, the Merciful and Kind, should, like our father on high, be kind and considerate. But pride, born of consciousness of physical age and physical relationship as of a father to a son, led him to cruelty and harshness. This small example should be enough to explain how more severe form of *pride*, accompanied with *hate* and *anger*, can cause cracks in relationships, bitterness in dealings, estrangement between friends, and cases of violence, crime and social turmoil.

Pride of one's muscle-power, pride of physical beauty, pride of possessions that are material in nature and are related to the body, make a man behave like a person under the effect of alcohol. One loses

one's sense of proportion in inter-personal dealings and break the happy equation with fellow beings. If one is the head of the government of a country, one, under the intoxication of the wine of pride, behaves with other nations as a haughty person which, sometimes, leads to deterioration of relationship with other nations and, in some cases, to wars, resulting in great loss of men and money. How often does man forget that pride, born of his body, belonging to a particular race—white, yellow, brown or black—or to a particular country of the birth of his *physical* form, is unjust, for he is not a body after all, but a soul, and all souls are brothers, whatever the colour of their bodies or whichever the country from which their body hails. The body is like one's costume and the country of one's birth is like a place of habitation; do brothers not wear different costumes and live at different places and still have the love as brothers? Only if all had realised that they are souls and are brothers to each other, under the Fatherhood of God, the loveful, merciful and kind, there would then have been a sound basis for a spirit of world-brotherhood, leading to amity, unity, and love-bond. Wars would then have been out of question because our Father is Compassionate and the Giver of peace and the Redeemer (not killer) of the sinful.

Take another example of peacelessness and sorrow, caused by body consciousness. A mother feels so shocked of the news of the death of her son that her mind gets off the track and she feels the need to consult a psychiatrist to bring her back to her normal state. She feels so shaken that she cannot attend to her routine work and she constantly cries. "Oh my son, my son!" even though she knows well that her son, whose body has been cremated or buried cannot come back to life. Evidently, her sorrow is due to her infatuation or her *attachment* to her son on the basis of bodily relationship, based on body-consciousness. It is body-consciousness which takes the form of casteism, nepotism, and even extreme nationalism.

Similarly, greed also is hooked to body-consciousness. Take the case of a man, who is hoarding lot of landed property and cash and is trying to amass great wealth so as to leave behind him a great fortune for his son. He exploits others for the sake of his son or wife or for himself, considering himself to be a body; he does not care even if the sons of other people, working in his factory, die because of malnutrition or lack of medicare, but he wants to hoard more and more for his own

sons—'own' on the basis of *body*-relationship. Obviously, cruelty and exploitation on his part are due to his *attachment* to one who is related to him on the basis of *body*, as his son.

Likewise, take the case of *sex-lust*. It is a form of attraction towards the colour and contours of the flesh, or it is born of the consciousness of sex which is related to the body. It is this carnal desire which is at the root of over-population which, in turn, has led to many socio-economic problems like poverty, lack of employment, lack of schools, colleges, houses, hospitals, and to devaluation of man and to deterioration in the quality of life. So also *Anger*, which is the cause of quarrels, strikes, riots and wars, is based on body-consciousness. Billions of dollars are being spent, annually, by nations to prepare weapons of mass-destruction.

If, therefore, this message goes across the world, that all are souls, there would be no gross form of body-consciousness and racialism, colour-consciousness, lascivious tendencies, physical infatuation and attachment, anger and hate, and, so, all such afflictions of mind will cease and the world will certainly become a happy place to live. It will become a garden of roses, with different men and nations as variegated flowers and orchards, each contributing the beauty and harmony to it.

Practice of Raj-yoga Meditation

In order to remedy the situation, man has now to practise Rajyoga Meditation. Meditation or yoga is a process of conscious withdrawal from the body into the core of one's own being. When a person engages his mind with the thought that he is a soul, a conscient being, he, indirectly, becomes withdrawn from the gross awareness of the gender, age, nationality, etc., of his body and, instead, has an experience of the reality of the self.

This incidence of identification of the self with the body has happened with us not only in this but in all the births we have undergone since the start of Copper Age or *Dwapur Yuga*—the second half of the world cycle.¹ Thus, we have been identifying ourselves with our body, and a mountain of errors has, therefore, grown over our personalities. We should thus imagine what an effort is necessary to counteract this erroneous notion that has become the incrustation on

1. This will be explained in the second part of the book.

our personalities! One knows nothing of one's own true nature and false knowledge has become a part of one's being, a great effort is, therefore, now required to rectify the error²

In other words, Rajyoga Meditation is the method and the practice which enables one to transcend body-consciousness and to stabilise in the self. *This is aimed at realisation of the true nature of the soul and attainment of bliss and peace. It is based on truthful suggestiveness whereby one may now get rid of the perverted knowledge and may now realise that he is not the body nor the senses nor anything of Matter but a self-aware, conscient being, called soul.* Before one takes to the practice of meditation, one is body-conscious, 'this' conscious and 'that'-conscious but when one practises meditation, one's consciousness withdraws itself to its source and one, therefore, stabilises in its own pure and peaceful nature. One is then able to experience that the soul is an entity, different from the body. Then no other proof is required to establish the reality of existence of the soul.

Thus, practice of meditation enables man to educate himself about the true nature of the self and the world. It is a metaphysical inwardisation of being which enables the soul to withdraw from the world of senses into the world of soul. This frees the soul of all morbid thoughts and psychopathological states and gives it purity and lasting peace. It frees the mind from the wrong notion that peace and happiness lie in gross things of the world and, instead gives it an experience of spiritual peace and solace.

If after studying this book, the reader is led to the belief in the existence of soul and feels inspired to correct the error of identification of the self with the body or the brain and takes to the practice of soul-consciousness and Meditation and, thereby, to elimination of vices, the author will feel the purpose of its publication to have been fulfilled.

□

2. The Theory and practice of Meditation will be explained in the fourth part of the book.

Soul-consciousness is the key to happiness

*“Man’s many diseases are due to his emotional turmoil or his mental disturbance. Emotional upheaval is caused by one of the vices, or evils, called sex-lust, anger, ego, etc. which spoils his relationship with others and create a spurt or surge of disturbance in his mind. So, know that vices are cause of peacelessness and disease. If you stabilise in the self and attain **swa-sthiti**, you will have **swasthya**—health.”* —God Shiva.

There was a time when many medical practitioners considered the problem of disease particularly in its relation to microbes or virus and they thought their job was to make an all-out effort to destroy the pathology-producing germs. Of course, there is no denying the fact that they were also aware of the environmental, ecological, dietitic, metabolic and hormonal imbalances as the factors causing disease. So, it was customary, in those days, to speak of diseases caused by germs or virus, diseases caused by deficiency of vitamin, calcium or mineral salts, diseases due to hereditary transmission, diseases due to deficiency in the hormonal output of the thyroid, liver, pancreatic dysfunctions, etc. Moreover, they considered the problem of health and disease piecemeal on the basis of their knowledge of the different segments of the human body and hence the nomenclature they used was based on various parts of the body in exclusion to others, as for example, they named diseases as cardiac, neurological, haematological etc., or they named them after one particular causative factor—dietary deficiency, hormonal dysfunction, etc. Thus they did not give due importance to conceiving it as the disease of the body as a whole and to considering all the factors together. *Not only that, one important truth that was not realised or was not sufficiently understood and seriously considered was the role one’s Mind or personality-traits played in causing, aggravating or precipitating many diseases or obstructing one’s convalescence.* The result was that the doctors treated one particular part of the body and, after eliminating the symptoms of its disease

through drug-administration or surgery, discovered another disease and when they treated this second one, the patient complained that another one had come up and yet the basic cause of all these three diseases was mental or psychic which the doctor had not attended at all. Bronchial Asthama, diabetes mellitus, Ideopathic epilepsies. Parkinsonism or neurological ailments, thyroid toxicosis, insomnia, nervousness, etc. are some of the diseases which can be cited as examples.

Disharmony between mind and body is the main cause

Though such days, when the doctors were trained only in physiology, anatomy, aetiology, pathology, pharmacology, bio-chemistry, biophysics, etc. but were not given much insight into the interaction of Mind with the body-mechanism are not yet completely over, yet, it is encouraging to see that, during the last about two decades, much work has been done by psychiatrists, neurologists and others to see the interaction of psyche (Mind) and soma (body) and the bio-engineers have provided the means, such as the EEG, which enables one to see the state of one's mind. Now disease is recognised as disharmony between body and mind where mind is believed to play a great role in the maintenance of homeostasis, secretion of hormones and respiratory functions, etc. It is now becoming widely known to psychiatrists, clinicians and surgeons that man's thoughts, emotions, personal traits, *Sanskārs* (latent tendencies), habits, *vasanas*, *vrittis* (outlook), etc. can play havoc on one's health. Though even a layman knew since the hoary past that one's state of mind, characterised by fear, anxiety, anger, etc. had its adverse effect on one's heart, breathing system, blood-pressure, digestion etc. yet now there are the means to measure these and to understand the physiology and anatomy of the whole happening. *Now it is being rightly emphasised by many medical researchers that man's emotions, behaviour, outlook and habits have a great link with his disease or health.*

Hypothalamus plays the central role

Of late, it is also being realised that the human consciousness is a composite entity which is constituted of homogeneity of (1) general awareness, (ii) emotional and (iii) analytical consciousness and that all these three are, in one way or the other, linked to hypothalamus. Previously, it was thought that the general awareness was a function of the reticular tissue of the upper brainstem and the emotional elements

were contributed to the limbic structure while the incisive consciousness or logical and abstract thinking was the function of the cortical region, but now it is known that these are, in fact, linked to Hypothalamus which also controls, through the pituitary (the Master gland), all the endocrine glands and also the autonomic nervous system and the homeostatic functions and that, one's thoughts, feelings and moods, therefore, play a very great role (through the Hypothalamus and the pituitary) in determining one's state of health or disease. Names of many such medical personalities can be cited who have conducted detailed researches in this respect and have recorded the effects, from many parameters.

Psychic factor is the major factor

As a result of these researches, it is now well-known that, in the case of certain diseases, **the psychic factor is the main, major or important factor. These particular diseases have come to be known as 'psycho-somatic diseases'**. Those who have done research-work in connection with Raj-Yoga (Meditation), have found that meditation helps reduce, cure or eliminate many diseases and improve one's health or helps one's recovery. These findings are of great value for, though it was asserted by proponents of Raj Yoga previously also that yoga cures many diseases, the modern means, such as E.E.G., E.E.C. etc. have enabled the modern researcher to ascertain it for himself the beneficial effects of Raj-Yoga.

It is found that cultivation of soul-consciousness and elimination of body-consciousness by means of Meditation, eliminates anxiety-states and depression and leads to right type of awareness with conforming biochemical changes, the principal feature being the proper blood level of different neurohumors and the related enzymes and improvement in cardio-respiratory functions and endocrine vitality. It brings notable relief in insomnia, reduces or eliminates nervousness and results in improved sleep and reduction in blood-pressure and gives to man a feeling of good health and well-being. It rehabilitates vital organs and endocrine glands, improving the rate of blood-flow and tissue-oxygenation. It induces appropriate autonomic co-ordination and thus prevents problems arising due to the lack of integrity and co-ordination of autonomic nervous system. Over and above this all, the tranquility that Meditation or Raj-Yoga brings to mind is of immense value; it

physically improves the functions of the brain and the power of concentration and clear reasoning.

Benefits of meditation

The research work done in relation to effects of Meditation on body and mind has shown that Meditation brings about improvement in physical efficiency and a tendency towards relaxed physical and mental states. It has also been noticed that there is a shift in the activity of the involuntary nervous system towards parasympathetic dominance which normally favours energy-conservation. These and many more are the benefits of Meditation*. But the most important of them all, is the attainment of bliss¹—which cannot be evaluated in terms of money—and the liberation from the bondages of die-hard habits and the thick crust of vicious *sanskārs*² and a cleansing of thought which no other practice in the world can bring about. It is a pity indeed that, while there is much talk of physical benefits of Meditation, the psychic and spiritual benefits are being relegated to a place of insignificance. Meditation enables the soul to shine in its original lustre and glory and to reach the climax of its noble qualities and be free from all worries, all troubles. □

*Anand, B.K., G.S. Chhina, and B. Singh. 1961, some aspect of electroencephalographic studies in yogis. *Electroenceph. Clin. Neurophysiol.* 134:

Wallace, R.K. 1970, Physiological effects of Transcendental Meditation. *Science*, 167: 1751-54.

*Datey K.K., S.N. Deshmukh, C.P. Dalvi and S.L. Vinekar, 1969, Shavasana—A Yogic exercise in the management of hypertension. *Angiology* 20:325-333.

Mind-Body inter-action and the question of happiness and health

"Body-consciousness leads to fear, anger, tension and unsteady state of Mind. It leads to vices and peacelessness. Know that you are a soul. Soul-consciousness and peace will enable the soul to be righteous and to have positive thoughts which will give it peace." —God Shiva

In order to understand how man suffers due to negative thoughts and how he can maintain happiness and better health through positive thinking, it would be profitable to understand the mechanism through which Thought affects the body and *vice-versa*. By understanding the mechanism of Mind-Body interaction, the truth in the saying: "As you think so shall you become" can be better understood and the concept of 'Vice' and 'Virtue', or 'demoniac' and 'divine', or 'evil' and 'holy', becomes partly clear.

Let us take a concrete example to understand this. A man is sitting relaxed in his drawing room. Suddenly, there enters into his room an angry man with a pistol hung by his side. Seeing him, the former feels insecurity and fear and thinks of 'fight' or 'flight' and then, in a second, quickly moves into the adjacent room and bolts up its door from inside. At this moment, in this tense drama, if his respiration, heart-beat, pulse-rate, etc., were measured, and E.E.G. were also taken, and a check-up of these were made in the angry entrant—the man with the pistol—also, both would show signs which are observed in a man in a situation of stress or tension. Now let us see, in the light of biology and neurosciences how this occurred, say, in the case of the frightened man.

The mechanism of inter-action

We shall state it briefly. First of all, there was sense-stimulation through the eyes and then the optic nerves and the retina participated and there was, in the frightened man's brain, an 'image' of the man with the pistol. The first in the line to be excited by the signals, or by

electrically and chemically coded messages (mediated through the nervous system and the blood) was the hypothalamus in the sub-cortical region of the brain. It was in the hypothalamus, where, by certain processes, the signals were matched with the past information about the angry entrant and were matched also with the record of such postures as are associated with anger, ill-will and the motive of crime. The hypothalamus, which is a part of the Limbic system, had, almost immediately, relayed messages to the Limbic system and, in unison with it, the whole event was interpreted and felt as it was felt.

The Hippocampus and the Limbic System, it should be known, are closely related to the function of retention of 'record' or 'memory' of past perceptions and, therefore, in the light of that past record or 'memory', they contribute the *feeling* part to our thought and our Mind or Soul which, as has been explained in earlier chapters, abides in the Hypothalamus. The Mind or the Soul, abiding in the Hypothalamus, now perceives and feels the situation in a particular way, determined by the stimuli, the messages or signals, and the memory of the past, etc. So, our perception or thoughts are always associated with feelings of hope or disappointment, confidence or nervousness, relaxation or tension, so on and so forth. Now, it is these feelings, mixed-up with past memories and present right or wrong interpretation of the stimuli that bring about physical, chemical, electrical and psychic changes in our body and soul.

What happens is that the Soul feels, as it does. The nervous stimuli, originating in the Hypothalamus, excites the neurohumoral centres, as for example, the median eminence in the hypothalamus, for it should be remembered that hypothalamus is the bridge between the nervous system and the endocrine glands which secrete hormones. Now, the median eminence secretes a chemical substance, called the ACTH releasing factor. This secretion is carried *via* the blood to the anterior pituitary gland which is also called the Hypophysis and which forms a 'combine' with the Hypothalamus. Pituitary gland secretes the hormone, known as adreno-cortico-trophic hormone, which is, briefly, called ACTH. The ACTH travels through blood and stimulates the Adrenal cortex in the abdomen. Adrenal cortex, which is an endocrine gland secretes final adrenal corticoid hormones— mainly cortisol and corticosterone. Those hormones make available the energy that is **required for the *adaptive mechanism* of the body by altering metabolic processes. These hormones produce other effects also. For example,**

they facilitate other enzyme response and may suppress immune reactions

Now, one important thing to be remembered, in this context, is that thoughts and feelings, to which we have referred above, may be *positive* or they may be *negative*. Thoughts and feelings of love, unity, peace and happiness are called *positive*, whereas those which are associated with anxiety, grief, fear, despondence, etc. are *negative*. These negative feelings are the cause of neurogenic or psychogenic stress—simply called 'Stress'. **In other words, the negative feelings alter the steady state and they challenge or put stress on the adaptive mechanism of the body.** It acts through the mechanism, explained above, and, besides leading to secretion of adrenal corticoid hormones, such as cortisol and corticosterone, it produces other hormones also, such as (i) Somatotrophic hormone or the Growth hormone which also stimulates defence reactions and (ii) Catecholamines, *viz.* adrenaline and non-adrenaline. These increase the blood pressure, rate of blood-circulation and pulse-rate and stimulate the Central Nervous system.

Through the Autonomic Nervous System, Stress adversely affects the gastrointestinal system and the vascular system. That is why there is incidence of peptic ulcers, fainting, etc.

Stress causes Disease

Now it has been clinically or aetologically determined that Stress, due to negative thoughts, causes typical disease of maladaptation or what are called 'Stress Disease'. Hypertension, peptic ulcers, some cases of bronchial asthma, irritable colon, ulcerative colitis, rheumatoid arthritis, etc. are some of such diseases. More and more diseases are now being identified with psychological stress as the main or one of the contributory factors. The list is now very wide and includes even infections. Malignancies, which were earlier thought to be due to pathogenic factors, are also now being thought to have stress as one of the causative or exacerbative factors. It has also been found that one of the main factors behind cancer or tumours may be the experience of trauma or intense stress. *On the contrary, it has been observed that elimination of stress, or the psychogenic improvement, leads to cure of malignancy or reduction in its aggravation. Moreover, stress has also been shown to effect the aging process. It has been found that stress increases conjugation of DNA and RNA and increases free radical of RNA in cells and, thereby, decreases the life-span of cells and also*

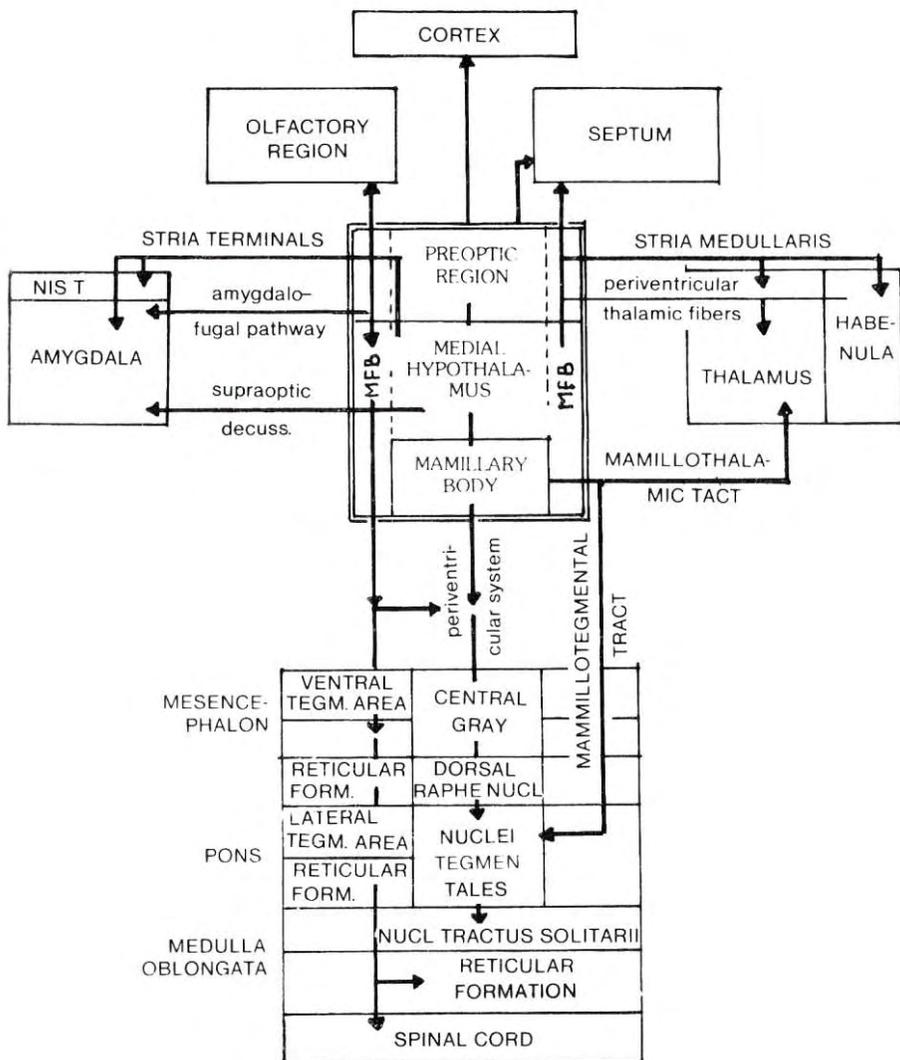
brings about rapid aging. It thus reduces life expectancy and memory and mental efficiency and stamina.

Attitudes and Thoughts are the main actors in this drama

*It must not be forgotten that, in this high drama, Thoughts, interpretation of the stimuli, past memories and attitudes (built on beliefs, interpretations and memories) are the main actors. On the attitudes and thought depends our health, our happy feeling, our relaxation and peace, our life-expectancy, our efficiency and stamina and our relationship with others. It is these which bring about change in our steady state, called Nirvikar Sthithi (undisturbed state) or Sthithprajnata (mental balance in religious parlance, and it is these which challenge and put a strain on our adaptive system, our nervous system, our hormonal system, our vascular system, breathing system and, in fact, on our every body-cell. Therefore, those thoughts which bring about a feeling of disappointment, anxiety, rage, trauma, hypertension, etc., are called negative thoughts. These are called Vikar in sanskrit language, in religious parlance. These are considered the cause of all sufferings. Their effects on social, economic and interpersonal sphere have already been shown on page 101. The thoughts, being metaphysical, are related to the metaphysical Mind or Soul. If Mind, because of its habit, tendency, attitudes or beliefs, constantly, frequently; or even sometimes entertains negative thoughts, it is called a 'fallen', 'degenerated', or even a 'sinful' soul because, through its negative thoughts, it not only causes physical and mental sufferings to itself but also to others with whom it deals. Because of faulty beliefs, one builds up faulty attitudes and because of faulty attitudes, one's reaction to stimuli or situations is excessive, insufficient or faulty—it is inappropriate and negative. It is this which is the cause of all troubles. And this, as has been explained in the preceding pages, is due to Body-Consciousness, i.e. the wrong belief that the self, which uses the words, *I am*, is the body.*

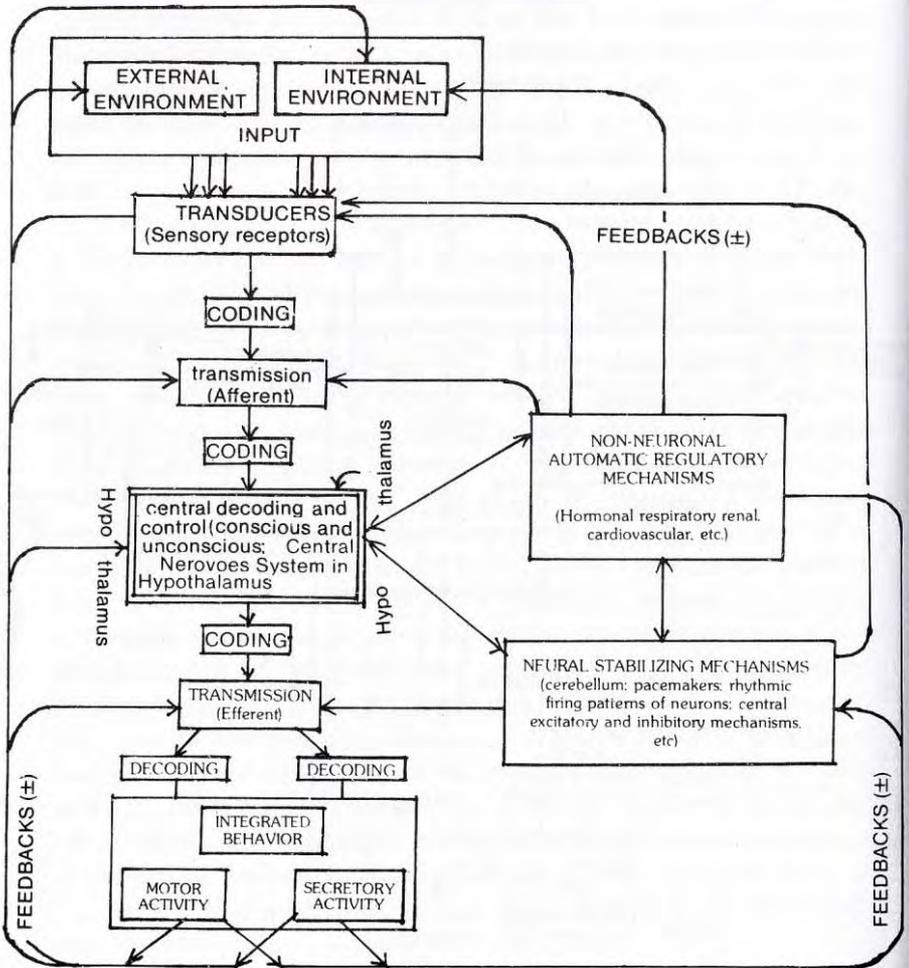
Therefore, the way that leads to the goal of peace and happiness lies in removing this fault. One must take to a soul-conscious way of life if one wishes to have health and a relaxed and peaceful state of mind and better relations with others. Rajyoga Meditation helps man attain this state. How Rajyoga meditation brings about positive and steady state of mind and how it has good effect on physical health will be dealt with in the fourth part of this book. Here, we may only mention that observations made by means of E.E.G., etc. have conclusively shown that Meditation and Soul-Consciousness give many benefits. □

How the Soul, seated in the Hypothalamus acts through the efferent connections of the hypothalamus



The schematic Diagram above shows the different connections of the hypothalamus.

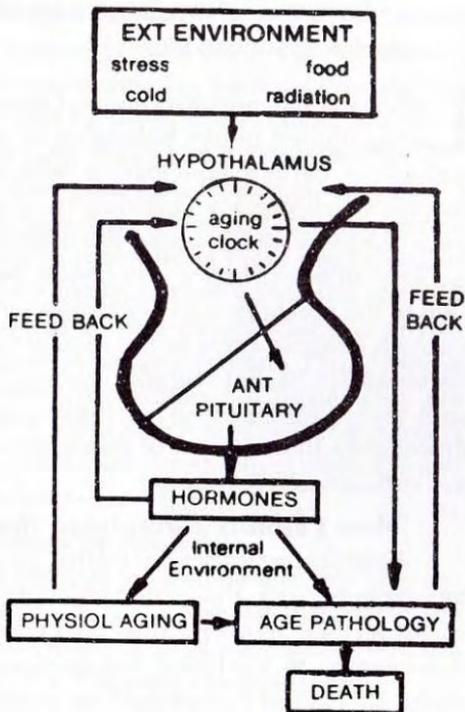
The Soul acts through Hypothalamus



The above schematic figure shows how Hypothalamus is 'brain within the brain'. The whole brain and the rest of the nervous system is continually processing information from the internal or external environment. The final read-out or decoding takes place in the Hypothalamus at conscious and sub-conscious level. See place marked ●

Soul abides in hypothalamus where is located the Aging clock

The Schematic diagram, (opposite) shows the hypothalamic regulation of hormones as a major agent of the aging process. There are, of course, other factors also. The soul which has to have a particular age, as a result of its past Karmas, dwells in the Hypothalamus where the aging clock is located.



Soul and God as monads

Just as all Matter is ultimately not a solid stuff but light-energy, infinitesimal in its size even so is soul an infinitesimal point of spiritual energy. It is a 'metaphysical atom' or a 'metaphysical photon', so to say. It is eternally existent and conscient in its nature and acts and reacts to the stimuli and thinks and feels and reaps the fruits of its action. So, know yourself as conscient metaphysical energy and give up all sloth and give up identification with the physical or the material —God

Leibnitz, a seventeenth century German mathematician and scientist who studied books belonging to various disciplines voraciously, arrived at certain conclusions which he thought were new and reconciled all previous philosophical systems. His these conclusions were published in his works, titled *New System, the Monadology, and the Principles of Nature and Grace*. Some of his ideas are somewhat akin to the revelations of God Shiva who has revealed His new system through Brahma Baba as the medium in the recent decades. Some of his views are likely to be confused with these Godly revelations about soul and God because of their similarity, for, in fact, if studied thoroughly, there is a lot of dissimilarity between the two systems and this difference is important.

How Leibnitz formulated the concept of Monads?

Leibnitz had experienced that, in science, no phenomenon could be explained in the absence of or without relation to motion. In order to explain the concept of motion, Leibnitz found it necessary to postulate the existence of force. Leibnitz, from his study, concluded that everything in the universe is a manifestation of force. Heretofore, people had thought that Matter was the *substance* and that its basic constituting unit was atom and that Matter occupies space, i.e. it has the essential characteristic of extension. *But Leibnitz had now concluded that the universal substance is Force, and that its basic characteristic is not that it occupies space but that it has activity.* So on the basis of the principle of conservation of mass and motion, he

pleaded that a theory of conservation of force be accepted. *He argued that elements cannot be accepted as substance because the extension of an element is divisible and that which is divisible cannot be substance. So, Leibnitz theorised that Force which is the simple indivisible is the real substance.* From the fundamental belief about the nature of substance, he formulated his theory of Monads.

What are Monads?

The theory of Monads, formulated by Leibnitz, reflects the triune study of physics, mathematics and theology. In Physics, atom is considered as the lowest unit which is real, but atom is *not* indivisible. We know that atom can be split up into electrons, protons, etc. So, according to Leibnitz, atom is not the substance because substance is that which, besides being real, cannot be split up. *In Mathematics, a point is indivisible but it is not a real entity. So, Leibnitz thought that neither the atom nor the point can be substance because substance must be both real and indivisible. Leibnitz coined a new term, 'Monad'. He laid down that Monad is the name given to such a real and indivisible substance which is of the nature of Force.* Leibnitz says that there are innumerable monads and each one of these has individual existence and consciousness and is partless or indivisible and spiritual, for each has a centre of conscious energy though the quantity or degree of consciousness widely varies among monads. *Thus Monads are neither physical nor mathematical entities but rather they are 'metaphysical atoms', so to say.* It is this which confuses this concept with Godly knowledge. We will understand the nature of monads more clearly if we understand more about their characteristics.

Characteristics of Monads

We have already said that Monads are infinite and that they are simple indivisible metaphysical points which are different from the atoms of physics on the one hand and points of mathematics on the other hand. Leibnitz gives them the following characteristics:

1. **Formless, Extensionless:** Since Monads are metaphysical points, they occupy no space, i.e. they have no extension. So, they are formless also. These monads integrate to form objects. And when there is dissolution or disintegration of Monads, the object breaks up but the monads themselves are not influenced by such processes.

2. **Eternal:** Monads have always been existing and will continue to exist eternally. So, in each monad, the past, the present and the

future is present in seed form. Each monad is independent of the other and nothing can destroy it because it is indivisible and unsplitable.

3. **Mobile:** Monads, by their very nature are mobile, because as has been mentioned earlier, they are the metaphysical points of Force and it is force that moves. Even if some monads appear to be passive or inactive, their passivity is only imposed on them because of resistance offered by other forces and hence it is not real. The nature of every monad is active, but their activity may be hindered by some obstruction.

4. **Unique:** Each monad is unique, unparalleled and independent.

5. **They are of three kinds:** There are three categories of monads. One category includes those monads which are called *material*. Leibnitz says that even these monads have consciousness though consciousness in them is at the lowest level. It is at such low level that one could say that they are 'unconscious'. The different *material* objects found in the universe are the result of combination of such monads, which may also be called '*Sleeping monads*' because of their very low stage of consciousness. It means that monads appear outwardly as unconscious and material yet they are spiritual from the inside and have a core of consciousness.

(ii) The **Second category** of monads is constituted of those which have consciousness and memory. Such monads are found in every living being. Leibnitz says that the mind and memory, in living beings is provided by these monads. Because of memory, these monads also establish an associative relation between the past and present. These monads may, therefore, be called 'mind-monads'. Because of comparatively high level of consciousness as compared to sleeping or material monads, these may be called '*Dreaming monads*'. He has further divided this category into one which has monads that form plants and other which has monads that form animals.

(iii) The **Third category** consists of monads which are found in human beings. It is these monads because of which human beings can invent, have high and subtle ideas and can know eternal truths. Human beings are a category apart from animals because animals do not have these monads. It is because of these monads that man receives and can understand knowledge concerning God and the universe and has a rational sense.

(iv) Besides these three or four categories, there is one other Monad; we call it God. He is *monad monadum*—the monad of monads. We will discuss its characteristics later.

(6) **Windowless:** Leibnitz says that monads are 'windowless'. He means to say that monads do not have a window through which anything can enter or leave monads. In other words, monads cannot receive any knowledge from an external source; on the other hand, all knowledge is present in nascent state in man's mind, to begin with. Experience does not create knowledge, it only serves to bring the nascent knowledge to light. Sensations are the first stage of all knowledge and are experienced in a blurred form; it is reason which makes them clear. God is the Supreme reason; for He is Knowledgeful.

(7) **Active as Mirror of the universe:** According to Leibnitz, monad has two kinds of activity. He calls one of these as *perception* and the other as *appetition*. *Perception* implies that each monad represents or reflects the universe; in the words of Leibnitz, 'it is a mirror of the universe.' The representation of each monad is individual—some represent or reflect more clearly and others less clearly. Clarity of monads improves as they rise higher. Waking monads are more perceptive in man and God. In plants and such other life, the perception is lower and unclear. Since each monad presents its own limited and individualistic view, it is represented differently by different monads. It is because of perception that different monads are mutually related.

The second characteristic of Monads is *appetition*. It is the innate faculty of the Monad which enables it to evolve or to move. Nothing affects the Monad from outside; any change comes from within. The self-mobility of the Monad is called *Appetition*.

Continuity in the Universe

From what has been said above about Monads, it is clear that Monads are the metaphysical units of the material and spiritual universe or the 'living and 'non-living' objects. And, there is continuity in creation because of various categories of Monads, starting with the sleeping monads at the one end and God, the Supreme Monad at the other hand. In this continuity, consciousness increases gradually from material Monads to plant Monads, to animal Monads, to human Monads, to God who has the highest *perception* and *appetition* or mobility,

force and consciousness. Let us now mention the characteristics of God in a little better detail.

God—the Supreme Monad

According to Leibnitz, God is the monad of monads. In his form of monad, He is an individual but he is also the substratum of other monads. He is the perfect and real existent. He possesses all those attributes in their most perfect form that are to be found in the individual monads. He is not subject to change and development of the ordinary monad. He is self-existent and eternal and *His knowledge is perfect. He can perceive all the objects, in all time and space at a single glance.*

2. Creator of the Universe: A point that attracts special attention is that Leibnitz says that all Monads have been created by God and are subject to destruction at His will. Of course, none other than God can destroy or create them. In his writings, Leibnitz, sometimes says that all Monads are manifestations of God. Some philosophers, therefore label Leibnitz as a 'Monist' where as others call him pluralist because Leibnitz has also said that all Monads are eternal and they are individually eternal.

3. Perfectly active: God is perfect activity; he possesses no degree of inaction. In this manner, He is perfectly real and *Actus Purus*, i.e. pure action.

4. No conception of God: Leibnitz says that man can have no conception of the perfect nature of God because man is limited whereas God is infinite. He says that God does not offend reason but He cannot be comprehended by it also. Man makes great efforts to know Him but cannot succeed. Different religions in the world exemplify the different degrees of their understanding for each one of them has perceived God in its own way to a different degree.

5. God establishes harmony: A very important thing to know about God is that He, according to Leibnitz, created harmony. *When God created Monads, He gave them such nature that it made it possible for them to exist in harmony with each other.* So it is because of this pre-established nature that whenever something happens in the body, i.e. in the monads of the body, its influence is communicated to the monads of the mind, and any activity in the mental monads is reflected in the monads of the body. So, even though the monads are windowless, they do influence each other.

According to Leibnitz, this principle of harmony or synthesis works everywhere. Because of this principle, innumerable monads create a remarkable variety and yet the greatest variety has also the greatest unity because God has created the world with the highest possibilities of the universe. It would be better at this stage to know something more about the Universe and Evil as Leibnitz thinks about them.

Universe and Evil

Moving backwards from God, in the continuity of Monads, one arrives at the Monads of elementary Matter which is '*materia prima*' of the universe. While God is Perfect Activity or Pure Activity whose perception and knowledge is the clearest, at the level of material Monads, there is more inertia than motion.

According to Leibnitz, God's creation of the universe is based on the best possibility. God, being Perfect, has the knowledge of all alternative forms of which the universe is possible. He, therefore, chooses the best possibility. It is for this reason that one finds lot of order and system in the universe.

In this theory, Natural laws also were created by God. So, even God does not make any evil alterations in them. In fact, even He appears to be following these laws. Once He has created the Monads and laws and has established harmony, He does not interfere in the Universe. Leibnitz has neither said it explicitly that God leaves the universe to itself once it is created nor does he say that God takes some active part in every event.

Leibnitz says that Evil is a necessary part of the universe because *despite the fact that God chose the best possible alternative, some evil was unavoidable. God introduced the greatest possible diversity and unity and harmony in the universe because the infinite can never be adequately expressed through the finite forms that exist in the universe.* It is, therefore, necessary that the world should be imperfect even though nothing better than this could be done.

Leibnitz is of the view that Evil is the result of limitations. It is expressed in the form of pain and diseases in its biological form, in the form of corruption in that of behavioural form and in the form of spiritual evil in that of reality. He says that Good and Evil are two sides of the same coin and it is because of evil in every field that we are able to become even more conscious of goodness. Without evil being possible, good also cannot be possible.

Above, we have given briefly the important points of Leibnitz's philosophy. Let us now see it in comparison and contrast with God's revelations.

Comparison and Contrast with God's revelations

In the first instance, it should be noted that, *though, according to God's revelations, souls are metaphysical points of conscious energy which are indivisible and eternal, they are different from the material monads, not in regard to the quantity of consciousness as Leibnitz contends, but in terms of quality. According to revelation, material monads are altogether different from the spiritual monads, for the former do not have any consciousness at all.*

Moreover, plants do not have souls, i.e. spiritual monads, whereas all animals have. The monads of animals cannot evolve into those of human beings, for human souls are a category apart.

God did not create Souls; Souls are unborn

Secondly, God did not create the physical elements or material monads or *materia prima* nor did He create spiritual monads, i.e. souls. According to God's revelations, both the material monads and the individual souls are *uncreated* and *eternal*. Nor does God ever destroy them. *Their nature also was not created by God as Leibnitz believes it to have been created for the purpose of achieving unity and harmony in diversity.* According to revelation, their natures also are eternal and co-eval with their existence. *If God had created a soul 'A' with better nature than soul 'B', the latter would be justified in objecting to God's unfairness and injustice to him, but the fact remains that God did not create souls as Leibnitz thinks God created monads, each with a particular nature depending on the will of God.*

Souls are not windowless

Thirdly, souls are not windowless. There is no doubt that knowledge is there in souls in latent or nascent form yet the souls receive knowledge from God also who is perfect Truth. God's knowledge does create its impact on souls and, therefore, souls are not totally or hermetically sealed to outer effect. God's revelations give to souls worthy experience though it is time also that each soul receives the benefit accordingly to its own nature which, as said before, was not created by

God but is its own individual personality formed out of its own thoughts, beliefs and acts. Thus nascent knowledge and revelations or outer observations etc. both play their respective complementary role.

In fact, there is inconsistency in the thoughts of Leibnitz, for, on the one hand he says that Monads are *eternal* and independent and, on the other hand, he says that they and their nature were created by God. How can that which was *created* be *eternal* and how can one who depends upon the will of another be independent? Moreover, how can God be called *Perfect God* if he has also created certain Monads, or such nature of certain Monads, as are very low at the moral level? It would be charging God with having deliberately brought in Monads or souls of low morality.

Leibnitz confused about nature of God

Further, Leibnitz seems to be confused about the nature and acts of God. On the one hand he says that God created metaphysical monads or souls and, on the other hand, in order to explain the presence of Evil in the world, he says that the Infinite (God) manifested Himself into limited (souls and other monads) and this is precisely the reason why Evil is present in the world. *Thus, in one breath, he propounds the theory of God being a Creator of all the rest and in another he propounds pantheism, i.e. Monism, akin to the thought of Ramanujacharya of India.* This makes his view about God very ambiguous. In fact, he has said that human souls being limited, cannot know God who is Perfect and unlimited, and his this statement applies to him also.

No Statement about God's appearance on human scene

However, the crux of the whole matter is that he has not given a small hint as to whether God comes into the world to tell the Truth about Himself. *If God is Perfect in every respect, He must be perfectly compassionate and loving also towards His creation, i.e., His spiritual children. Further if God is Pure Activity (Acutus purrus) His compassion and love must become active too and must find their manifestation in the form of action. So, according to basic tenets of Leibnitz, God must give vent to His knowledge out of His active compassion and love. But Leibnitz does not say even a word about this. It is another thing to say that each religion had tried to search the*

truth about God and has found it partly but it is quite another to say that, ultimately, God actively reveals the Truth because human beings have failed to find it. Leibnitz has not mentioned the latter.

Again, the question is that if God created the monads and or their individual nature, out of what material had God created them ? If monads or *materia prima* was already there, then, the word 'creation' has no meaning in this context. If the monads were there and God gave them only nature, then, the question is whether monads had no nature and no attributes before ? In fact, nothing is there in world which does not have its own essential nature or intrinsic and non-deletable qualities. So, it would be wrong to propound that God created monads and their nature so as to create harmony.

It should be noted in this context that Leibnitz thinks that there are separate monads which constitute one's memory and ability of perception whereas God says that memory and perception are the inherent abilities of the soul itself; they are not constituted by a number of 'dreaming' or 'waking' monads.

Leibnitz has failed to solve the problem of Evil

Again, in saying that God is directly or indirectly the author of Evil, Leibnitz has not satisfactorily solved the question of existence of evil but has raised so many related questions. This is not in any way abated by saying that God chose the best of the available possibilities and created the best possible universe. Leibnitz had no source to know that the world order originally created by God was perfect: it had no Evil, no sign of corruption, no moral, biological, financial or psychological defects and the resultant pain. That was known as the Golden Age of the world order. Leibnitz has not mentioned that, in the beginning, Evil was absent from the world scene and that it entered much later nor has he given any hint that, once Evil has entered the world, it increases, it grows horizontally and vertically—in expansion and in degree and is, after reaching its climax, eradicated by God with the co-operation of willing human beings. Instead, the act of creation of harmony by God is congruent with impartation of knowledge to mankind so that they change their nature, from malignant to benign one and thus create harmony among themselves and also harmony with the Nature or Matter. Leibnitz should have considered the question whether Evil, which is present in the world, grows with time, or gets abated, or remains constant, or sometimes its graph goes up while

at other times it goes down. If evil continues to grow with time, God, having Perfection, would be required to act so as to bring back the world to its original state of goodness or it would finally and totally corrupt all monads for ever.

Furthermore, Leibnitz has not explained the roots or the seeds of Evil. He has only stated that Evil is due to limitations of Monads. Limitations are of many kinds, but which is the one that results in Evil? —Leibnitz has not pointed to that specific limitation. God Shiva, on the other hand, has revealed that the human souls become body-conscious, they identify themselves with body and this at the root of all Evil. By pointing out this fact, He has also explained how Evil can be eradicated or lessened by practising soul consciousness. Leibnitz, on the other hand, has not suggested any remedy because he has not been able to identify the root cause.

But, the important thing about Leibnitz's system is that he has not stated what relationship the Supreme Monad has with the human monads nor has he defined the relationship among human monads themselves. This, however, is very crucial factor in philosophy and ethics. This is essential for establishing harmony among souls and between God and souls. God, on the other hand, has revealed that He is the Father of mankind and gives to human souls the divine inheritance.

There are many other points of similarity and contrast between the system of thought, enunciated by Leibnitz and that given by God but one main difference is that Leibnitz has given a system which is neither complete nor free of inconsistencies. For instance, he has not stated the duration of world cycle nor has he explained how the world order, which evidently, has been showing gradual increase in evil, will be restored to its original stage. One has necessarily to know all these major points, for, without them the system has no clarity. □

We have given above the divine revelation about the nature of the infinitesimal soul in comparison with the concept of soul as given by Leibnitz, the Mathematician-Scientist so as to bring about clearly, the contrast about the two. Now we will give excerpts from the writings of some scientists who express their belief in the existence of the soul.

Souls are plural and are not parts of God

IT is a universal belief that Soul is neither produced nor is it productive. If it were produced like objects of matter and were, ultimately, to merge or mix in its original source, how could it be called: 'unborn' and 'immortal'? As we all know, a thing is said to be unborn, immortal and eternal provided it exists in the present, has ever existed in the past and shall continue to exist till eternity. If it loses its independent existence at any point of time, it cannot be called—immortal.

Therefore, to say that a soul is a part or particle of God, like a bubble of the sea, has no separate and independent existence and ultimately merges into it, is wrong. It is against revelations made by God and the divine visions blessed to us by Him besides being against divine reasoning. If the soul be compared to a bubble, it cannot be conceived as immortal while it actually is unborn and immortal. The souls are many, are separate from each other and from God. They are dependent on the Divine not as a particle is on the whole but like a child is on his parents or a servant is on his master. Multiplicity of souls is not an appearance that has an empirical reality but it is based on experience, logic and, above all, divine revelations. As all agree, Soul is a sensitive entity. Therefore, to say that souls emerge as bubbles do from an ocean, is like believing that the sensibility of soul gets split up into parts. This supposition is untenable and unsustainable. People say that the limiting adjuncts of soul, such as intellect, mind, senses, etc., have caused the 'apparent' multiplicity and that when they are realised to be nonself and unreal, the soul becomes one with Him. But it can be understood from the previous chapters that the intellect, mind, etc., are not adjuncts but are the names of the various faculties of the soul itself.

In fact, those who say, on one hand, that God is Omnipresent and, on the other, consider soul to be like a bubble or particle of Him, refute their own belief. The possibility of a bubble arising from the sea is perceivable and conceivable because there is space above and around the surface of the sea. But, their own conception of God is that He is Omnipresent. As such, there being no space devoid of or unpervaded by Him, to conceive the birth of soul from a result of that mutual relationship, there will be peace in the world.

All souls are eternal sons of God

It is a natural tendency of the soul to feel itself as a son of God. Leave aside those who are Vedāntins possessing mere literal and scriptural knowledge. Others, who have been practising spiritual discipline or meditation of any kind and are comparatively advanced than the rest will tell you that at a stage they found that they could not but consider the self to be a child (not particle) of the Supreme. Nay, they experienced and surrendered themselves as a child to God as Mother or Father and it was only then that they could gain progress.

The Soul does not merge into God

In the state of liberation or release also the soul does not merge into God, who has His own separate identity. Rather, both abide in the soul-World. Therefore, the souls are numerous, individual and immortal.

Application in Yoga And Divine Efforts

1. The maxim: "I am a soul, distinct from body", is incomplete for meditation and belief. Meditate and concentrate on the maxim: 'I am a soul, son of the Supreme Soul'. It would be wrong to meditate thus: 'I am a particle of God.' It is also wrong to meditate thus: "I am Brahm, I am Shiva, I am God." Rather, "I am a son of God" should be the keynote of your faith and actions.

2. (i) The aim of Yoga is not to merge into God as monists think. The aim of Yoga is the deification of the Self, attainment of perfection, and to obtain the inheritance of peace, purity, and bliss. The aim of Yoga is to have communion with God. The more we meditate on this formula, the more our invisible spiritual connection with God gets established and we receive inspirations, peace and bliss. We can perceive Him, be face to face with Him and receive from or give messages to Him.

(ii) The aim of Yoga is not mergence in God but to obtain proximity, company or contact of God here and in the Soul-World.

(iii) Since each soul is eternally distinct from others, its state of perfection also is distinct from the rest. The attainment of perfection means to become what it originally was. As it fell from that status, or highest rung of its respective ladder to its lowest, due to body-consciousness, even so it has now to climb up to the highest which is particular to each soul.

That each soul has its own respective highest state or degree of knowledge, light, might, peace, purity, etc., may be better explained by comparing souls to the stars, moon and the sun dwelling in the sky.

Or, it may be compared to a rosary used for religious incantations in which the flower represents the Supreme Soul, the dual bead represents Brahma and Saraswati—one of the Supreme creations of God, and the 108 beads represent the souls' perfection, the place of each in the rosary representing its respective height reached.

(vi) Also since each soul has predispositions particular to it and differing from those of others, therefore, it has to put in a particular amount of effort, varying from that of others, to deify itself.

God, as of a bubble from an ocean, means to interpose contradiction in their own statements. There being antagonism in their own citations, their arguments fall.

Moreover, the bubble cannot be called as 'unborn and immortal,' because, as we have pointed out, an immortal entity, in order to be so called, must exist for infinite time. Therefore, it is wrong to consider the soul as a part and particle of God.

The Analogy of Sparks to fire is erroneous

Similarly, to conceive of souls as sparks of fire as the Vedantins do, is to betray ignorance. The world population is increasing not because God, likened to fire here, is emitting more souls, the sparks. We have visualised the Soul-World* from where the souls come on this world drama-stage to play their respective roles. God-Sermonizer's sermons embodied in Shrimad Bhagwad Gita also contain a clear reference to the Soul-World and also to the 'retreat' of the souls when the destruction of this world (of corporeal beings) takes place. The actions 'going to' and 'coming from' the Soul-World can be ascribed to the souls if they are individual, multitudinous, separate and have separate form.

As we have said, heretofore, it can be proved that the impressions, propensities and inclinations of each embodied soul are different. We have further stated that what is called ego, mind, intellect, etc., are not entities material and distinct from the soul but these stand for the qualities of consciousness, volition, ascertainment, etc., of the soul itself.

* *Parloka*—परमधाम अथवा परलोक

Therefore, the souls are numerous. If souls were one, all beings would have the common propensities, similar inclinations, identical views and non-different actions and their fruits. All non-partisan religious people agree on this point that each soul leans constantly to its earlier predispositions. All have admitted the existence of pre-dispositions accruing from preceding forms with no retrospective limit (i.e. ending in infinity). Therefore, the souls are many and have been existing plurally since eternity.

The Analogy of a Rosary is fallacious

Some people cite the analogy of the rosary and its beads. That also is fallacious. There is not one soul to all beings as a string is to pearls strung on to it. It is both untenable and contrary to experience. If one soul animated all bodies, then one being born all would be born; one dying, all would be dead. Moreover, the engagements and occupations of all beings are not at one time universally the same. If there were one soul animating all beings, then all bodies would be stirred by the same influence. But, it is not so. Some are engaged in more virtue, less evil; others are engaged in more evil and less virtue; some are devoted to knowledge, others to error or Bhakti. Therefore, it is a fact that souls are numerous. Qualities (Gunas) also affect differently. One is happy, because His Sattva is predominant. Another is miserable because Tamas is predominant. Were there one soul, all would be alike.

What Scientists say on the question of Soul and on Rebirth

Some people think that scientists do not believe in the existence of soul and consider it as an irrational belief or mere blind faith. Following are some excerpts from the writing of some famous scientists and psychologists which show that many world-famous scientists believed and believe in the existence of soul and its incarnation.

Sir Francis Walshed, Neurologist

Says in his article, titled: "Thoughts upon the Equation of Mind with Brain" in **Brain—A Journal of Neurology, March 1953.**

"From sheer psychological and philosophical necessity, traditional commonsense philosophy from the earliest Greeks to Aquinas accepted the existence in man of an essential immaterial element . . . setting him above the merely animal. This element they called psyche, entelechy, anima or soul.

It has also to be recognized that for the soul's functioning as an essential element in the hylomorphic human person, it needs sense data, of which the brain is the collecting, integrating and distributing mechanism. Yet it would be quite childish to identify the instrument with its user, even though the user be dependent upon the instrument for operating . . . We shall have to accept the ancient concept of the soul again; as an immaterial, noncorporeal part of the human person, and yet an integral part of his nature, not just some concomitant aspect of man, but something without which he is not a human person . . .

There is a sense in which the present is an age of which a characteristic is its failure to understand the status of its own abstractions, and this, perhaps, is the inevitable fruit of the divorce of natural science from metaphysics, to have achieved which was the empty triumph of the nineteenth century . . . For me, the chill physico-mathematical concept of the human mind is a muddy vesture of decay in which I am not willing to be enfolded. It is unworthy of the dignity of Man and if anyone says that this is not a scientific attitude. I am unmoved by the irrelevance, for, outside its proper field of discourse, the word "science" does not

intimidate me. Man was not made for science, but science by man, who remains more and greater than his creations."

Max Planck, world famous Physicist

says in his article 'Where is science going?'

There is a point, one single point in the immeasurable world of mind and matter, where science and, therefore, every causal method of research is inapplicable, not only on practical grounds but also on logical grounds, and will always remain inapplicable. **This point is the individual ego. It is a small point in the universal realm of being; but in itself it is a whole world, embracing our emotional life, our will and our thought. This realm of the ego is at once the source of our deepest suffering and at the same time of our highest happiness.** Over this realm no outer power of fate can ever have sway . . .

There can never be any real opposition between religion and science: for the one is the complement of the other. Every serious and reflective person realizes, *I think, that the religious element in his nature must be recognized and cultivated if all the powers of the human soul are to act together in perfect balance and harmony. And indeed it was not by any accident that the greatest thinkers of all ages were also deeply religious souls, even though they make no public show of their religious feeling . . . Every advance in knowledge brings us face to face with the mystery of our own being.*

(Emphasis by giving Italics and bold type is by us)

Erwin Schrodinger (1887—1961)

World-famous Physicist who won Nobel Prize (1933)

Writes in 'What is life?' published by Cambridge University Press:

(1) My body functions as a pure mechanism according to the Laws of Nature. (2) Yet I know, by incontrovertible direct experience, that I am directing its motions, of which I foresee the effects, that may be fateful and all-important, in which case I feel and take full responsibility for them.

The only possible inference from these two facts is, I think, that I—I in the widest meaning of the world, that is to say, every conscious mind that has ever said or felt "I"—am the person, if any, who controls the "motion of the atoms" according to the Laws of Nature . . .

If you analyze (this "I") closely, you will, I think, find that it is just a little bit more than a collection of single data (experiences and memories), namely the canvas (or groundstuff) upon which they are collected . . .

You may come to a distant country, lose sight of all your friends . . . acquire new (ones) . . . Less and less important will become the fact that, while living your new life, you still recollect the old one . . . Yet there has been no intermediate break, no death. And even if a skilled hypnotist succeeded in blotting out entirely all your earlier reminiscences, you would not find that he had killed you. *In no case is there a loss of personal existence to deplore. Nor will there ever be.*

Albert Einstein (1879—1955) —

The greatest scientist says in 'The world as I see it':

It is enough for me to contemplate the mystery of conscious life, perpetuating itself through all eternity—to reflect upon the marvellous structure of the universe, which we can dimly perceive—and to try humbly to comprehend even an infinitesimal part of the intelligence manifested in nature . . . *

The most beautiful and most profound emotion we can experience is the sensation of the mystical. It is the sower of all true science. He to whom this emotion is a stranger, who can no longer wonder and stand rapt in awe, is as good as dead. *To know that what is impenetrable to us really exists, manifesting itself as the highest wisdom and the most radiant beauty which our dull faculties can comprehend only in their primitive forms—this knowledge, this feeling is at the centre of true religiousness.***

I maintain that cosmic religious feeling is the strongest and noblest incitement to scientific research. A contemporary has said not unjustly, that in this age of ours, the serious scientific workers are the only profoundly religious people.

Alexis Carrel (1873—1944)

Says in 'Man the Unknown'

The soul is the aspect of ourselves that is specific of our nature and distinguishes man from all other animals. We are not capable of defining

* See 'The Autobiography of Robert A. Millikan, Prentice Hall, p.207.

** See 'The Universe and Dr. Einstein' by Lincoln Barnett & Mentor Book.

this familiar and profoundly mysterious entity. What is thought, that strange being, which lives in the depths of ourselves without consuming a measurable quantity of chemical energy? Could it be a constituent of our universe, ignored by the physicists, but infinitely more important than light?

The mind is hidden within the living matter completely neglected by physiologists and economists, almost unnoticed by physicians. And yet it is the most colossal power of this world . . . Should it be considered as an immaterial being, located outside space . . . and time, outside the dimensions of the cosmic universe, and inserting itself by an unknown procedure into our brain, which would be the indispensable condition of its manifestations and the determining agent of its characteristics?

Our mind has a natural tendency to reject the things that do not fit into the frame of scientific or philosophical beliefs of our time. After all, scientists are only men. They are saturated with the prejudices of their environment and their epoch. They willingly believe that facts that cannot be explained by current theories do not exist . . . At the present time, scientists . . . still look upon telepathy and other metaphysical phenomena as illusions. Evident fact having an unorthodox appearance are suppressed . . . The inventory of the things which could lead us to a better understanding of the human being has been left incomplete. We must, then, go back to a naive observation of ourselves in all our aspects, reject nothing and describe simply what we see.

Thomas H. Huxley (1825—1895), Biologist

He is the person, who advocated Darwin's Evolution theory like a crusader. He says in "Essays upon some Controverted Questions".

Looking at the matter from the most rigidly scientific point of view, the assumption that, amidst the myriads of worlds scattered through endless space, there can be no intelligence, as much greater than man's as his is greater than a blackbeetle's; no being endowed with powers of influencing the course of nature as much greater than his, as his is greater than a snail's, seems to me not merely baseless, but impertinent. Without stepping beyond the analogy of that which is known, it is easy to people the cosmos with entities, in ascending scale . . .

I understand the main tenet of Materialism to be that there is nothing in the universe but matter and force . . . *Kraft und Stoff*—force and matter—are paraded as the Alpha and Omega of existence . . . Whosoever

does not hold it is condemned by the more zealous of the persuasion to the Inferno appointed for fools or hypocrites. But all this I heartily disbelieve . . . There is a third thing in the universe, to wit, consciousness, which . . . I cannot see to be matter or force, or any conceivable modification of either . . .

The student of nature, who starts from the axiom of the universality of the law of causation, can not refuse to admit an eternal existence; if he admits the conservation of energy, he cannot deny the possibility of an eternal energy; if he admits the existence of immaterial phenomena in the form of consciousness, he must admit the possibility, at any rate, of *of an eternal series of such phenomena.*

Heber D. Curtis (1872-1942), Astrophysicist

As reported in The Los Angeles Times, dated the 31st. December, 1926, says:

I personally find it impossible to regard Handel's "Largo," Keats's "Ode to a Grecian Urn," and the higher ethics as mere by-products of the chemical interaction of a collection of hydrocarbon molecules. With energy, matter, space and time continuous, with nothing lost or wasted, are we ourselves the only manifestation that comes to an end, ceases, is annihilated at three score year and ten?

What we crudely call the spirit of man makes new compounds, plays with the law of chemical action, guides the forces of the atom, changes the face of the earth, gives life to new forms and takes it away from millions of animals and plants. Here is a flame that controls its own flaming, a creative spirit which cannot reasonably be less than the continuity it controls. This thing, soul, mind or spirit, cannot well be an exception. In some way, as yet impossible to define it too, must possess continuity.

Louis Figuier (1819-1894) French Naturalist And Science-Writer

Says in 'The Tomorrow of Death'

Descartes and Leibnitz have demonstrated that the human understanding possesses ideas called *innate*, that is to say, ideas which we bring with us to our birth. This fact is certain. In our times, the Scotch philosopher Dugald Stewart, has put Descartes theory into a more precise form by proving that the only really *innate* idea, that which has universal

existence in the human mind after birth, is the idea or the *principle of causality*, a principle that makes us say and think that there is not effect without cause, which is the beginning of reason . . .

Innate ideas and the principle of causality are explained very simply by the doctrine of the plurality of existences; they are, indeed, merely deductions from that doctrine. A man's soul, having already existed . . . has preserved the trace of the impressions received during that existence . . . has lost, it is true, the recollection of actions performed during its former incarnation, but the abstract facts must remain in the soul in its second incarnation . . . Natural aptitudes special faculties, vocations, are the traces of impressions formerly received, of knowledge already acquired, and, being revealed from the cradle, cannot be explained otherwise than by a life gone by . . . The soul of the man remains always the same, in spite of its numerous peregrinations.

Gustaf Stromberg, Astronomer

The following is from a review of his book, titled 'The Soul of the Universe'. The review appeared in the 'Times' of April 29, 1940:—

Memory is independent of matter. If it can survive replacement of (cerebral) matter during life, why should it not survive the dissolution of the brain cells after death? "The memory of an individual . . . is written in indelible script in space and time—it has become an eternal part of a Cosmos in development."

Dr. Stromberg defines the soul as "the ego of a human being . . . something which gives unity to the mental complex of a man." Though immaterial, he considers it a real structure, like a field of force. Therefore it cannot be annihilated without violating a law analogous to the purely physical law of conservation of mass and energy. Exactly what experiences the human soul may have after death, the author does not presume to say. He thinks the transmigration of souls entirely possible.

Thomas H. Huxley (1825-1895) British Biologist And Darwinist

Quoted from 'Evolution and Ethics'

In the doctrine of transmigration, whatever its origin, Brahminical and Buddhist speculation found, ready to hand, the means of constructing plausible vindication of the ways of the Cosmos to man . . . This plea of

justification is not less plausible than others; and none but very hasty thinkers will reject it on the ground of inherent absurdity. Like the doctrine of evolution itself, that of transmigration has its roots in the world of reality; and it may claim such support as the great argument from analogy is capable of supplying.

Raynor C. Johnson, Physicist

The following is quoted from his book titled 'The Imprisoned Splendour', published by Harper & Row, Chap. 18, on "Pre-existence, Reincarnation and Karma". Dr. Johnson is an eminent British physicist, holding his Ph.D. in both Science and Philosophy:—

"It is probably true to say that a number of my readers have already reacted to the title of this chapter with some measure of emotional interest or aversion. Some people seem curiously and almost instinctively interested in these topics, others, frequently religious-minded people, feel antagonistic, as though some strange pagan faith was subtly menacing their cherished beliefs. The average thoughtful Western man has in general given little consideration to these matters, although his reticence does not always match his knowledge. In any attempt to formulate a philosophy of life and endeavour to see meaning in our pilgrimage, these ancient beliefs cannot be lightly set aside. It is our duty to weigh them carefully, and without prejudice, in order to see if they illuminate for us tracts of experience which would otherwise remain dark and mysterious . . .

The idea of re-incarnation presents no logical difficulties, whatever be the emotional reaction to it. What the soul has done once by the process of incarnation in a physical body, it can presumably do again. (By the terms 'soul' we mean that individualised aspect of the Self, including . . . the Intuitive self and Higher Mind, all of which are regarded as immortal.) We should of course bear in mind that what is meant by the phrase "have lived before" is not that the physical form Raynor Johnson has lived on earth previously, but rather that Raynor Johnson is only a particular and temporary expression of an underlying immortal soul which has adopted previous and quite possibly different appearances.

Sir Humphrey Davy (1778-1829), English Chemist

(The following is quoted from his 'Consolations in Travel, Dialogue IV)

“The external world is to us nothing but a cluster of sensations, and in looking back to the memory of our being, we find one principle which may be called the monad or self, constantly present, intimately associated with a particular class of sensations, which we call our body, or organs. These organs are connected with other sensations, and move, as it were, with them in circles of existence, quitting for a time some trains of sensations to others, but the monad is always present. We can fix no beginning to its operations, we can place no limit to them.”

Sir Edward B. Tylor (1832-1917)
known as the father of anthropology

In his famous work *‘Primitive Culture’* (Vol-2, Chapter 12) he makes the following comment after comparing various beliefs on reincarnation among the ancient peoples:

So it may seem that the original idea of transmigration was the straightforward and reasonable one of human souls being reborn in new human bodies.

Dr. J.B. Rhine, Director of Parapsychology Laboratory,
Duke University

(The following extract has been taken from an article that appeared in *‘The American Weekly’*, dated the April 8, 1956, entitled “Did you Live Before?” In this, Dr. Rhine has discussed the famous case of Bridey Murphy. *)

In brief, Bridey Murphy is the story of Ruth Simmons (Virginia Tighe), a young housewife living in Pueblo, Colorado . . . One evening in 1952 she agreed to be the subject of a hypnotism experiment. The hypnotist was a young businessman, Morey Bernstein. At first he led her back through what we commonly call age-regression . . . Eventually she remembered the toys she loved when she was only one year old. There was nothing unusual about this, but in a second session the hypnotist suggested, “Your mind will be going back . . . back until you find yourself in some other scene, in some other place, in some other time. You will be able to talk to me about it and answer my questions.”

* The book *‘The search for Bridey Murphy, by Morey Bernstein* was published by Doubleday, Jan., 1956 in more than 30 countries. More than one million copies of it have been sold. Dr. J.B. Rhine was requested by the editors of *‘The American Weekly’*, to review it.

The gist of her response was that she was a little Irish girl named Bridey Murphy, who lived in Cork with her mother Kathleen, her barrister father Duncan, and one brother . . . The year was 1806. She told how, at fifteen, she attended Mrs. Strayne's school in Cork "studying to be a lady," and how she later married Brian MacCarthy and went to live in Belfast. As the sessions continued, all recorded on tape, the life story carried on through the years, up to Bridey's death at the age of sixty-six. She claimed that, after bodily death, Bridey existed in the spirit world for forty years, then was reborn in Iowa, in 1923, to take up her life as Ruth—the present Ruth Simmons.

Checking later with the Irish Consulate, the British Information Service, the New York Public Library and other sources, Mr. Bernstein learned that a number of Bridey's statements were consistent with historical fact. If Ruth who never had visited Ireland, had no normal way of knowing these things, didn't this raise the question: Does reincarnation really occur? . . .

Here at Duke University, we have turned from examining the beliefs of groups and cults to a collection of individual experiences for some due to an answer to the question—"Do spirits survive?" We have collected thousands of incidents, several hundred of which seem to indicate that the teller of the tale has had contact with a loved one who has died . . ."

The following is quoted from "Do dreams come true" from Readers Digest, March 1955.

The scientific tests that were initiated by prophetic dreams have already led to the discovery of a new fact about the human mind, a discovery so radical as to call for an eventual revolution in basic human thought. Perhaps the most significant finding that has emerged is this: there is now known to be present in human personality an aspect that is unbounded by the space and time of matter—hence a nonphysical or spiritual aspect. Its boundaries and its capacity for growth may well be beyond the limits of our present powers to conceive.

For an up-to-date survey of the facts in this much discussed case, see chapter "How the Case of the Search for Bridey Murphy Stands Today" in Prof. C.J. Ducasse's book "A critical Examination of the Belief in a life After Death" (C.C. Thomas, Springfield, Ill, 1961) Eds.

A type of lawfulness peculiar to mind and contrary to physics is increasingly evident in the extra-sensory perception and psychokinetic researches. Without these researches and with only the facts of the biological sciences to go on, it is hard to see how any kind of immortality would be possible. The brain dominating, or cerebro-centric view of personality, would not allow it. In that view the brain is primarily and completely the centre of man. But if the psyche is a force and a factor in its own right, with laws and ways peculiarly non-physical, the survival hypothesis has at least a logical chance.

If the mind is different from the physical brain system, it could have a different destiny, could perhaps be independent, separable, unique. This degree of simple possibility must not, of course, be mistaken for probability; but the mere logical possibility is itself very important . . . Is it not then provocative, to say the least, to discover certain capacities of mind that appear to operate beyond the boundaries of space and time within which our sensorial, bodily system has to live and move? Here, surely, if every, "hope sees a star" and the urge toward an inquiry into the question of survival receives valuable impetus and encouragement. N.Y. Herald-Tribune, Feb 27, 1944. From Journal of Parapsychology

Ian Stevenson, Psychiatrist
Chairman Department of Psychiatry, University of Virginia
School of Medicine

(In July 1959, Harper's magazine published an article by Dr. Stevenson entitled "*The Uncomfortable Facts About Extrasensory Perception.*" In 1960 his 44-page essay "*The Evidence for Survival from Claimed Memories of Former Incarnations*" was the prize-winning essay of the American Society for Psychical Research contest in honour of William James, one of its early presidents. Parts I and II appeared respectively in the April and July issues of the Journal of the Society. Dr. Stevenson studied hundreds of instances where children or adults seemed to remember a past life, and presents a select few "*in the evaluation of which reincarnation becomes a very serious contender as the most plausible explanation of the empirical facts.*" He says:

“Further investigation of apparent memories of former incarnations may well establish reincarnation as the most probable explanation of these experiences. Along this line, we may in the end obtain more convincing evidence of human survival of physical death than from other kinds of evidence. In mediumistic communications we have the problem of proving that someone clearly dead still lives. In evaluating apparent memories of former incarnations, the problem consists in judging whether someone clearly living once died. This may prove the easier task and, if pursued with sufficient zeal and success, may contribute decisively to the question of survival.”

**Carl. G. Jung (1875-1961) Psychiatrist and Psychologist says in
“The Undiscovered Self”:**—

“In the same way that our misconception of the solar system had to be freed from prejudice by Copernicus, the most strenuous efforts of a well-nigh revolutionary nature were needed to free psychology from the prejudice that the psyche is, on the one hand, a mere epiphenomenon of a biochemical process in the brain or, on the other hand, a wholly unapproachable and recondite matter. The connection with the brain does not itself prove that the psyche is an epiphenomenon, a secondary function causally dependent on biochemical processes . . .

The phenomena of parapsychology . . . warns us to be careful for they point to a relativization of space and time through psychic factors which casts doubts on our naive and overhasty explanation of the parallels between the psychic and the physical. For the sake of this explanation people deny the findings of parapsychology outright, either for philosophical reasons or from intellectual laziness. This can hardly be considered a scientifically responsible attitude, even though it is popular way out of a quite extraordinary intellectual difficulty. To assess the psychic phenomenon, we have to take account of all the other phenomena that come with it, and accordingly we can no longer practise any psychology that ignores the existence of the unconscious or of parapsychology.

The structure and physiology of the brain furnish no explanation of the psychic process. The psyche has a peculiar nature which cannot be reduced to any thing else.”

The following is quoted from one of his lectures, delivered in the year 1959, ‘Concerning Rebirth’. This was published in Vol. 9 of Jungs Collected Works, Part I.

Rebirth is not a process that we can in any way observe. We can neither measure nor weigh nor photograph it. It is entirely beyond sense perception. We have to do here with a purely psychic reality, which is transmitted to us only directly through personal statements. One speaks of rebirth, one professes rebirth; one is filled with rebirth. This we accept as sufficiently real . . . I am of the opinion that the psyche is the most tremendous fact of human life . . . The mere fact that people talk about rebirth, and that there is such a concept at all, means that a store of psychic experiences designated by that term must actually exist.

Rebirth is an affirmation that must be counted among the primordial affirmations of mankind. These primordial affirmations are based on what I call archetypes . . . There must be psychic events underlying these affirmations which is the business of psychology to discuss—without entering into all the metaphysical and philosophical assumptions regarding their significance.

**W.F.G. Swann, Physicist, former Director of
The Bartol Research Foundation**

(See Preface for the first portion of the following quotation:)

We must not be too astonished at the invocation of an entity which does not call for expression in terms of space and time. After all, I may speak of such things as good and evil without accompanying them with coordinates x, y, r, t , to express where they are and when they were there.

**William James (1842-1910), world-famous
Psychologist and Philosopher**

According to the state in which the brain finds itself, the barrier of its obstructiveness may also be supposed to rise or fall. It sinks so low, when the brain is in full activity, that a comparative flood of spiritual energy pours over. At other times, only such occasional waves of thought as heavy sleep permits gets by. And when finally a brain stops acting altogether, or decays, that special stream of consciousness which it subserved will vanish entirely from this natural world. But the sphere of being, that supplied the consciousness, would still be intact: and in that more real world with which, even whilst here, it was continuous, the consciousness might, in ways unknown to us, continue still.* □

*This is quoted from his lecture, first delivered at Harvard in 1893 and published at Jame's essay on Human Immortality.

Soul and Rebirth-II

Many people think that it is only the Hindus, Buddhists and Jains who believe in rebirth. Here we give excerpts from the works of some eminent British poets who believed in the existence of the soul and after-life or rebirth. Some of them even believed in the recurrence of past events. And yet they were Christians.

John Masefield, the Poet Laureate, believed that he had taken many births and was, in the past, born in Thebes, Troy and Babylon. Here he writes beautifully in his poem, titled 'A Creed':

I held that when a person dies
His soul returns again to earth;
Arrayed in some new flesh-disguise,
Another mother gives him birth.
With sturdier limbs and brighter brain
The old soul takes the road again.

Such was my belief and trust;
This hand, this hand that holds the pen,
Has many a hundred times been dust
And turned, as dust, to dust again;
These eyes of mind have blinked and shone
In Thebes, in Troy, in Babylon . . .



Sir Edwin Arnold in his translation, in verse, of the Bhagwad Gita, titled by him 'The Song Celestial', writes on rebirth:

Tis but as when one layeth
His worn out robes away,
And, taking new ones, sayeth
"These will I wear today!"
So putteth by the Spirit:
Lightly its garb of flesh,
And passeth to inherit
A residence afresh . . .

William Wordsworth wrote in *'Intimations of Immortality from Recollections of Early Childhood'*

Our birth is but a sleep and a forgetting;
 The soul that rises with us, our life's star,
 Hath had elsewhere its setting,
 And cometh from afar.
 Not in entire forgetfulness
 And not in utter nakedness
 But trailing clouds of glory do we come
 From God who is our home.



Taliesin, a sixth century Welsh bard, wrote:

I was with the Lord in the highest sphere
 On the fall of Lucifer into the depth of hell;
 I have borne a banner before Alexander . . .
 I am a wonder whose origin is not known.
 I have been in Asia with Noah in the ark,
 I have seen the destruction of Sodom and Gomorra . . .
 I shall be until the doom on the face of the earth . . .
 I was originally little Gwion,
 And at length I am *Taliesin*.



John Milton also, under the Platonic influence, believed in the existence of soul and in the fact of rebirth. We reproduce a part of his *'Comus'*:

The soul grows dotted by contagion,
 Imbodies and embrutes till she quite lose
 The divine property of her first being . . .



Alfred, Lord Tennyson, a well-known nineteenth century British poet, wrote of soul, rebirth and recurrence, in his *Early Sonnet No. I*, thus:

And when with downcast eyes, we muse and brood
 And ebb into a former life, or seem
 To lapse far back into a confused dream
 To states of mystical similitude,

If one but speaks, or hems or stirs a chair
 Ever the wonder waxeth more and more
 So that we say, all this hath been before,
 All this hath been, I know not when or where:—
 So, friend, when first I looked upon your face,
 Our thoughts gave answer, each to each, so true,
 Opposed mirrors, each reflecting each—
 Although I knew not in what time or place,
 Me thought that I had often met with you,
 And each had lived in other's mind and speech.



Margaret L. Woods expresses in *Vale Atque Ave*, the wish and the promise to be reborn:

I shall return to thee,
 Earth, O dearest
 Mother of mine!
 I who have loved thee with joy everlasting,
 Endless discovery, newness diurnal . . .
 Now I depart . . .
 I shall still blindly fumble and wait
 Till the true door open, the true voice call again:
 And back to the human high estate,
 Back to the whole of the soul, resurgent,
 O Earth, O dearest! I shall return,
 I shall return to thee, Earth, my mother.



Robert Browning, another famous British poet, says in his poem, *Paracelsus*:

At times I almost dream
 I too have spent a life the sages' way,
 And tread once more familiar paths. Perchance
 I perished in an arrogant self-reliance
 An age ago; and in that act a prayer . . .

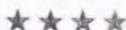


In his poem, Empedocles on Etna, Matthew Arnold says:
 And then we shall unwillingly return
 Back to this meadow of calamity,
 This uncongenial place, this human life;
 And, in our individual human state
 Go through the sad probation all again,
 To see if we will poise our life at last,
 To see if we will now at last be true
 To our own only true deep-buried selves, . . .



Lawrence Binyon, poet and Art historian writes, in his '*Unsated Memory*':

*Where is that world that I am fallen from?
 Ah, surely I was rather native there
 Where all desires were lovely . . .
 Oh, we go shrouded from ourselves, and hide
 The soul from its splendour and encrust
 The virgin sense with thinking, Then some chance
 Moment reveal us; we are deified,
 Feeling and seeing; gold gleams from the rust;
 And, marvelling at our lost inheritance,
 We breathe the air of beauty . . .*



Another poet, John Leydon, has written in '*Ode to Scottish Music*':

Ah, sure, as Hindoo legends tell,
 When music's tunes the bosom swell
 The scenes of former life return,
 Ere sunk beneath the morning star,
 We left our parent climes afar,
 Immured in mortal forms to mourn.



The noted poet, Samuel Coleridge also says in his poem '*On a Homeward Journey upon hearing the birth of a son*' that he often feels that he was reborn: We reproduce his lines:

Oft o'er my brain does that strange fancy roll

Which makes the present (while the flash doth last)
 Seem a mere semblance of some unknown past,
 Mixed with such feelings as perplex the soul
 Self-questioned in her sleep: and some have said
 We lived, ere yet this fleshy robe we wore.

William Shakespear, the greatest British Dramatist and poet, has written in 'Sonnet 59' of rebirth and recurrence:

If there be nothing new, but that which is
 Hath been before, how are our brains beguiled,
 Which labouring for invention, bears amiss
 The second burthen (bearing) of a former child!
 O, that record could with a backward look,
 Even of five hundred courses of the sun,
 Show me your image in some antique book,
 Since mind at first in character was done!
 That I might see what the old world would say
 To this composed wonder of your frame:
 Whether we are mended or whether better they
 Or whether revolution be the same.

O, sure I am, the wits of former days
 To subjects worse has been given admiring praise.



William Ernest Henley was a great believer in soul and its rebirth. He felt that, in his previous lives, he was born in various countries. He expressed his this firm belief in his poem, titled 'To W.A.'

Or ever the knightly years were gone
 With the old world to the grave
 I was a king in Babylon
 And you were a Christian Slave

I saw, I look, I cast you by,
 I bent and broke your pride. . .

And a myriad suns have set and shone
 Since then upon the grave
 Decreed by the King in Babylon
 To her that had been his Slave.

In another poem, 'Ballade of a Toyokuni colourprint', he wrote:

Was I a Samurai renowned,
 Two-sworded, fierce immense of bow
 A historian angular and profound. ?
 A priest? a porter?—Child, although
 I have forgotten clean I know
 That in the shade of Fujisan,
 What time the cherry-orchards blow,
 I loved you once in old Japan. . .
 Dear, 'twas a dozen lives ago;. . .

Another poet, Frances Cornford, wrote of rebirth and recurrence in beautiful verse form as under:

I laid me down upon the shore
 And dreamed a little space;
 I heard the great waves break and roar,
 The sun was on my face. . .
 And so my dream began;
 How all of this had been before:
 How ages far away
 I lay on some forgotten shore
 As here I lie to-day. . .
 I have forgotten whence I came,
 Or what my home might be,
 Or by what strange and savage name
 I called that thundering sea. . .

Thus many poets believed in the existence of soul. But the times have changed. People now do not read this kind of poems and, instead, it has become a tradition now to write on carnal love and to read poems on such subjects as strengthen a person's body-consciousness.

Benjamin Franklin, at the age of twenty-two, wrote his own epitaph as follows:—

*"The Body of B. Franklin,
 Printer,
 Like the Cover of an Old Book,
 Its Contents Torn out
 And*

Soul and Re-birth—III

WE published in the last issue of the World Renewal, the excerpts from poems of some British Poets. In this issue, we are publishing the excerpts from the poems of some American poets. These excerpts show how these poets believed in the existence of the soul and in rebirth.

—Editor

Henry Wadsworth Longfellow (1807-1882),

writes in '*Rain In Summer*'

Thus the Seer,

With vision clear,

Sees forms appear and disappear,

In the perpetual round of strange,

Mysterious change

From birth to death, from, death to birth;

From earth to heaven, from heaven to earth:

Till glimpses more sublime,

Of things unseen before,

Unto his wondering eyes reveal

The Universe, as an immeasurable wheel

Turning forevermore

In the rapid and rushing river of Time.

* * *

Again, Longfellow has beautifully expressed his belief in the existence of the soul in the famous poem, '*A psalm of life.*'

Tell me not, in mournful numbers,

Life is but an empty dream!—

For the soul is dead that slumbers,

And things are not what they seem.

Life is real! Life is earnest!

And the grave is not its goal,

Dust thou art, to dust returnest,

Was not spoken of the soul. . .

* * *

John Greenleaf Whittier (1807-1892) has expressed his belief in rebirth in *Raphael* as under;

We shape ourselves the joy or fear

Of which the coming life is made
 And fill our Future's atmosphere
 With sunshine or with shade.

The Tissue of the Life to be
 We weave with colors all our own,
 And in the field of Destiny
 We reap as we have sown.

Still shall the soul around it call
 The Shadows which it gathered here.
 And painted on the eternal wall
 The Past shall reappear.

Think ye the notes of holy song
 On Milton's tuneful ear have died?
 Think ye that Raphael's angel throng
 Has vanished from his side?

Oh, no!-We live our life again:
 Or warmly touched or coldly dim
 The pictures of the Past remain,
 Man's work shall follow him !

* * *

Likewise, James Russell Lowell (1819-1891) says in *'The Twilight'* that he had lived before.

Sometimes a breath floats by me
 An odor from Dremland sent,
 Which makes the a ghost seem nigh me
 Of a something that came and went,
 Of a life lived somewhere, I know not
 In what diviner sphere. . .

A something too vague, could I name it,
 For others to know:

As though I had lived it and dreamed it,
 As though I had acted and schemed it
 Long ago. . . .

* * *

Another American poet, John Townsend Trowbridge (1827-1916), has said in *'Beyond'* about the ethereal visits:

From her own fair dominions
 Long since, with shorn pinions
 My spirit was banished.
 But above her still hover in vigils and dreams
 Ethereal visitants, voices and gleams
 That forever remind her
 Of something behind her
 Long vanished.

* * *

Emily Dickinson (1830-1886), also has given expression to belief in many existences in a poem, by saying that the body is *'An overcoat of clay.'*

Afraid? Of whom am I afraid?
 Not death; for who is he?
 The porter of my father's lodge
 As much abasheth me.

Of life? 'Twere odd I fear a thing
 That comprehendeth me
 In one or more existences
 At Deity's decree.

Of resurrection? Is the east
 Afraid to trust the morn. . . .?

* * *

Death is a dialogue between
 The spirit and the dust
 "Dissolve," says Death. The Spirit, "Sir,
 I have another trust."

Death doubts it, argues from the ground.
 The Spirit turns away,
 Just laying off, for evidence,
 An overcoat of clay.

* * *

Paul Hamilton Hayne (1830-1886) titled his poem *'Pre-existence'*. Here are its beautiful lines:

One sails towards me o'er the bay,

And what he comes to do and say
 I can foretell. A prescient lore
 Springs from some life outlived of yore.
 O swift, instructive, startling gleams
 Of deep soul-knowledge: not as dreams
 For age ye vaguely dawn and die,
 But oft with lightning certainty
 Pierce through the dark oblivious brain
 To make old thoughts and memories plain
 Thoughts which perchance must travel back
 Across the wild bewildering track
 Of countless aeons. . . .

* * *

Thomas Bailey Aldrich (1836-1907), has written in the poem, 'Metempsychosis' that the soul is immortal.

I know my own creation was divine. . .
 I was ere Romulus and Remus were;
 I was ere Nineveh and Babylon;
 I was, and am, and evermore shall be,
 Progressing, never reaching to the end. . . .

A century was as a single day.
 What is a day to an immortal soul?
 A breath, no more. And yet I hold one hour
 Beyond all price, that hour when from the sky
 I circled near and nearer to the earth. . .

We weep when we are born, not when we die!
 So was it destined; and thus came I here,
 To walk the earth and wear the form of Man,
 To suffer bravely as becomes my state,
 One step, one grade, one cycle nearer God.

* * *

Robert Frost, the famous American poet says in his poem 'Birches' that he will like to come back again,

I'd like to get away from earth awhile
 And then come back to it and begin over.
 May no fate wilfully misunderstand me
 And half grant what I wish and snatch me away

Not to return. Earth's the right place for love:
I don't know where it's likely to go better. . .

* * *

Vachel Lindsay (1879-1931), has said in *'The Chinese Nightingale'*:

Do you remember, ages after,
At last the world we were born to own?
You were the heir of the yellow throne—
The world was the field of the Chinese man,
And we were the pride of the sons of Han.
We copied deep books and we carved in jade,
And wove blue silks in the mulberry shade. . .

* * *

Stripped of its Lettering and Gilding,

Lies Here

Food for Warms,

But the work shall not Lost,

For it will, as he Believed, He

Appear Once More

In a New and more Elegant Edition

Revised and Corrected

By the Author"

And so will this book "*Eternal Drama of Souls, Matter and God*" appear again, revised and corrected by the Author; its present course ends here. □

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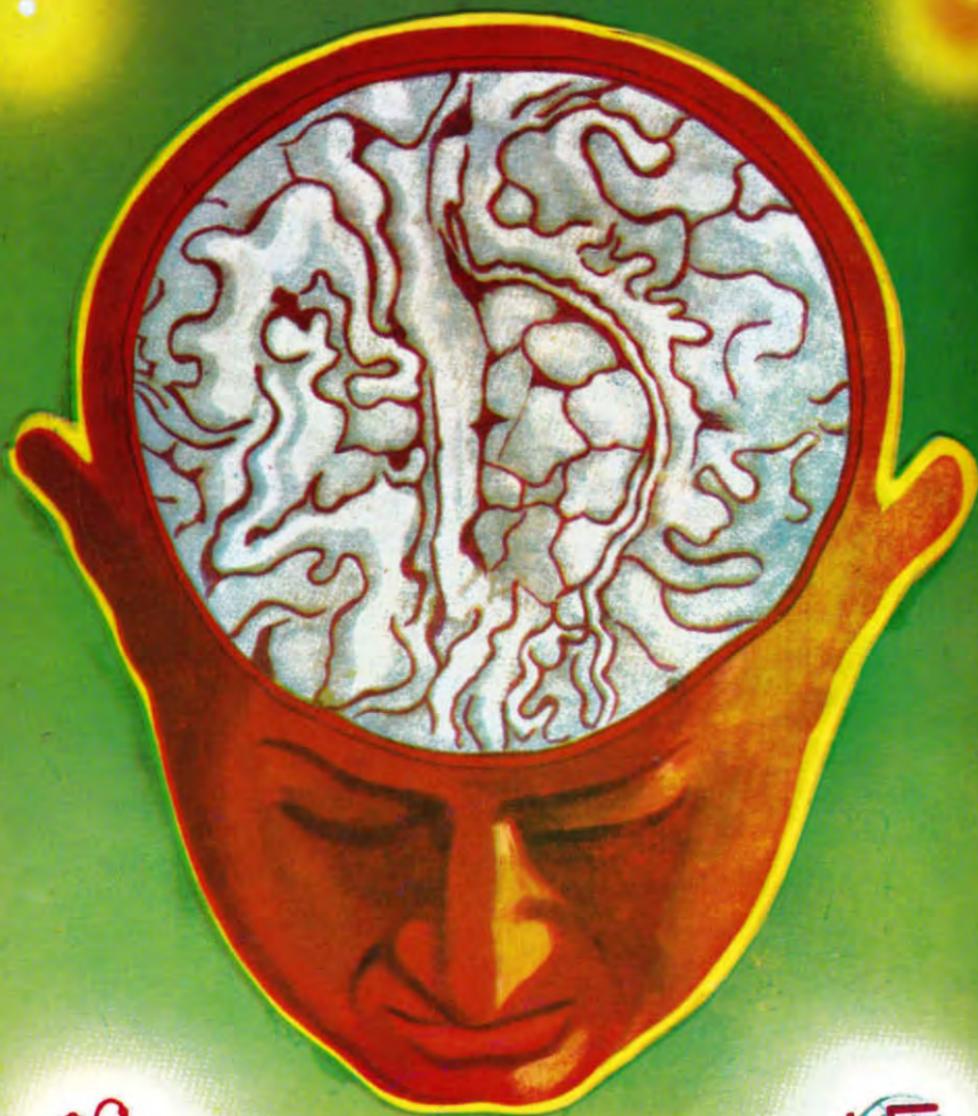
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Is mind or soul separate from the brain ?
Where in the brain does Soul abide ?
How does the Soul act through the brain-body mechanism ?



How does body-consciousness cause sufferings ?
How do attitudes and emotions affect health ?
How does soul-consciousness lead to happiness ?

