

Modern Science and the Higher Self

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[Page 1] THE putting together of the two phrases — *Modern Science* on the one side, and the *Higher Self* on the other, may strike some of you as strange and even as incongruous; for the ideas of Modern Science and of the Higher Self are so far removed from each other in the general mind that to bring them together as though they were closely related must seem to be unusual and grotesque. And yet I think I shall be able to show you as we go on, that these two things, the most modern and the most ancient, the thought of the West working by way of continuous experiment and the thought of the East working by seeking the Higher Consciousness science and recording its testimony, that these two are in our own days brought closely into touch with each other, so that they may aid and strengthen each other, may be found as servants in a common cause, and not as opposing and incongruous ideas. I want to show you, in the course of this evening's lecture, that there is in Modern Science a distinct recognition of the Higher Self, that there is an agreement between eastern and [Page 2] western science, conflicting with each other in their methods, that there is a mass of evidence compiled by western scientific men, which can be cited as showing the recognition by science of the Higher Self, of the existence of a Jîvâtmâ, a living Spirit, a living intelligence in man, and that the Spirit finds an ever imperfect instrument for expressing itself in the body of man. I want to show you how the face of Modern Science today is turned in a different direction from that in which it was turned some twenty or thirty years ago; I want to show you that there is a growing idea in the West that man in the waking consciousness is but a small fragment of the real man, that man transcends his body, that man is greater than his waking mind and consciousness, that there is evidence in plenty, daily forthcoming from most unexpected quarters, to show that human consciousness is far larger and fuller than the consciousness expressed through the physical brain. This idea of a larger consciousness, larger than the moral waking consciousness in man, the consciousness hitherto recognized in modern psychology, is one that has not only been suggested but is now beginning to be recognized by Modern Science in the West. Such is then the reason for putting these two phrases together, *Modern Science* and the *Higher Self* .

Now, I ought to define what I mean by the *Higher Self* . I am not using the phrase in the [Page 3] strictly technical sense which you find in the Theosophical literature, that is to say, the Jîvâtmâ in man. I am using it for the whole expression of that Jîvâtmâ above the physical. I am using it for everything which transcends the brain consciousness, which finds the brain too coarse and dense an instrument for its expression. I am using it, in short, to imply what generally goes under the term *larger consciousness* . If we can show definitely that experimental science has recognized human consciousness to be stronger, more energetic, more lively than the consciousness working in the physical brain, if we can prove the existence of yet higher realms, we shall enter on a path which leads to the highest invisible worlds. We climb step by step and see the larger consciousness unfolding itself more and more, stretching over an immense expanse, till at last we reach that to which men in every clime have always aspired, till the spiritual aspirations of man are vindicated. Such is the promise of infinite expansion which lies in the domain of an enquiry into the consciousness of man. The particular branch of Modern Science which thus comes into touch with the Ancient Science is that of psychology. Psychology in its modern form, climbing from below by way of experiment, comes into touch with the ancient psychology of the East; and this is a science of immemorial antiquity, whereas modern psychology is an infant science in the West.

Not that the [Page 4] West has had no psychology; in the Middle Ages and in the centuries that went before them there was a psychology but that psychology was repudiated in modern days. So that if you go back some thirty or some five-and-thirty years, you will find it distinctly stated by the representative European thinker that no psychology could be regarded as sane which was not based on the science of physiology.

The method of introspection, of the observation of one's own mental processes, was entirely discarded in modern thought. The method of studying the mental processes of others by inference was equally challenged and doubted. It was said, and there was some truth in the saying, that the moment you began to study your own mental process, that moment it changed by the very fact of your observation; and it was argued also that if you tried to study the mental process of others, you could only do it by inference and not by direct observation. It is necessary, it was said by modern thinkers, to first study the brain, the nervous system and mechanism in man, whereby thought is expressed. Thus arose the science which is called psycho-physiology, a science in which the nervous system and the brain, regarded physiologically, were studied, were analyzed, were measured, and it was considered impossible to understand thought without the knowledge of thought's mechanism, and without a knowledge of the [Page 5] process of the changes in that mechanism. It was considered that along this road of experiment better results would be obtained than would be obtained by other methods, and as science became more and more materialistic, as it reached the point at which Professor Tyndall made his famous statement that we were to look in matter for the promise and potency of every form of life, it was natural, if not inevitable, that men should begin to study thought by the study of its mechanism, of its apparatus, rather than by the way of the direct observation of its processes. As the method of experiment justified itself more and more by most interesting results, it became regarded as the only method which was worth the consideration of the thoughtful, of those untainted by superstition; hence the birth of what may be called a new science, the science of psychology, based on physiological experiments, a science which it was thought would confirm the statement that thought was the product of the brain, was really the outcome of the nervous mechanism in man.

So far were men inclined to go in making rash statements, that it was deliberately laid down that thought was produced by the brain. You had such a well-known, such a famous physiologist as the German Carl Vogt, declaring that the brain produced thought as the liver produced bile. That, perhaps, was the most extreme statement of the school of thought represented by many of the [Page 6] German thinkers. The very fact that such a statement could be made showed the line of thinking which Modern Science was following.

Now directly in opposition to that stood the immemorial psychology of the East. That was founded on the idea that man in his essence was not a body but a living Spirit, was not a mere form but an eternal Intelligence. Eastern psychology was founded on the notion that this living Intelligence, this entity, Jîva or Jîvâtâmâ, was the primary thing to be understood, that instead of considering thought to be the product of a certain arrangement of matter, the certain arrangement of matter was to be regarded as the result of thought. Instead of considering that life, consciousness, intelligence were the results of a mechanism, of an apparatus gradually built up by nature under the working of blind and unconscious laws, eastern psychology declared that the primary fact was the fact of consciousness, and that matter was but its garment, its instrument, the means of its expression, arranged and guided by intelligence, and only useful and interesting as expressing that intelligence in the various worlds of the universe. That is put strongly and clearly in the *Chhândogyopanishat*, and I quote this because we shall find in the latest science a strange and startling endorsement of the ancient thought. It is declared in that Upanishat that

Âtmã exists, and that the bodies and the senses are all the results of the will of Âtmã. You [Page 7] may remember how the passage runs, "The eyes are for the perceiving of that Being who dwelleth within the eyes". It was Âtmã who desired to hear and to smell and to think; hence arose the organs of the senses and the mind. Everywhere Âtmã is the primary fact; the organs, the bodies, come into form in order that the will of the consciousness may be expressed. Thus great, then, is the opposition between this western thought of some thirty years ago and the ancient thought of the East, the one beginning with the body out of which the consciousness grows, the other beginning with the consciousness by the activity of which gradually the bodies were formed. Keep this antithesis in mind as we follow out the lines of our study.

Come then to Modern Science, starting with the idea that thought must be understood by the clear understanding of its mechanism which many considered its producer. Great scientists began to study carefully the nervous system, and they studied it with a marvelous patience, they studied it with marvelous success; they measured the rate at which the impressions made on the surface of the body traveled to the nerve centers and there appeared as mental perceptions. They measured the rate at which the thought could travel along the nervous fibers. They measured the delicacy of perception related to the various parts of the mechanism. They reduced more and more all [Page 8] thought-processes to processes of chemistry, of electricity, to be measured by the balances, to be weighed, to be analyzed. They met with great success; they threw wonderful light on the mechanism of nervous apparatus. They went, in their researches, in their efforts to map out the nervous system, even into crime, the crime of vivisection. Thousands of miserable animals had their skulls taken off, their brains laid bare, and electrical shocks applied to the various parts of the brain, in order that by these diabolical methods some of the secrets of consciousness might be wrenched from nature.

But as they carried on their experiments, certain results appeared which seemed to challenge the starting point from which they had come. They were dealing with thought as the product of the nervous system, and necessarily, therefore, they thought that as the nervous system increased in perfection, the thought increased in complexity, in accuracy, in dependability. The constitution of the brain, the relation of the parts of the brain to one another, the functions that belonged to different portions of the brain, all these were mapped out, analyzed, explained. But as they began to study, or rather as they carried on the study, they found that there were certain results of consciousness that did not fit into the theory with which they had started. They found that there were certain results of consciousness which took place when the brain [Page 9] was not in its normal state, in its full activity, and that these could not be ignored, that no theory of consciousness could be true that did not explain these as well.

First the attention was turned to what were called the results of dream consciousness. The waking consciousness had been carefully examined. But what of the consciousness that went on when the man was asleep? The phenomena of sleep must also be explained. Interesting experiments began on the dreaming consciousness, on the functioning of consciousness when the body was asleep. Experiments were made with the usual care, with the usual ingenuity, with the usual patience. We have no time to deal in detail with them. Many of you can find for yourself a large amount of details in the famous book of Du Prel, *The Philosophy of Mysticism*. It seems sufficient for the moment to give you one example which covers a large class of experiments. They began by taking a sleeping man, touching his body at some point, and then waking him at the moment, and asking him: "What have you dreamed?" Very often there was no dream, no result, but in a large number of cases the man reported a dream. I will take one illustration. The back of the neck was touched. The man was asked: "What have you dreamed?" He said: "I dreamed that I committed a murder; I was brought to trial for the murder; I dreamed the whole of

the trial. [Page 10]

The speeches of the barristers, the summing up of the judge; I waited for the verdict of jury; I was pronounced guilty; I was doomed to death; I was taken away to the condemned cell; I remained there for so many days; I was led to the place of execution and, as the knife of the guillotine descended on me, I felt it touch my neck, and I awoke". Many such experiments were tried and put on record. What was the result that came out of them ? The stimulus to the dream came from the touch, as the touch on the back of the neck had suggested the idea of death by guillotine. How can we explain all that went on in the dream consciousness after the touch and before the awakening ? How did the dream consciousness pass through a long series of events in order to explain the touch, and how was it that the events which followed the touch seemed to precede and to explain it? That was the problem. After long discussion and cogitation, the suggestion was made that consciousness in the dream state was working in some medium other than the dense matter of the cells of the brain. The speed by which, the nervous impulse traveled from any part of the body to the brain had been measured and was known. But here was a long series of phenomena in consciousness which came between the touch on the body and the knowledge of that touch in the brain. There must therefore be some finer medium in which consciousness is working, through which the [Page 11] knowledge has gone more rapidly than through the nervous matter, so that there is time to build up the story to account for the touch before the consciousness of the brain knew it had been made on the body. The mind then, in sleep, was not thinking by the dense brain, but by some subtler medium which answers more rapidly to the vibrations of consciousness. Just as two men might start from the same point and one running quickly might run to the goal fast, turn back, and might meet the other long before he had covered a quarter of the distance, so consciousness in the subtler medium could travel faster, make up the story to explain, return and meet the consciousness in the physical brain, and give the story as the explanation of the touch that had been felt outside.

Such was a suggestion made to explain the rapidity of action in the dream consciousness. But much more than that was wanted to make a satisfactory theory. And science said: "It is not enough to have dreams examined in this way. Let us try to throw a man into the dream-state and examine him while he is in it instead of waking him out of it. Let us try to come into touch with him while the dream is going on". Then began the long series of experiments spoken of as hypnotic, where a man was thrown into a trance and thus a prolonged dream state was attained, a state produced by, and under the control of the operator. In the hypnotic trance, as you must know, the body is reduced to [Page 12] the lowest point of vitality. The eye cannot see, the ear cannot hear; lift up the eyelids and flash an electric light into the eye, there is no contraction of the pupil; the heart well-nigh ceases to beat, the lungs have no perceptible action; only by the most delicate apparatus can it be shown that the heart is not entirely still, that the lungs have not entirely ceased to contract and to expand. Now what would be the state of the brain under these conditions according to the theory that thought is produced by the brain ? The brain is reduced to the condition of coma, lethargy. It cannot work; it is badly supplied with blood; the blood it obtains is surcharged with carbonic acid and waste products, for it has not been supplied with sufficient oxygen. From such a brain, according to the modern theory, no thought ought to be able to proceed. But what were the startling facts that answered the enquirers, when they questioned the consciousness under these abnormal conditions ? Where there should have been lethargy there was increased rapidity, where there should have been stupor there was very much increased intelligence, where there should have been apparent death, there was life in overflowing measure, and the whole of the mental faculties were stronger and more vivid. Take the memory of the man in the waking state. Question him about his childhood, he will have forgotten many events, they have vanished into the past. Throw the man into trance, question him then [Page 13] about his childhood, and memory gives up the stores that apparently

had been lost, and the most trivial incidents are recalled. Take a man, read to him in his waking moments a page of a book that he has not before heard, and ask him to repeat it; he will stumble over a sentence or two, he is unable to recite it. Throw the same man into a trance, read the page to him then, and he will repeat it word for word even when the language is to him unknown. Memory, then, in the dream or trance state is immensely increased in its range and power. Take the perceptive faculties. As I said, the eye would not answer to the flash of electric light, but the faculty for perceiving the material world, of which the eye is the organ, finds expression in the trance state such as in its waking state it cannot exert. The man in the trance will be able to see through a barrier that blocks the waking vision, and tell you what is happening on the other side of a closed door, or what is within the body; tell you not only what is happening on the other side of an obstacle but what is happening hundreds of miles away. These are not the dreams of the Orientals, of the Theosophists; I am confining myself to cases where experiments have been put on record, where men who do not believe in the superphysical were confronted by facts they found it impossible to explain. I have myself seen experiments of this kind in the days before I was a Theosophist. This proved to demonstration that opaque bodies were [Page 14] not obstacles to the vision of the man plunged into the hypnotic trance, and this is now admitted by all students of hypnotism. Memory and perception then are increased in power when the brain is stupefied. So I might take you through one faculty of the mind after another and show you that in every case consciousness is stronger, more vivid, more active, when its physical mechanism is paralyzed.

Out of all these experiments there arose again the question: What then is the relation between consciousness and the brain ? It was established that, with paralysis of the brain, consciousness becomes more active than it was before.

The result of these experiments on the condition of mental faculties, was a proof that whatever the dream consciousness of man might be, it was far wider in extent, far more powerful, than the same consciousness working through the physical brain. Thus gradually way was made for the recognition of the fact, well-known to the eastern psychologists, that the waking consciousness is only a part, an imperfect and fragmentary expression, of the total consciousness of man.

The modern psychologists meanwhile were proceeding on a new line of investigation, and they began to study what are called the abnormal phenomena of consciousness, not only the normal and the commonplace but the abnormal and the exceptional, and at first the study along these lines [Page 15] seemed to carry most of the thinkers directly against the psychology of the East. Study in one school of psychology came to what seemed a terrible conclusion. It was the school of Lombroso in Italy. He declared, and many others followed him, that the visions of the Prophets, of the saints, of the seers, all their testimony to the existence of superphysical worlds, were the products of disordered brains, of diseased or overstrained nervous apparatus. He went further, and he declared that the manifestation known as genius was closely allied to insanity, that the brain of the genius and the brain of the madman were akin, until the phrase "genius is allied to madness", became the stock axiom of that school. This appeared to be the final death-blow dealt by materialism to the hope of humanity nourished by the grandest inspirations that had come to men through the geniuses, the saints, the prophets, the seers, the religious teachers of the world. Was all this truly but the result of disordered intelligence ? Was all religion but the grand dream of diseased brains and nerves ? Was religion really a nervous disease ? Are all people who see and hear, where other people are blind and deaf, neuropaths ? That became the terrible question set rolling by this psychological school. At first there was silence, caused by the very shock of the question. Men were so taken aback that they knew not how to answer them, knew not how to argue. Gradually, [Page 16] however,

there came from the ranks of thoughtful men a challenge. Granted that this is true that you have discovered, granted that these brains through which the visions of religion, the revelations of religion have come, are abnormal, is it after all so important, so vital a matter ? May it not be that as the higher worlds come into touch with man, they may well be able to affect only the most delicate brains, and in that very touch they may throw the delicate mechanism slightly out of gear ? Is it not possible that the subtle vibrations of the higher worlds to which the human brain is unaccustomed yet to respond, may in some individual differing from the standard of ordinary evolution, find an answer, and the higher world may speak through these abnormal brains to men ? The question of importance to humanity is not whether the physical brain of the genius is allied in its mechanism to the physical brain of the madman, but whether what comes through the brain of a madman and the brain of a genius are equally important to humanity. If we receive, through the disordered brain of a madman, a jangle of useless disconnected ideas and dreams, that result is worthless and we set it aside. But if through the brain of the genius, of the religious teacher, through the brain of a prophet, through the brain of the saint, come forth the highest inspirations, the loftiest ideas that have raised mankind above the brute and the savage, shall we cast [Page 17] them aside as well ? We judge the results not by the mechanism through which we have received them, but by their value to humanity and, no matter what the mechanism of the brain may have been, there remains the thought that has been given to the world.

Everything of which humanity is most proud, all its sublimed hopes and aspirations, the most beautiful imaginings of poetry, the transcendental flights of metaphysics, and the sublimed conceptions of art, are all product of neuropathy, of abnormal brains. When men tell us that the great religious teachers are neuropathy, that Buddha, Christ, S. Francis, are neuropaths, then we are inclined to cast our lot with the abnormal few, rather than with the normal many. We know what they were. They were men who saw far more and knew far more than we; what matters it whether we call their brains normal or abnormal ? In these men's consciousness is a ray of the Divine splendor; as Browning says:

Through such souls alone
God, stooping, shows sufficient of His Light
For us in the dark to rise by.

And if in those cases the brain change from a normal to an abnormal state, then humanity must ever remain thankful to abnormality.

That is the first answer which may be made to this statement of Lombroso, and you find a man like Dr. Maudsley, the famous doctor, asking whether [Page 18] there is any law that nature shall use only for her purposes what we call the perfect brains ? May it not be that for her higher performances she needs brains which are different from the ordinary, the normal, brains of man ? For, take the normal brain that is the product of evolution, the result of the past; that brain is fitted for the ordinary affairs of life, it is fitted for the calculations of the market place, for the observation of material things, for the work of the world, for carrying on the ordinary affairs of life; brought to its present state by the practice of such thinking, it is the best machinery for such work. But when you come to deal with higher thought, with abstract speculation, when you come to deal with religious ideas and with the possibilities of higher worlds, that brain is the most unfit of instruments; it is not delicately organized enough for the subtler vibrations of the higher worlds. For just as you may take a watch delicately wrought and by that watch you may measure small intervals of time which you could not measure by a clumsier mechanism, so is it with the different brains of men. The normal brain is the commonplace brain; the normal brain is the average brain. It has

no promise for the future; it is but the product of the past. But the abnormal brain, that which can answer the higher vibrations, the brain which, if you will, you may call by the insulting name of *morbid*, that is the brain which stands in the front of evolution, which is the [Page 19] promise of the future, and shows us what man shall be in the generations yet to come.

As the struggle went on another answer came. When, in times of unusual strain and unusual excitement, the brain answers to the higher vibrations, then it is very likely that nervous disease will accompany the answer. It is not always the brain of the genius to which strange experiences occur. They occur to people of all types; the average man and woman have their experiences. When a person has been rapt in ecstasy of prayer, or is fasting, and the body is weakened or is under great stress of excitement, the brain will certainly be affected far more easily than under normal conditions, and it will be able to register finer vibrations more easily than the so-called healthy brain. Take a very common illustration. You have a violin or a *vīnā*. You find that you can get from the string of your instrument a certain note, but you want a higher note; what do you do? You tighten the string. Just so with the human brain. It does not answer to the higher notes of life in its ordinary state; you must tighten the string by intense concentration or devotion, and then the brain will answer. But in the tightening there is danger; in the tightening there is possibility of breakage; and so in the normal brain tightened to respond to the stress of the subtler vibrations, there is the danger of nervous disturbance, [Page 20] there is the danger of unbalancing the mechanism.

How can that be met? We look to the science of the East, to its old psychology, and it gives us the answer — it is the only science that knows the answer — and this answer is strengthened by a modern discovery touching the mechanism of the brain. What is the process of Yoga? It is a process by which gradually, by physical, by mental training, the man develops a higher consciousness, and enables that higher consciousness to express itself in the physical body. Now every one of you, who knows anything of Yoga, knows perfectly that in Yoga there is a physical training, purification of the body, purification of the brain, which precedes the practice of any of the higher forms. You know that it has always been told that if a man would practice Yoga he must become an ascetic in his life. That he must give up liquor and the grosser articles of diet, that he must purify the body, and then purify the mind. You know that only as that is being done, can the mental Yoga be effectually performed, and then as the body is becoming purer day by day, consciousness develops, its higher powers show themselves through the purified brain without disease, without over-strain, without any injurious nervous or morbid results. Eastern psychology recognizes the danger of nervous disturbance, and enables the necessary sensitiveness [Page 21] to be obtained without the overstraining of the physical instrument.

But I said that a late discovery in Modern Science with regard to the brain had justified the process. What is the discovery? That the brain cells in which thought is carried on develop, and increase in size and in complexity by the process of thought; that as a man thinks, his brain cells grow; they send out processes which anastomose, join one to another, and thus make a very complicated mechanism by which higher thought can be expressed, that the whole process of the expression of thought depends on this growth in the cells of the brain, and that as you think you are really making your brain, you are creating the mechanism by which hereafter a higher thought may be expressed. The latest anatomy of the West has laid down this, that these cells grow under the direct impulses of thought, and that as you think you prepare the brain for better and higher thought; as the thought acts on the nervous cells, the nervous cells become more complicated, intercommunicate more fully, are more apt for the processes of thought.

The Yoga practice of concentration, of steadying the mind by fixing the thought, makes the brain cells grow, and thus creates an instrument adaptable for higher thinking in the future. As you carry on your meditation you are building fresh mechanism in the brain; as you carry on concentration, [Page 22] you are creating the apparatus for higher performances. Thus as the purification of the body, of the brain, of the mind, goes on in Yoga, you are building up the brain, making it able to come into touch with a higher world, without losing its balance, without losing its sanity and its strength. There lies the scientific justification of Yoga from the latest investigations of the West. What then does the East tell us as to the result of Yoga ? It tells us that man is a consciousness expressing his powers through the body which he moulds to his own purpose, that man's consciousness in the brain is far less than his consciousness out of the brain; that man uses the brain as an instrument on the physical plane, but is not limited by it, is not confined by it. That old theory of the ancient Sages is now being promulgated in the West by such men as Sir Oliver Lodge, who declares that the investigation of hypnotism, the study of consciousness, the study of abnormal states of consciousness, prove that human consciousness is larger than the consciousness in the brain, and that there is much more of us outside the body than is shown by the working of the brain. That is the last word on consciousness from the West, and it is identical with the testimony of the East.

Do you see now why I put together Modern Science and the Higher Self? The Higher Self is the consciousness beyond the physical, the larger, wider, greater consciousness which is our real Self, [Page 23] the Self of which the consciousness in the brain is only the faintest of reflections. This body of ours is only a house in which we dwell for our physical work; we hold the key of the body; we should put it in the lock by Yoga, and try and release the imprisoned consciousness. We are greater than we appear to be; we are formed in the divine image; we live not in this world only but also in other worlds; our consciousness outstretches the physical. In this planet of mud our foot is planted, but our heads touch the heavens; they are bathed in the light of the spiritual world far above, in the world unseen, bathed in the light of God. We may trust the consciousness and the testimony of the Saints, the Prophets, the Seers, and the Teachers of humanity. They told us what They knew, that which we may also know for ourselves. They were divine, showing Their divinity to the worlds. We are none the less divine, although our divinity is veiled. Let us claim our birthright, to know as They knew. These great Ones of the past, these Saints and Teachers of humanity, They are the promise of what we shall be in the future, and the heights They have touched in ages past, we also will attain in days to come. Every one of us is a *divine fragment*, every one of us an eternal Spirit, every one of us a deific life, striving to attain through matter to consciousness of our own divinity. That is the teaching of all faiths, that is the fundamental principle of life, of religion, of [Page 24] nature , and Modern Science is finding that even physical nature is not intelligible without the understanding of the higher world, without the recognition of larger possibilities.