

THE BIOLOGICAL FUNCTION OF THE THIRD EYE

by Richard Alan Miller, c1975.

From the time of Dionysius to the time of Plato, the cultures of the Mediterranean consented to the doctrine that claimed the existence of an order of ultimate reality which lies beyond apparent reality. This "paranormal" reality was accessible to the consciousness only when the "normal" routines of mental data processing were dislocated. It was Plato's pupil Aristotle who changed his teacher's game, separating physics from metaphysics. The philosophical temper of our present civilization, being scientifically and technically oriented, is basically Aristotelian.

No such rational figure as Aristotle arose in the Orient to a position of equal eminence. Because of this and other reasons, Indian anatomists and zoologists, who where no doubt just as curious as the Greeks about the origins of life, and as skilled in dissection, did not feel compelled to set their disciplines up in opposition to metaphysics. Physical and metaphysical philosophy remained joined like Siamese twins. As a result, the discipline which became medicine in the West evolved into a system known as Kundalini Yoga in the Hindu culture.

In Western terms, Kundalini Yoga can be best understood as a biological statement contained within the language of the poetic metaphor. The system makes the attempt of joining the seeming disparate entities of body and mind. It is a very complicated doctrine; in oversimplified terms, the system encourages the practitioner to progress through the control of a number of stages, called Chakras or mind-body coordination. A sixth, associated with clairvoyance and telepathy, is called the Ajna.

The physiological site of this sixth Chakra, the Ajna, is located in the center of the forehead. It is symbolized by an eye - the so-called third eye, the inner eye, or the eye of the mind. When this eye is opened, a new and completely different dimension of reality is revealed to the practitioner of yoga. Western scholars when they first encountered this literature, took the third eye to be an appropriately poetic metaphor and nothing else.

It was not until the middle of the nineteenth century, as the subcontinent of Australia and its surrounding territory came to be explored, that a flurry of interest centered upon a lizard native to the area, the tuatara (*Sphenodon punctatum*). This animal possessed, in addition to two perfectly ordinary eyes located on either side of its head, a third eye buried in the skull which was revealed through an aperture in the bone, covered by a transparent membrane, and surrounded by a rosette of scales. It was unmistakably a third eye but upon dissection it proved to be non-functional.

Though this eye still possessed the structure of a lens and a retina, these were found to be no longer in good working order: also lacking were the appropriate neural connections to the brain. The presence of this eye in the tuatara still poses a puzzle to present-day evolutionists, for almost all vertebrates possess a homologous structure in the center of their skull. It is present in many fish, all reptiles, birds, and mammals (including man). This structure is known in literature today as the pineal gland.

The gland is shaped like a tiny pine cone situated deep in the middle of the brain between the two hemispheres. Studies then began to determine whether this organ was a true functioning gland or merely a vestigial sight organ, a relic from our reptilian past. In 1959 Dr. Aaron Lerner and his associates at Yale University found that melatonin (1), a hormone manufactured by the pineal gland, was created through the action of certain enzymes on a precursor chemical which must pre-exist in the pineal in order for it to be transformed into melatonin. This precursor chemical turned out to be serotonin (2).

It was E.J. Gaddum, a professor of pharmacology at the University of Edinburgh, who was the first to note a connection between serotonin and mental states of being. In a paper published in 1953, he pointed out the fact that LSD-25 was a potent antagonist to serotonin. Serotonin is not an unusual chemical in nature; it is found in many places - some of them odd, like the salivary glands of octopuses, others ordinary; it abounds in plants such as bananas, figs, and plums. What then is its function in the human brain?

The task of exploring the role played by melatonin, and its precursor serotonin, was undertaken by a biochemist, Julius Axelrod. He found that melatonin suppressed physiological sexuality in mammals. If test animals were stimulated to manufacture excessive amounts of melatonin, their gonads and ovaries tended to become reduced in size, to shrink, to atrophy. The estrous or fertility cycle in females could likewise be altered experimentally by doses of melatonin.

Now two most curious functions had been attributed to the pineal gland, the third eye of the mind:

- (1) It has now been established that this organ produced a chemical which had, indirectly at least, been associated with psychedelic states, and
- (2) It also produced a chemical which suppressed functional sexuality.

The literature of religious mysticism in all ages and all societies has viewed the mystical passion of ecstasy as being somehow antagonistic to, or in competition with, carnal passion.

Axelrod and his co-workers also discovered another incredible fact: the pineal gland produces its chemical according to a regular oscillating beat, the basis of this beat being the so-called circadian rhythm. They found that the pineal responded somehow to light conditions, that by altering light conditions they could extend, contract, or even stabilize the chemical production rhythms of the pineal.

The fact that the pineal responds to light, even if this response is indirect via the central nervous system, has some fascinating and far-reaching conceptual applications. There are many behavioral changes which overtake animals as the seasons change, and which can be produced out of season in the laboratory by simulating the appropriate span of artificial daylight. Do such seasonal changes in mood and behavior persist in humans?

The great religious holy days of all faiths tend to cluster around the times of the solstices and equinoxes. Is it possible that the human pineal gland responds to these

alterations in length of daylight? Changing the balance of neurohumors in the brain may perhaps effect a greater incidence of psychedelic states in certain susceptible individuals just at these crucial times. This possibility provides an entirely new potential dimension to our secular understanding of the religious experience.

The pineal gland has thus been referred to as a kind of biological clock, one which acts as a kind of coupling system; perhaps maintaining phase relations within a multi-oscillator system; a phase coordinator for multiple bio-rhythms. The pineal is a "cosmic eye;" it is aware of celestial rhythm. It "tunes" our biochemistry to those subtle rhythms not observed by the normal eye, like seasonal and lunar changes rather than daily ones. Serotonin can be seen as the "intensity knob" of the brain. As the level of serotonin increases, so does the level of activation of the cortex.

Strong suspicion has fallen now on serotonin as being one of the principle agents of the psychedelic experience. Studies now reveal that LSD-25 strikes like a chemical guerrilla, entering into receptor granules in the brain cells swiftly, and then leaving after a very short time, perhaps ten to twenty minutes (in animals). When the bulk of LSD-25 has left the receptor granules, it is replaced by what seems to be excessive, or super-normal amounts of serotonin. The LSD-25 creates what is called a "bouncing effect," like a spring pushed too tight. When the LSD-25 leaves the system, the serotonin springs back and overcompensates.

For most of us, most of the time, our world is a Darwinian environment. We must manipulate ourselves within it, or attempt to manipulate it in order to survive. These survival needs tend to color our appreciation of this world, and we are continually making judgments about it. Some of these judgments are based on prior personal experience, others are provide by the culture. This "recognition system" is one of the elements disrupted by the psychedelic state.

The principle question concerning psychedelic states remains: How much disruption can the system tolerate? The problem of how to maintain a certain madness while at the same time functioning at peak efficiency has now captured the attention of many psychiatrists. There seems to be a point at which Edgar Allen Poe's "creative madness" becomes degenerative, impeding function rather than stimulating it.

In light of this analysis, a shaman can be seen to be uncoupling his internal bio-sensor from the universal inputs. He gets "drift" where he is rushed toward new signal-to-noise ratios. The particular rituals are set up to disconnect the shaman from his social and cosmic environment. This is done through the ritual use of hallucinogens; they de-synchronize his internal rhythms. This de-synchronization produces more noise in his awareness. It also expands that awareness. The rituals are so designed as to contain elements which focus or tune that "noise" and direct the expanded awareness.

Man is unique by virtue of being possessed by intuitions concerning the scope of the mysterious universe he inhabits. He has devised for himself all manner of instruments to prove the nature of this universe. The beginnings of scientific understanding of shamanistic ritual and the function of the third eye provide man with powerful new techniques for exploration. This will allow him to penetrate the vast interior spaces where the history of millions of years of memories lies entangled among the roots of the primordial self.

(1) The chemical substance melanin is the pigment which darkens skin color. It is located in specialized cells scattered through the topmost layer of skin. Melatonin was found to be the substance responsible for causing the contraction of melanin-producing cells.

(2) Serotonin is of the same chemical series of indole alkaloids which include psychedelic drugs such as LSD-25, psilocybin, D.M.T. and bufotenine. The hormone serotonin is also known as 5-hydroxytryptamine.

ADDENDUM:

06-01-92 This paper was originally written in 1975 for several scientific publications, and was reprinted IN THE CONTINUUM (Vol.II, No.3) in 1978. At that time, I made a very important discovery which was added to THE HOLISTIC QABALAH series. I thought to share that discovery at this time, to complete my thoughts on this subject:

In 1979 I was in a very serious accident, where I was crushed between a brick wall and an out-of-control automobile. My left knee was crushed, the parenteal nerve was severed at the knee. I was going to lose my leg! I postponed surgery, did some specific rituals with Kundalini and my "third eye," and now have complete regeneration of nerve tissue - something now believed by mainstream medicine as physically impossible. Here is how I did it:

There is a "chill" which runs up (Gopi Krishna) or down (Sri Aurobino) the spine at certain times of the week. You can, in some situations, actually induce this event. Sometimes, you can make our whole body shake. This is the physical aspect of Kundalini. On a physical plane, there are a series of small nerve fillia that stick out from the spine - almost like a "ladder."

The "chill" is an EM-wave that is traveling up (or down) the spine, as each nerve fillia begins to oscillate. The most interesting fact about this is that the EM-field frequency is in the visible light region! This is what most religions refer to as "The Light." And what is at the very top end of this wave-train of light? The pineal gland!

Now, if you stimulate the pineal gland on a regular basis - let's do it 3 times each day, what happens next is wonderful. The pineal gland is "light sensitive," its primary function now understood to regulate the body for seasonal changes (health). This so stimulates the pineal gland that it sends out a signal down the neural cavity. The neural cavity, of course, connects the pineal gland at one end with the thalamus at the other....

What happens is that a resonant cavity oscillator is set up in the neural cavity, causing it to modify the glial cell it normally manufactures. If there are enough trace minerals in your diet, this stimulated neural cavity will actually create true nerve cells, rather

than those associated with sheath (gleal). If you take a trace mineral supplement and do this exercise, you can regenerate nerve tissue!

The actual process took some 5 months of daily meditation, as the actual consistency of nerve tissue is somewhat like that of Vitamin E - very viscous and slow to travel down my central nervous system to my knee. I no longer have nerve loss of any kind. This was documented by Clinic 7 (Pain Clinic) at the University of Washington in 1980. I now walk normally, although I still have some structural problems.

This is but one application of the principles outlined in this paper. Serotonin can also be considered a "Gate" for accessing other dimensions not accessible to "normal" consciousness.