

# BIOENERGY

## *update*

By Dr Bernard Brom

*The Bioenergy Association of South Africa was initiated in 1992 in order to create an interest in the subject of Bioenergy. We will attempt in these reports, which will appear bimonthly in the Journal, to keep medical doctors updated on the latest development in the field of medical bioenergy.*

In our earlier *Bioenergy Update* columns we concentrated on some of the more philosophical issues regarding Bioenergy. In this Column I will be looking at what we actually know about electromagnetic energy and fields within the human body-mind system.

Since the beginning of the last century it has been possible to detect the electrical signals from the heart. This was first demonstrated by Waller in 1890 using the capillary electrometer described by Lippman in 1873. Electrodes placed on the limbs and over the chest area above the heart are able to pick up the action potentials of the order of millivolts in amplitude at the body surface. Of special interest is the fact that these action potentials must be passing throughout the whole body in order to be picked up at the end of the limbs. One means of communication used throughout the world is via electrical cables. This means that if the heart had something to say it could communicate this information or directive throughout the body. According to Chinese traditional medicine the heart is regarded

as the "Emperor" of all the functions in the body. The electrical recording of the heart suggests a mechanism for this idea. The English language is also rich with idioms regarding the heart eg change of heart, heavy heart, the heart of the matter, to win the heart of, do one's heart good, heart and soul, set one's heart on, etc. suggesting perhaps that there is more to the heart than just a mechanical pump.

I am perhaps making a issue of this but would like to pursue the matter a little further.

In regarding the heart as a pump only, is modern medicine with its present reductionistic approach not missing the point about the heart? Man is not just a body but body /mind/spirit. Does heart therefore not have spirit also ie is there not also something more subjective about the heart and its function? Man is not only physical and objective and that which can be measured but has a whole range of subjective characteristics which are not measurable. According to my dictionary the heart is also thought of as the vital centre of one's being, emotions and sensibilities, the seat or repository of emotions. It seems to me that modern medicine in its scientific pursuit of understanding has somehow taken the heart or spirit out of man. The heart has become just a pump but does it fit in with our own experience? Do we not as human beings actually experience something very special as arising from our chest area and do we not bring our hearts together when hugging?

There is a great need to bring the experience of ourselves and the world around us as we actually know and experience it into a communication with the

body of information that is called the science of medicine. Dissection of the body should not detract from the information we have from our own experience just because medical scientists regard such information as anecdotal. It is this anecdotal information which over thousands of years built up the body of information which is known as Traditional Medicine. This medicine was the direct experience of learned and sensitive men and women who did not require scientific instruments to learn about life and the nature of the body.

The heart as "Emperor" of all the functions of the body takes on new meaning when we can put back its soul and recognise that heart is not just a physical organ which pumps the blood around but has a "soul" quality as well.

I believe we need to humanise the body of man that we have dissected for so long and found nothing except flesh and bone. There is something else, that will not be found by machines, but is known by any man who wishes to know it.

The electrical recordings of the heart go some way to bridging this gap. To assume that this recording is nothing more than a measurement of the electrical impulses passing through the muscles and stimulating contraction, with no influence on any other part of the body is only an assumption. There are still enormous black holes in our understanding of the way humans function, and especially in the control mechanism underlying all the biological systems, to assume that we can ignore this electrical impulse from the heart flowing throughout the entire body.

When Galileo put the telescope to his eye and looked into the sky he saw that the moon was only a rock and in that moment all the gods vanished. The moon was no longer Mother Moon and the sun Father Sun but rather just a dead dark rock and burning hot gases. Spirit and gods disappeared from the heavens. Something similar happened to man when we began to dissect him. The electromagnetic connections disappeared but also the Spirit and we were left in the words of General Smuts "... with dead matter." Life slipped through our fingers when we divided the whole into parts. We gained some-

thing and lost something. What we gained is both good and very good in parts but what we have lost may be all important.

There are, of course, many other electrical recordings possible in the body of man. The electromyogram is a recording of the propagating wave of muscle action electrical potentials.

The EEG is the electrical recording of brain activity and various kinds of patterns are identified ie alpha rhythm, beta rhythm, delta waves are present during deep sleep, and theta waves. The relationship between brain and mind is certainly not clear and has not been seriously addressed. I believe again that this is because the electrical recordings and the meaning thereof has been oversimplified and assumed to be merely artifacts of biochemical processes.

It should be remembered as indicated in the previous *Bioenergy Update* that behind all biochemical processes, are changes of electrons, from one orbit to another, or due to a loss of electrons generating electrical charges. Behind every electrical current is the movement of electrons. It is perhaps in the understanding of the movement of electrons and why electrons fly out of orbits that we may begin to understand the control mechanism involved in biochemical processes. There must be controls and this is apparent in everything that happens in the body. These controls are dynamic and very finely tuned and there is, at present, no explanation. We do not know the controls, for example, of the hormonal cycles, the length of a pregnancy, the onset of puberty etc and besides all the daily controls of temperature, pH etc. One has the feeling that somehow these controls must also have something to do with the mind/brain but are mind and brain the same? Is mind not perhaps also the other side of the coin? Like the heart, which is perhaps not only a pump but the Emperor of all systems, does the brain not also have a "heart"? Has our dissecting knife not allowed the spirit to slip through our fingers so that we are left only with flesh and bone. How many honest scientists really expect to find a mind in the brain? Our electrical recordings of the brain may be the bridge which will eventually link doctors again to a way of bringing back mind into man. It is important to clari-

fy this problem because doctors are often telling their patients that it "is all in the mind." Do they mean the brain because then they should say it "is all in the brain." Somehow I think their gut feeling is that the mind and brain are not exactly the same. Again we deny our experience because science tends to suggest that mind and brain are the same.

The experience of most men is that mind is much greater than brain. Recent research in memory mapping suggests that there is no specific locality for this in the brain but it exists as a fluid pattern of relationships. Thus one is dealing not so much with form but with function. It is the network of relationships which are important rather than the individual parts which can be removed without loss of memory. This network which somehow holds the memory is unlikely to lie within the biochemistry or anatomy of the brain but is much more likely to be within the more subtle realm of which the electromagnetic fields within the brain may be connecting points.

I do not wish to suggest that the electrical recordings of the heart are equivalent to the Spirit of the heart but this information can help us to bridge that gap between the heart as a pump and "heart" as the soul of man.

Similarly I do not wish to suggest that the electromagnetic properties of the brain are equivalent to the mind, but merely to offer an idea which can link us to mind in some way. Electromagnetism allows one to open a whole dimension of thinking which brings us so much closer to our experience of ourselves. For example, resonance effects, fields of force, receiving antenna and the sending of information, the co-ordination of information, all are very appropriately the area of electromagnetic fields.

For those of us who believe in intuition and for those who believe in God, *Mind* and not *Brain* must be the mechanism which makes this possible. Intuition allows us to transcend time and space and to know God, which is more than just a belief in Divinity and not merely a condition of the brain's biochemistry.

Readers of this column will notice that I constantly make a special effort to try and make a number of

statements over and over again in varying contexts and I would like to spell them out very clearly as I end this column for this edition of the Journal.

1. The biochemical/anatomical viewpoint of modern conventional medicine is providing us with a very limited viewpoint of man. This viewpoint is, to a large extent, at odds with the direct experience between one human and another and of one's own understanding of oneself.
2. The recognition of man as an electromagnetic being adds another dimension which brings our understanding closer to the experience that we have of ourselves and others.
3. Even this understanding of man is however limited and we should not imagine that it would ever be possible to measure man completely with machines.
4. The direct experience of sensitive human beings (as was the method adopted by all traditional approaches since ancient times and is still the method used by individuals) together with measurements by machines will, in the end, I believe, come closest to the truth.

#### **Books of Interest:**

Briggs J, Peat FD. *Turbulent Mirror*. Harper & Row, New York, 1989.

Smuts JC. *Holism and Evolution*. N & S Press, Cape Town, 1987.

Smith CW, Best S. *Electromagnetic Man*. St Martin's Press, New York, 1989.