

BIOENERGY

update

By 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 this article we will consider the meaning of the word "Energy" and what it is that we wish to measure? Science has, to a large degree, appropriated the word *energy* to mean that which can be measured with instruments. Any other form of energy is subjective and therefore discounted as being of any interest to scientists. This has tended to polarise those who regard themselves as purists in science and those who have a much more open minded view of the word energy. Kinetic energy, mechanical energy, potential energy, magnetic energy, chemical energy, nuclear energy, radiant energy etc are clearly within the limits of the purists. Man's every day language however, has constant reference to the energy of love or anger, the power of social changes, the stirring of a man's voice, all which have the power to move and create a different balance of forces. There is also the power to heal and the energy of healing as practised by many so-called healers who either call upon a higher power to do the healing through them or claim to use an energy emanating from their hands. Acupuncture also claims to manipulate energy and

remove blocks to the flow of energy and Homeopathic remedies have no biochemical substance which differentiates one from another, but rather some form of energetic information imprinted on the water molecule. One cannot ignore either the question of emotional energy and its effects on biochemistry and mind and its influence on the emotions and the much more enigmatic spirit and other "higher" powers.

It seems strange that medicine, which has to do with healing man, should have so closely identified itself with that aspect of science which is clearly purist in its understanding of energy, despite the fact that man's experience of life is certainly not limited to that which science can measure. The scientist, when he walks out of his laboratory, is no longer confined to, or interested in, the laws of science when he meets his girlfriend downstairs. What happens in that relationship is totally unexplainable to any scientist. Clearly, what happens in that meeting cannot be measured, but there is common agreement amongst all independent men and women, that something clearly takes place, and this should be enough to make this experience authentic and scientific. Are we to depend on machine measurement to confirm the reality of our experience? Ancient man had no machines apart from his own sensitivity and yet was able to create masterful works of art, great civilisations, the pyramids and other great edifices, acupuncture and the useful function of herbs.

The smallest structural unit of an organism that is capable of independent functioning is the cell. All matter can be split into smaller and smaller pieces.

A molecule is the smallest piece that keeps the characteristic of the original substance. If broken down further, we eventually discover the atoms from which molecules are made. The water molecule, for example, is made from two atoms of hydrogen and one atom of oxygen. Atoms are the building blocks of matter. Interestingly enough, atoms are too small to be seen and are therefore, in a way, absolutely subjective. We only know about atoms because of the effects on various materials and not because scientists have actually seen an atom. No one has seen emotions either, but certainly it is not difficult to see the manifestation of emotions in the way the person speaks, moves etc. It seems almost more difficult to measure these changes even though they are more obvious than the pathway of an atom.

There are about 90 different kind of atoms and they are known as elements eg oxygen, iron, sulphur etc. It is these elements which make up the chemical compounds. The atoms are differentiated by subatomic particles which are the number of electrons, protons, and neutrons making up its structure. All the material objects that we see around us are made up from these basic atoms.

This process of breaking matter apart and examining the parts is called reductionism. Something does seem to be lost along the way in this process of breaking wholes into constituent parts. Human beings become a body, made up of molecules and atoms. This kind of science when applied to human beings or any other object for that matter, becomes a very "cold", "hard", "objective" science which seems to rob human beings and life of its warmth, colour, beauty and subjective meaning. I always love the statement of General Smuts who said that "Life slips through our fingers" when we reduce the whole to its parts and examine those parts in order to understand the whole. Something disappears when we examine blood, stained and fixed on the slide. Something disappears when we reduce the herb to its component parts and then try and synthesise its "active" ingredient. Something disappears when a man dies that seems to be much more than the fact that physical functions have stopped.

What is it that makes up the whole and how does it

differ from the parts. This can be easily understood if we compare a mixture to that of a compound. In a mixture the various elements are easily identified and can be easily separated. In a compound the elements seem to disappear and give up their own unique properties to form an entirely new substance with very different properties from the original substance. The elements which make up the mixture are still present in the compound but there has been a qualitative change and a change in function.

It is in the processes required by reductionistic science which breaks the whole, that something is lost. The system, of course, falls apart and it is no longer possible to measure the links which draw the elements together in their unique way. It is these links drawing the elements together that creates a system which functions as one whole piece. The members of a rugby team play together in order to achieve the goal of winning. The captain may be a dentist and the hooker a farmer, but in the team they are each merely a member of the team with a common goal. After the match when they go home they each assume their own individual goals. As a team they are linked together, not by anything physical, but by an idea which has the power to motivate them in a particular way.

The world of biological systems is not very different. The atoms or elements bind together to create the molecules which combine again with other molecules to create complex systems. Complex systems have specific goals and properties which are very different from its individual constituents. Jumping to conclusions about the system by examining its constituent parts is exactly what it suggests, ie jumping to conclusions. This is not an exact science. I have no problem with this approach because it is a useful exercise, but one needs to recognise what is being done and its limitation.

The rugby team is held together by an idea, by a plan of action, by information which is passed from one team member to the other. They are also influenced by factors outside their own space, which is the field. The weather may affect their play, the spectators have a powerful effect and the memory of their trainer's coaching will be ringing in their ears.

Similarly, in a system, the elements function together. The goals of the system become more important than the goals of the individual constituents.

Biological systems are open ended systems, ie they are not separated from other systems and conditions around them. Human systems appear to be open outwardly to the environment and inwardly to "spiritual" dimensions or spaces.

We can, at this point, come back to our initial enquiry about energy. That which makes a system unique is not its elements. There are no more than about a total of 70 different elements in the universe and every human being has the same grouping of elements.

What makes a system unique is the kind of information it stores and the way it carries out its goals. The atoms/molecules, as individual elements, have little to suggest the possibilities of complex systems. Reducing complex systems to parts and studying the parts leaves one with a sense of emptiness about this kind of science. Man is reduced to vitamins, minerals, fats, carbohydrates etc and must we assume that somehow they have learnt to feel and think.

Electromagnetism and magnetism are, and were, permanent features of the biosphere and have probably played some role in the evolution of living organisms and will be reflected in some way or other in their vital processes. Is it these fields which disappear when complex systems are taken apart? There is increasing evidence to suggest that this is, in fact, so. This should not really surprise us. The mechanism for communication systems were already in place even before the first stirrings of biological systems showed on the scene. Magnetic fields and electromagnetic fields, as indicated above, were already part of the biosphere. It seems more likely that either the physical aspect of the system internalised these energy fields or there was a collapse of these fields due to specific conditions at a particular time in space something akin to the formation of stars.

What we have then is complex open-ended systems with fields of forces of various kinds and physical

elements drawn together in such a way that they function in a coherent and unified way with common goals. These goals and links disappear from that part of the system when taken apart. The system must readjust to its new configuration.

When seen in the light of the above discussion, it seems strange that modern medicine has reduced man to parts, with each part subject to a different speciality, and that most research should consider merely the biochemical aspects of man.

Recognising man as a system which has a physical component resting, as it were, within a field of energetic activity clarifies an enormous amount regarding what we know of man. This would help to explain the exceedingly complicated and efficient feedback loops and the incredible speed at which information is transferred throughout the body. It can also help us to conceptualise a framework to understand emotions and mind, not as biochemistry, but rather as bio-information contained within an electromagnetic field having a reflex influence on the material biochemical/anatomical body.

The system is open-ended and therefore an interaction between the fields within and outside are inevitable. This could explain the spread of ideas within society, the good or bad "vibes" that is the common experience of man, the special "feel" that a person may have for animals or plants, the special knowing between identical twins, even when they are not in direct contact etc.

I will be expanding many of these ideas in further updates, as they have seeds of a great deal of research, which has already been achieved but not published in the usual medical journals, which have become too specialised for this kind of research.