It is the glory of God to conceal a thing:
but the honour of kings is to search out a matter.
(Proverbs 25:2)

2

The Living and The Non-Living

Responses of the Living and Non-Living

At this stage, we take a look back a hundred years at the groundbreaking research of an Indian pioneer of science (physicist, inventor and plant physiologist) Sir Jagadis Chandra Bose*[1,2,3] of Calcutta. He began his career as a physics lecturer at Calcutta's Presidency College and later became a professor there (1885-1915), which he left to found and direct (1917-37) the Bose Research Institute, Calcutta. Bose earlier went into research of wireless transmission of radio waves. Attracting the attention of the Royal Society of London, he published in their journal a paper on the "Determination of the Wave Length of Electric Radiation," and was later awarded a doctorate from London University. Continuing his work with radio, he noticed in 1899 that certain metallic components in his radio receivers lost their sensitivity with continuous use; they exhibited a type of fatigue characteristic of human and animal muscle tissue, and they recovered full sensitivity after a period of rest or unuse. This led him into further research. His design and invention of highly sensitive instruments for the detection of minute responses by living organisms to external stimuli enabled him to discover parallelisms between animal and plant tissues and, even more remarkably, similar responses by "non-living" inorganic substances such as metals.

Among Bose's initial discoveries, iron oxide for example was found to experience "fatigue" just like animals and people do. The "curves of response" between animal muscle and those of iron oxide were similar. Just as the fatigue of muscle is removed by rest or gentle massage or temperature variation or by a warm bath, so it is essentially the case with the iron oxide. Removal of fatigue by treatments exactly parallels, according to Bose. Among the

experiments, metals like tin, zinc, brass and platinum were dosed with various poisons and narcotics and their "curves of response" were startlingly similar to those of poisoned plants and animals! These remarkable discoveries make it difficult to draw a line, according to Bose, and say "here the physical phenomena ends and there the physiological begins. The continuity of the phenomena in the living and the non-living does not seem to be broken."

A paper accepted by the Royal Society of London in May 1902 reads: "The various phenomena connected with the response in inorganic substances – the negative variation – the relation between stimulus and response – the increased response after continuous stimulation – the abnormal response converted into normal after long-continued stimulation – the diphasic variation – the increase of response by stimulants, decrease by depressors and abolition by poisons so-called – all these are curiously like the various response-phenomena in living tissues."

I could not help but took a long pause to reflect upon the implications of Bose's remarkable experimental results when I first read about them some twenty years ago. Their impact on my mind was quite strong and it still lingers as I think about them. Did Bose discover a kind of rudimentary consciousness in simple metals? Do plants have consciousness as animals and man do? What is consciousness? The concept of "Creation *ex Deo,*" as the answer, began to filter through. Bose must have discovered what may be a fundamental expression of the works of the Divine. Does this fundamental expression also reflect a similar fundamental expression within the Divine Itself? We will explore this possibility as we continue.

Modern quantum science tells us that matter at its sub-atomic level is made up of four fundamental forces: electrical force, magnetic force, strong and weak nuclear forces. At the sub-atomic level, we are told there also exists a number of sub-atomic particles given different names. Could these sub-atomic particles and their binding forces together explain the phenomena discovered by Bose? If so, these sub-atomic particles and forces at some level must interface with the stuff or internal resources of God or His Spirit.

Bose, in later experiments, also demonstrated that "all the characteristics of the responses exhibited by the animal tissues, were

also found in those of the plant." Some descriptions and summaries can be given as follows:

a. Plants appear to have a nervous system like our own.

b. Like the human biological system, plants also are subject to periodic rhythms – they have their periods of sleep and awakening. Plants, too, are subject to exaltation and depression. At certain hours of the day, they are fully conscious and active and at other hours they are dormant and lazy.

c. Poisons have as much effect on plants as on human beings and applying antidotes can revive them. Certain poisons, which in normal doses killed the plant but sufficiently minute doses stimulated plant growth and flowering, were found to have precisely similar effects upon the metals. This is really remarkable! An "enemy" can be converted to be a friend – like the dilute substances used in homeopathic medicine. Does consciousness lie at the root of matter?

d. Among other experiments, carrots and turnips (supposedly non-sentient) obtained from the greengrocer turned out to be highly sensitive, even in their roots!

e. Chloroformed plants were as successfully anaesthetised as were animals; the plant's response disappeared just as it does for the animal and the plant recovered to respond anew when the chloroform effect wore off. During transplantation, plants feel pain; they could be made unconscious using a chloroform-like chemical, just as in the case of human beings.

f. A high amount of carbon dioxide (stale air) could suffocate plants and they could be revived with oxygen, just as in animals.

g. The response of animal and vegetable skins (grape and tomato on one side as against frog, tortoise and lizard on the other) were shown to be substantially alike.

h. Also similar were the responses of "digestive organs" of some carnivorous pitcher plants and those (stomachs) of the frog and other animals.

i. Plants grow every second by 1/50,000th of an inch.

j. Thin and wiry plants are far more susceptible to excitement than stout and robust plants. They too, need rest and without it, become flabby and depressed.

k. Plants grow in twists and turns, not in a perfect straight line because they have positive and negative electrical charges in them. Owing to this, one part of the plant grows in the forward direction and the other grows in the backward direction. These pushes and pulls affect the structure of the plant and they tend to curve slightly, instead of growing straight.

l. Plants always grow towards light even when kept in a dark place.

m. The roots of plants absorb water but even without roots plants can absorb water. When the root is cut and stem is placed in water, it starts absorbing water. Moreover, when a plant is placed upside down in water, the leaves and the stem start absorbing water.

n. The cells of a plant expand and contract much like a human heart.

o. Plants shrink a little during the night.

p. Plants die when placed in 60° C warm water.

q. How does the plant finally die? In human beings, at critical junctures, a spasm passes through the entire body and similarly in plants a great contractile spasm takes place. This is accompanied by an electrical spasm. In the script of the recording device, the line suddenly reverses and then ends. This is similar to the death spasm observed in animals. They "gave up the ghost."

Bose's genius and his "earth-shaking" immense amount of work gained recognition among the Western scientific community though not without some initial resentment and controversies. Bose in a quarter-century of research published several massive books*[4] totalling over 2,500 pages and more than 1,000 experiments.

In the Royal Institution discourse (May 10, 1901), Bose marshalled the results he had been obtaining for the previous four years and

demonstrated each of these by a comprehensive series of experiments. These were his concluding words from his speech:

"I have shown you this evening autographic records of the history of stress and strain in the living and non-living. How similar are the writings! So similar indeed that you cannot tell one apart from the other. We have watched the responsive pulse wax and wane in the one as in the other. We have seen response sinking under fatigue, becoming exalted under stimulants, and being killed by poisons, in the non-living as in the living.

"Amongst such phenomena, how can we draw a line of demarcation, and say, here the physical ends and there the physiological begins? Such absolute barriers do not exist.

"Do not these records tell us of some property of matter common and persistent? Do they not show us that the responsive processes seen in life have been foreshadowed in non-life? – that the physiological is related to the physico-chemical? – that there is no abrupt break, but a uniform and continuous march of law?

"If it be so, we shall but turn with renewed courage to the investigation of mysteries, which have too long eluded us. For every step of science has been made by the inclusion of what seemed contradictory or capricious in a new and harmonious simplicity. Her advances have been always towards a clearer perception of underlying unity in apparent diversity.

"It was when I came upon the mute witness of these self-made records, and perceived in them one phase of a pervading unity that bears within it all things – the mote that quivers in ripples of light, the teeming life upon our earth, and the radiant suns that shine above us – it was then that I understood for the first time a little of that message proclaimed by my ancestors on the banks of the Ganges thirty centuries ago: They who see but one, in all the changing manifoldness of the universe, unto them belongs Eternal Truth – unto none else, unto none else!" *[5]

Bose's discovery of "some property of matter common and persistent" among the living and the non-living led him to the conclusion (and his profound realisation) that there is a kind of oneness shared by all things. All things are interrelated. The concept of "oneness" with

the Divine is shared among many other believers also. Believers in many traditions see the evidence of God in all creation, even intuitively or mystically. They see "The Sacred" in nature.

Primary Theological Implication: *ex-Deo*

The above discoveries show that all of nature pulse with life, and there is a fundamental unity of reaction in the living and the "non-living" amidst all the diversity. They must reflect a common consciousness in all things. The primary theological implication is that all things are created out of the same living God-substance or God's *in*ternal resources. They necessarily reveal "a unity of life" – an essential vestige of the divine qualities – or an essential common expression of matter and spirit at their interface – an intimate similarity of expression that allows for unambiguous communication (similar "cause-and-effect" emotional and physiological response) among all life. The inherent unambiguous communicative ability (to respond to action and reaction without misunderstanding) of all things must ultimately be an irreducible derivative of the consciousness or nature of God – that which God himself cannot not be! And this stamp is carried over into all things created. This must of necessity reflect their intimate relationship to the Life that imparts life. The fact of creation *ex-Deo* may be the "eternal truth" that Sir Jagadis Bose discovered, and it is never more eloquently demonstrated than by his experiments! By virtue of the necessity that God cannot not exist, He also cannot not be what He is (His nature). And, that which He cannot not be must be carried over into His creations in what they too cannot not be what they inherently have been imparted – this same fundamental nature or characteristic expression of the fundamental nature!

Because of creation *ex-Deo*, there is some sort of living energy in all matter that manifests itself in certain assigned or inherent ways. There is also a sort of intelligence generalised throughout nature. By virtue of this inherently imparted nature, "inanimate" matter can respond to God's thoughts, and it can respond to the thoughts or feelings of other fellow created things. The universe is derived from a conscious and feeling Mind, and evidence of this consciousness is unavoidably present everywhere. The reality of the phenomenon of consciousness is in fact apparent to each of us, notwithstanding its denial by materialism which, in my view, is rendered untenable in

the light of Bose's indisputable experiments and other advanced fields of scientific studies, some of which we will examine in a later chapter.

It is also clear to me (and I believe to many others too, both within and without Christian circles) that consciousness is not the late outcome of the evolution of life but rather the originating cause of it. Creation *ex Deo* at once provides the understanding that raw materials are capable of scientific studies because the inherent laws imparted by God are uniform and consistent (which cannot not be) even as God is also the source of knowledge for other areas of studies such as religion, philosophy, and metaphysics. Creation *ex Deo* immediately reconciles. It is the source of both process and agency. It allows science to include God in it as agency if it wishes to. It leads to the necessity of divine revelation to explain the higher reasons for the immediate feeling of closeness with the Divine and for all the manifold varieties of living and "non-living" things. The heart has reasons where reason knows not, so intuited Pascal. Revelation provides satisfaction that explains to the heart and the mind.

The famous mathematician Kurt Gödel in 1931 proved that there are limits to the certainty of human knowledge. A logical system cannot prove its own consistency. There are truths that we cannot arrive at purely through mathematical and logical proofs. In any closed system, questions will arise that cannot be answered within that system. This lends strong support to the conclusion arrived at by philosopher Immanuel Kant more than a hundred years earlier: that *a priori* knowledge (preconceived prerequisites) is necessary to any understanding. Hence the need for divine revelation to inform man what he will not know within his own level of thinking and observation. We see a oneness of feeling but we see a variety of brute facts beyond our origination. Divine interpretation of brute facts becomes necessary to tell us of the divine intentions for them.

Bose's concluding heartfelt remarks are among those of many people outside of Christian circles who know in their hearts that God exist. There is general revelation of God to all. This reminds me of the apostle Paul's journey to Athens where he observed among the pious Athenians' objects of worship an altar with an inscription "To an Unknown God." Paul tried to tell the Athenians about the One who created human beings and that He is "not far from every one of us", He being so close that we might even "*feel* after Him," as "*in Him* we live and move and have our being." Paul even assented to some of

their poets' acknowledgement in the same breath that *we are God's offspring* (Greek *genos*, meaning *breed, race, specie, native, descendent*. *See Acts 17:27-29*). Is Paul not alluding to Creation *ex-Deo*? We are indeed God's offspring! What a tremendous revelation! According to the Christian Scripture, man has a spirit*[12] (more popularly known as soul) in him, energising him and this came from God Himself when He made man in His image and likeness, having breathed into man the breath of the spirit of life. We will look at more evidence of this in another chapter.

Primary emotions

According to a leading neuroscientist Dr Susan A Greenfield (in her book *The Private Life of the Brain*), emotions are basic to consciousness. Many other researchers and metaphysicians too have come to this conclusion no doubt. More evidence will be discussed shortly.

Secondary theological implications: Basic Freedom

The fact that God has transformed a small portion of His spirit into physical raw materials and living things by His acts of creation means that these created things have been assigned inherent properties to exist in the way they do, to function in their own unique manners. These transformed bits of God's spirit have the ability to cohere in their own particular characteristic dispositions as God have decided or intended for them, and they act with a degree of freedom as well as a degree of predictable behaviour as transformed. They are individual selves (psyches) in their own right, each with its own consciousness and character, as imparted.

The basic raw materials like the atomic elements may have little freedom to act otherwise than the predictable properties assigned to them. They apparently do not initiate actions on other entities apart from some basic affinities (such as: unlike charges attract and like charges repel). These elements (hydrogen, oxygen, nitrogen, calcium, iron, potassium, etc) have been neatly classified by scientists in the Periodic Table – a table of elements in order of atomic weights arranged in horizontal series and vertical groups, showing how similar properties recur at regular intervals. This we learnt about in high

school science and some of the substances we have experimented with in our science laboratories. We learnt for example how metallic iron combines with oxygen to produce iron oxide, how two parts of hydrogen combined with one part of oxygen to make up ordinary water (H_2O).

Water is fluid, it can take the lower shape of the container (of any shape) into which it is poured. When water is affected with very low temperature (zero degree Centigrade), it turns into frozen ice which has a relatively much lower degree of freedom of movement. When water is heated up into steam beyond 100 degrees Centigrade, the steam has a higher degree of freedom of movement than that of water. Water vapours (steam) move up into the atmosphere and they cluster together to form clouds. There are different broadly characteristic shapes or types of clouds depending upon their height above the earth surface. However, no two clouds are exactly alike. They are continually moving and shaping and reshaping, depending upon their electrostatic charges, the movement and interaction of the air streams and height and air pressures (and other factors) into which they find themselves. We can sometimes see (imagine) that they can take the shape of a mushroom, the shape of a bird, the shape of a rabbit, or other shapes depending upon how imaginative the observer is. When enough of these clouds gather together, they become heavy dark clouds and they fall as rain, back into water to provide sustenance to plant and animal life.

Insofar as God cannot not be what He is, likewise those things transformed from Him carry some inherent elements or qualities which also cannot not be what they are as transformed, as the author reasoned earlier. The fundamental unity of response in living and non-living things as discovered by Sir Jagadis Bose must be a fundamental aspect of the inherent property of God or His internal resources.

By virtue of each transformed thing being a separate entity apart from God, it necessarily exhibits a degree of freedom of movement and a characteristic will of its own. God has divine freedom, man has human freedom, atoms have atomic freedom (though not much) and so on. Each created thing is self-moving and a distinct psyche with its own freedom and genuinely able to impinge upon and conflict with or react to the self-movements of others. It would be purely arbitrary to stop with man and suppose the rest of creation to be

simply without freedom. We may need to differentiate between the created raw materials at the root level of matter which have law-like properties (as in electricity and magnetism) and the more complex living entities which have a volition of their own. More on this later. Meanwhile, the word *freewill* as applied to higher hierarchies of beings is a perfectly meaningful word as it is commonly and intuitively understood, notwithstanding the many debates on it over the centuries in theological and philosophical circles. Freewill is always spoken of in relation to an entity as a whole, a unity of the self, not to a process. Although man may not be as free as, for example, the birds of the air in freedom of movement, he is freer than they in volition, in being able to create and to make a variety of choices because he, of all things, is created in the Creator's image. We will in a later chapter examine some arguments for and against the concept of human freewill and explore some key scriptures that will help clarify the issue.

The thing created is no longer part of the Creator, though it once was

A created thing, being transformed from God's spirit or His internal resources, is no longer a part of God although it can be considered as still *in* God, as the apostle Paul has said. A thing cannot at the same time be itself and something else. A thing can be *in* something else, like a fish in water. Conversely, something else can be in a thing, like water soaked in an immersed sponge. These two examples illustrate another scientific axiom: no two similar things can occupy the same space at the same time.

Let us now refer again to the apostle Paul's comments to the Athenians. In as much as we are God's offspring, we are said to "live and move and have our being" literally *in* Him, because we have been transformed from a part of Him in the first place! How can anyone ever run from God? God is not only beside ("not far from") each of us. Our composition is literally immersed in that bit of *ex-Deo'd* divine spark, even "feeling after Him," (Acts 17:27) especially during moments of quiet meditation. The next chapter will describe the discovery of an invisible stuff (variously termed corona, aura, biofield, etheric body, subtle body) enveloping living entities. Is Paul referring to this invisible envelope? This is the impact on me of the above verses as I read them afresh. Each of us is a trace of God transformed. There is a common denominator which we cannot

escape from between our being and God's being. In the further thought that human beings are made in the image of God, they can even be called gods in some sense (at least as "sons of God" in a strong sense)! Again, we are getting ahead.

Distinctions in the created

Though all things are created out of God, not all of them are created equal in status or alike in shape and functions, and none are to be worshipped as the true God, as we are told in the Christian Scripture. God told the first pair of humans to have dominion and stewardship over all His physical creation, even over those living things created prior to them and created *ex-Deo*. God had to give initial definitions and explanations for things created to the newly formed first human couple so that they (and their descendants) could make sense of those things *as God intended*. All things created may be called mere facts or "brute facts" – facts that are meaningless unless they are interpreted by God. I am indebted to theologian Cornelius Van Till for this thought,*[6] which to me is a most important and crucial insight. God-interpreted facts give to us meaning as God intended. To the lower level of created beings, man may be a god, and not vice versa. Distinctions are to be made and lessons are to be learnt by man as stewards and rulers over God's creation. Man would not know the purpose of creation without his Maker interpreting the brute facts and revealing their God-intended purposes to him. He does not and could not know the meaning and purpose of himself or of the creation by simply trying to "know himself" without external help.

Other eminent thinkers like Kurt Gödel and Immanuel Kant had come to similar conclusions, as we indicated earlier. Because all things are created *ex-Deo*, there is widespread intuition or feeling of "being at one" between the creatures and the Creator, and also among creatures themselves. However, basic definitions and revelations are required from the Creator to provide meaning and purpose as He intended for all His creatures. Gödel's Theorem is eminently applicable here. Yet the purpose of God is not fully revealed at the beginning. It has taken many generations and many years of revelation, progressively unveiled, to throw light on much of what it all means. At this stage in our human history, much has been revealed but not fully explored and widely (or accurately) recognised.

What is truth?

Truth is always an interpretation. At the primary level, it starts with some basic assumptions, definitions and interpretation of brute facts. We find initial divine truths introduced, defined and interpreted by God in the early part of the book of Genesis (the first book of the Bible). The first humans were given part of this role (of definitions and interpretations) in their naming of the newly created animals (*Gen 2:19*). As history progresses from there, we find that more divine truths are revealed in stages by the Creator according to the Bible. Truth is therefore what is in accord with divine intentions for people, things and events – in the past, the present and the future. What might be true or applicable in the past may not be true or applicable in the present or in the future, and what might be true or applicable in the present may not be true or applicable in the future. It all depends upon the intentions of the divine purposes for mankind during each epoch in man's history. I believe this is a reasonable inference if we accept the existence of a personal God and that He has given a guide book to aid mankind in their journey in fulfilling His plans for them. Prophecies given in an earlier epoch and fulfilled in a subsequent one will not be applicable anymore in the latter. Mandates and prescriptions given in one epoch may not apply in another epoch, as seen in the Biblical history of mankind.

Nevertheless, there are some truths that are eternal at the fundamental level. Some of such truths, as arrived in this essay, are:

(a) That God exists,
(b) That creation is out of God (*ex-Deo*) and consequently
(c) There is always a unity or similarity of feelings and interactions between the creator and the things created – a "unity in diversity".

These are basic universal truths – ones that were true, are true and will be true – as all these are inescapably derived from God's ontology (being). There is inherently an ontological unity among them.

Unlike the above ontological truths, logical propositions developed by man (such as "if this ... then that") on the other hand are not

always true because they are not always correctly or completely formulated; they may turn out to be fallacious and must be tested against real terms.

The Web of Life

Some half a century after the experiments of Bose (in the 1960s and continuing until the present), another researcher by the name of Cleve Backster*[7,8,9,10] a prominent American lie-detector technician, explored the living responses and perception of plants and man at an interactive level. Connecting his lie-detector to a *Dracaena* (a palm-like indoor plant) in his office one day in the hope of determining how long it took for water poured on the roots to reach its leaves, Backster was intrigued by the characteristic human responses to emotions as reflected in the tracing on the graph paper. Observing this, he speculated upon what might happen if he were to threaten the physical well-being of the plant. Dipping a leaf into hot coffee generated no reaction. He then thought of a worse threat: he would burn a leaf with a match. At that moment of intent, he saw the recording pen of his detector leap excitedly – apparently the plant was able to read his mind! The same experiment has been replicated by other researchers in other places on other plants and recorders. The similarity of the results is a phenomenon that has now come to be known as "the Backster Effect." Backster calls it "primary perception."

Some further experiments and observations of Backster and other researchers include the following, along with some of my personal thoughts:

a. When Backster pretended that he would burn the plant, there was no reaction. Plants seem to be able to differentiate between real and pretended intent. Whenever Backster accidentally cut his finger, his plants reacted. Spontaneity seems to be a necessary ingredient to elicit a response from plants. This may be the reason why experiments on living plants may not be successfully repeated in a controlled scientific environment. Plants know when we are play-acting. The mind of the observer affects the results of the experiment.

b. Backster experimented on all sorts of plants, and the phenomenon persists even if a leaf was detached from the plant.

Similar reaction was obtained even from particles of a shredded leaf! It appears that consciousness is persistent even in the parts, not just in the whole. This is reminiscent of the discoveries of Sir Jagadis Bose described earlier. And this is anticipated by and in accord with our *ex-Deo* view of creation.

c. The phenomena can be elicited even if plants are kept in an electrically shielded room. There seems to be no physical barrier to consciousness.

d. Plants could remember and recognise the source of severe harm done to its fellow plants. In an experiment, a person came and mutilated a pot of plants in the presence of another plant being monitored. Later, several persons were paraded into the room, one at a time, to see if the monitored plant could identify the culprit. There was no reaction in the monitored plant until the culprit (unknown to the experimenter) walked into the room! The "murderer" was remembered and identified by the plant. Plants seem to have a memory and personality.

e. Once attuned to a person, a plant seems to be able to maintain a link (an affinity) to that person, no matter where (however far) the person is from the plant. Backster had an occasion to monitor his plant, with synchronised clocks, when he went downtown in New York City and mingled with the crowds. He had some near accidents and accompanying emotional stresses, and he jotted down in his notebook the times these occurred. When he returned to his laboratory and checked the recorder, he found the times of the plant reactions in the graph corresponded! Likewise in another experiment, a plant reacted to the emotions of its owner travelling by plane several hundred miles away from home; each time the plane touched down for a landing, the emotional stress felt by the person was also felt by the plant being monitored at home, as evidenced in the timed graph readings.

f. Plants appear to accommodate to the fact of death. A monitored plant showed violent reaction when shrimps were first thrown into boiling water nearby. However, subsequent repeated killings of shrimps showed lesser and lesser reaction from the plant until there was no reaction to further killings. The plant seemed to be numbed to repeated killings. This reminds me of a prophetic scripture which

says that in the continued prevalence of evil, the love of many will grow cold *(Matt 24:12).*

g. Plants may even go into a dead faint or "play possum" (to avoid suffering) when threatened. One day, Backster was visited by a physiologist friend who came to observe his experiments. Curiously, his plants did not react when the physiologist was present (even though the experimental set-up was in order). Backster later discovered that the physiologist friend routinely roasted plants to obtain their substance for analysis. Backster's plants resumed their normal responses after the physiologist had left. Plants apparently have an innate intelligence of their own.

h. Backster experimented on many types of cells (amoeba, cells of fruits and vegetables, blood, spermatozoa, scrapping from the human mouth) and discovered the same "primary perception" determinable from all of them. Living cells register fear, pleasure and relief. They respond to thoughts with high emotional content (e.g. anger, life threatening, sexual imagery).

i. Our white cells give away our feelings. Our emotional thoughts are known. This brings to mind several scriptures that bear on different aspects of human emotions.

- The effectual fervent prayer of a righteous man avails much. (*James 5:16*)
- Be angry and do not sin, let not the sun go down upon your wrath. (*Eph 4:26*)
- The advice to bless and curse not. (*Rom 12:14*)
- God detects the death of a sparrow that falls to the ground. (*Matt 10:29*). Through the death spasm that is given out?

j) That plants are sentient, able to monitor threat, emotion, and other physical and mental changes, as well as to intelligently respond to the environment, are some of the remarkable observations made by Backster and other researchers in recent times. Some of the hidden interrelationships between plants and man and all life have

been discovered experimentally, though these are still not widely known and acknowledged.

Music and Life

Modern research also indicates that music brings forth the better nature of plants – in increased and improved quality of production. Numerous experiments by researchers have been performed on plants using different kinds of music. One researcher in particular, Dorothy Retallack, exposed plants to various types of music ranging from classical to rock. She found that plants leaned away from the source of the rock and towards the source of the classical. Moreover, plants exposed to highly percussive sounds, especially the "hard Rock" stunted them in their growth and they had a tendency to wither and die. Those exposed to the classical music generally flourished and experienced rapid growth. Some plants even inclined to move towards (as if to wrap themselves around) the source of the classical. Harmonious music is synonymous with love, as we often intuit.

Bean sprouts that have been repeatedly showered love thoughts and words grow twice as fast as controlled ones.

Sages who hear the "music of the sphere" have admonished us to live by the Golden Rule of harmonious action – "do not unto others what you would not have others done unto you." Are we all heeding?

The Body Doesn't Lie

Our internal body chemistry works perfectly to keep us in health without our being consciously aware of its operations. If we had a cut on a finger, the body would feel pain and begin to repair it, predictably. Injury and disease affect the body. Non harmonic sounds (more noise than music) also affect us as we have seen. Even more subtly, non-harmonic pictures too can affect us. Dr John Diamond in his book *The Body Doesn't Lie* demonstrates that looking at a picture of a demon with a pitch fork affects the level of energy in the body as measured by kinesiological muscle testing. Looking at a picture of a vibrant galloping horse elevates the energy level of the body.

I had an occasion to help in developing a logo for a newly merged corporate body (I was a staff member of one of the companies that merged). We took portions of the logos from both entities to develop a new one. The final logo was a fiery sun with its flames winding off and tapering clockwise, framed at the top and upper left portion with the upper part of an "S" and at the bottom and lower right portion with the bottom part of this same alphabet, with a space or circular channel separating all three parts and opening out at two ends. Everyone in the team felt comfortable with this configuration, we could almost feel a circulatory energy flowing out at both ends

of the channel as we looked at the logo. When the sun piece was reversed with its flames pointing anticlockwise, everyone instantly rejected this new picture; there seemed to be a kind of sharp force coming out of this configuration towards the viewer, being drawn in through the channel from the open ends. Although no muscle testing was done, the unanimous decision in favour of one configuration as against the other indicated that the body does not lie.

Primary perception is basic to all living things and this unavoidable "common and persistent" quality is therefore reliable and truthful. Primary perception must be akin to another basic human quality called "conscience" developed naturally through learning since birth, but this can become faulty and unreliable through repeated breaching of its spontaneous nudging on what is right.

Fabric of Space

An apparent inference made by some researchers from Backster's research is that there is a continuum of an intelligent stuff that fills the vicinity of space where entities are, which supports communication between these entities or centres of consciousness. The thought of an ether*[11], a fine medium pervading space, is an old one. The "action at a distance" phenomenon, sometimes termed "spooky" (as a magnet attracting an iron nail at some distance or the effect of the earth's magnetic field on a compass) is still not fully understood. Experiments done to prove the existence of such ether are not successful or lacking. At this stage of writing, the author is not aware of any firm confirmation of the existence of ether. Researcher Bruce Cathie*[13] discovered that there is a grid of invisible energy lines (sometimes known as ley lines) netting the upper surface

of the earth and extending outwards. These lines could be travel or communication paths and could answer to the idea of ether in space.

There is another possibility: thoughts are capable of being conveyed across empty space. The speed of thought would be expected to travel faster in non-impeding medium-less space. Nevertheless, the live responses of these entities or units of life are no billiard balls type of mechanistic contact actions and reactions. These living entities exhibit the immaterial, non-physical realities we call awareness and/or consciousness. In the absence of an ether medium (i.e. if the vicinity of space is an absolute vacuum), a quantity (however small, like photons of light) of consciousness must of necessity be lost from the entity as this quantity travels radially across space and detectible by recipient entities. It is most likely that this may be the case, as the transmitting entity can become tired, as shown in Jagadis Bose's experiments.

The entity loses energy over time as communication is made unless its energy is periodically or continuously renewed, like in the case of a transmitting radio station. That such energy is renewed is clear, as living entities take in energy from the sun, the environment and from their food. In view of the apparent all-direction nature of propagation of "thought waves" which are detectible by lives at the speed of an instant anywhere and any distance from the emanating entity, the carrier medium, if it exists, allows little or no resistance to fast or instantaneous inter-communication among entities. However, there seems to be at least a kind of proximate field(s) surrounding the bodies of living entities themselves which is also called by various names such as *life field*, or *etheric energy field*, which is deemed to be intelligent. We may liken a body to a bar magnet with its magnetic field surrounding it. More on this in the next chapter.

This life field may have the property of sending out some kind of radio waves (a part of the electromagnetic spectrum) that can link with God and with all creation. On the basis of *creation ex-Deo*, this life field must also have emanated from the Spirit of God. In fact, this could very well be a part of the transformed trace of God in whom we live and move and have our very being. If God could exist in space, His creations too, by virtue of *ex-Deo*, must also have the capability to exist in space. However, the locations of created entities will obviously be constrained to the area where God has placed them.

If there is no ether or fabric in the vicinity of space where all things are, how does God monitor events? How can God be omniscient (all-knowing)? How can God act in the world? These questions will be explored in a later chapter.

The non-physical basis to the physical world seems to be recognised in metaphysical, philosophical, theological and theosophical literature. Pre-eminent among the ramifications that follow from Backster's research is the suggestion that consciousness is universal; its rudimentary form must reside within or surround every entity and it provides the basis of kinship for all beings.

Immanence or Transcendence?

The bringing of the universe into existence may be called by various names. In Christian terminology, it is frequently called *creation*. It can also possibly be called by other names like *transformation*, or *transmutation*, or even in a remote way an *emanation*.

Creation gives me the idea of something new or different being brought into existence by a creator, but it does not convey the nature of the processes involved. This word, along with certain presuppositions of God as we have seen, has given rise to the erroneous concept of creation *ex nihilo*.

Transformation gives the idea of a conversion of something of one nature into something else of another nature – a metamorphosis (like the caterpillar turning into a butterfly through the intermediary stage of the pupa). *Transformation* immediately eliminates the erroneous concept of 'creation *ex nihilo*.' It does not immediately convey the idea of a transformer God, but it at least presupposes an overarching transforming principle at work.

Transmutation has a similar meaning as *transformation*.

Emanation points us back to the source from which things emanated. It does not necessarily convey the idea of a change in the nature of the "emanated thing" which some therefore may see as unreal, a mask of the real underlying emanating source. The concept of emanation may confuse if we are not careful in using it. One would more easily suppose that untransformed forces (such as

electromagnetic forces) emitted by *ex-Deo'd* objects and living things as emanations. Such forces may be common law-like forces given out by one entity and received by another entity (both of whom may be seen as transmitting and receiving living stations).

There are also other more symbolic and personal equivalents such as *begotten* and *born*. These carry the sense of generation of complex living entities from a similar-looking parent entity.

All the above terminologies convey aspects of truth – truth viewed from different angles. Here in this essay, we try to extract truths as intended and viewed by God for His creation as used in the Christian book of revelation (the Bible). Obviously, objectivity and care must be exercised in order to listen to what the Bible actually says or tries to convey without reading one's presuppositions into it.

The term *evolution* may perhaps also be used. But here, it usually explains the coming into being of something over a long process of billions of years from something(s) else. A guiding principle of development or progress and growth is assumed in the Theory of Evolution, although some proponents claim that consciousness (and the guiding principle of development) is an "emergent" property of matter, this property not being there at the beginning. Everything that moved in primordial time was in chaos (randomness) and non-conscious. There was no prior mind. Obviously, I do not take such a view as ample evidence to the contrary keeps me as a believer in a personal Cosmic Mind or God.

From my perspective, I would prefer the common usage of *creation* for all things (living and non-living) brought into existence by God – for the reason that Adam was said to be "formed from the dust of the ground" (a secondary creation, even though he was imbued with life directly from the breath of God). The creations of God consist of both raw materials and organised living units of selves (a hierarchy of entities from the lowest atoms and their constituents to elements, chemical compounds, plants, animals, humans, spirit entities). These creations are individually distinct units of existents apart from the distinct separateness of God. God is therefore first and foremost transcendent (apart from the universe) and only secondarily in a sense immanent (present in His creation by virtue of the transformed-away stuff). The whole universe is not God, but only a small portion of the God-substance transformed into its manifold forms. Created

things are not aspects of God; they are transformations from the God stuff.

Because of creation *ex Deo*, God necessarily recognises and understands His creation. The created things are able to cohere in the specific properties assigned to each of them from the Creator. And these all (individual units of life or selves or psyches – and therefore communicators) are able to communicate with or respond to one another, whether or not they are aware of the perceptible and imperceptible inter-linking communication structure and processes. The effect understands the intent of the cause and it acts accordingly at every stage without fail at the fundamental level, at every layer or interface. Without this inherent understanding among processes, God would not be able to create in the first instance.

Innate primary feelings of creatures reflect innate primary divine feelings and vice versa, as one would expect if there should be common understanding among all entities. We now move on to another research done recently in the last decade which provides results as startling as those of Backster and Jagadis Bose.

Water messages

A Japanese researcher Masaru Emoto has been studying water since early 1990s. In 1999 he published his book "Messages from Water" (2 volumes) documenting hundreds of ice crystal patterns photographed in a special "cold laboratory" in Japan over several years. A third volume was added to his publication recently. Emoto became interested in the life energy in water (*Hado* in Japanese, or *Chi* in Chinese), and began to investigate the crystallisation patterns of water from pure and polluted sources. The difference in the patterns was striking. Pure sources of water from rivers, lakes and springs produced beautifully formed, harmonic patterns, characteristic hexagonal shape like snowflakes. Impure water produced poorly formed, ugly, often non-crystalline shapes.

Emoto discovered that water was extremely sensitive to vibrations, and not only physical vibrations such as music and speech. He devoted several years to photographing the formation of ice crystals from water which had been "treated" in various ways. He had monks recite prayers over the water, played music for it, even taped words

and pictures on the outside of small vials of water, all with remarkably distinctive effect.

Emoto's books contain photographs of "water crystals, all different, from the most sublimely beautiful to the most mundane, or even 'ugly', each with a legend that captures quite precisely the feeling evoked by the crystal."

Dr Mae-Wan Ho, director of The Institute of Science in Society, London reviewed Emoto's books and here is an excerpt from a newsletter *(http://www.i-sis.org.uk/):*

"*Tap water in cities subjected to chlorine treatment or heavily polluted failed to form crystals at all, with no sign of the characteristic hexagonal (6-fold) symmetry of snowflakes. Partial crystals sometimes appeared, as if 'trying desperately hard to be a clean water'. Whenever the quality of water was good, complete crystals formed, each distinctive in detailed pattern and colour.*

Some of the loveliest, most perfect crystals were from natural, unpolluted water sources, such as the Sanbu-ichi Spring in Nagasaka, and the spring water of Saijo, a town located in the highlands 500 to 700 metres above the sea, famous for its sake.

A stunningly beautiful, asymmetric crystal came from the fountain of Lourdes in France. It was described as, 'A mysterious crystal that gives off the feeling of mystical glory.'

In certain rivers, such as the Shinano in the Niigata and Nagano prefectures, perfect crystals were formed from the water upstream, but not from the contaminated downstream waters.

The effects of acid rain were abundantly clear in the poor crystallisation of most rain water. The crystals do carry messages, and crystal reading is as much art as science.

One question that came to my sceptical mind was how reproducible were the crystals? And to what extent is the single crystal photographed characteristic of the sample?

Emoto's method is to place the same small amount of a single sample of water in 100 petri-dishes, and then to allow them to crystallise in

the freezer under well-controlled conditions. He then examines all the replicates. No two will show exactly the same crystals. Despite that, however, one can see that the replicates were crystals of the same kind, they were definitely variations on a specific theme.

Now comes the part of the book that really begins to take one's breath away. One can understand how pollutants in water can affect crystal structure, though it by no means explains the specific appearance of crystals from the different sources. But one can rationalise that in terms of minute quantities of unknown dissolved substances, perhaps.

However, Emoto's group showed that starting from distilled water, which failed to crystallise, it was possible to generate crystals specific to the music to which the water has been exposed. My favourite is Bach's Air for the G String, which 'gives the impression that the crystal is dancing merrily', and the Tibet Sutra, which 'talks to people's souls and has a strong positive energy that can heal people's feelings'. Elvis Presley's Heartbreak Hotel, gave three kinds of crystals, one which looked like 'a picture of a heart broken into two', the second which shows 'the two parts trying to fuse together', and a third that shows 'a newly formed heart that overcame the difficult period'. Or do you think 'this idea is too sentimental?'

Well, perhaps it is not so strange that water should be sensitive to sound, which is a physical, energetic entity, and that the quality of the sound could generate some coherent vibrations in the water … that influence the crystallisation process.

But now, for the real stunner; Emoto's group showed that water can even respond to words. The same distilled water to start with, one tube had the message, "Thank you" written on it, while the other one had, "You fool!" The one with "Thank you" gave nice crystals, whereas the one with "You fool!" gave no crystals at all, and was very similar to the results produced by exposing the water to heavy metal music. And it did not matter which language was used: Japanese, Korean or English. The results were very similar.

'Love/Appreciation' gave a most elaborate, decorous crystal, so did 'Soul'.
'Demon' (removing the left part from the Chinese character for soul) led to something that looks like a disintegration of the soul crystal.

'Angel' made the crystal burst forth in a multitude of flowers, while 'Devil' looked distinctly sinister.

Even names were read by water. 'Adolph Hitler' looked like 'You make me sick' or 'I will kill you'.

And pictures too were registered. When shown the photograph of an innocent child, the water came back with a crystal that looked to me like pure joy itself.

So, what does it all mean? Emoto believes all that is based on Hado or Chi, a vital energy that comes ultimately from the circulation of electrons around the atomic nucleus. He believes that Chi changes according to the consciousness of the observer, 'the way they see things'.

How can this Hado be measured? By means of a machine referred to as the MRA (Magnetic Resonance Analyzer), 'which measures various states of Hado, encodes the unique energy pattern of each substance and checks whether it resonates or not'. It was developed in the United States 12 years ago."

Emoto's experiments seem to place beyond doubt that our thoughts impact upon water and the world around us (as living things are composed of a high content of water).

Some of those magnificent photos (many of which look like gems studded on a ring) can be seen from webpages made available in the internet (search under the rubric "messages from water" and/or "Masaru Emoto").*[14]

Consciousness

The results of the researches of the above three persons, Sir Jagadis Bose, Cleve Backster and Masaru Emoto, among others, seem to speak corroboratively and eloquently of a common consciousness in all things. The intent of an entity may be impressed upon another (across space) with a characteristic understanding reflecting the character of the intent. Modern technology has now demonstrated visibly that our thoughts and emotions can influence and change not only our physical being, but even the world around us. The unity of consciousness must be the root of all existence.

What is consciousness made of? Many researchers have pondered over this question – a big topic, and it has been known as the "hard problem". One might, as some thinkers do, go beyond the atom (the root of physical matter) and find consciousness somehow associated with the sub-atomic particles. Some other researchers associate consciousness with electromagnetism that is detected surrounding living things. Electromagnetism may be the common factor discovered in Bose's experiments. If so, electromagnetism is somehow associated with emotions. Is electromagnetism consciousness? Or, is electromagnetism a medium within which consciousness lurks and through which consciousness expresses itself? Does electromagnetism stand at the border between spirit and matter? How far can we penetrate the mystery? What exactly is consciousness? Perhaps it is not amenable to further scientific reduction if Gödel's Theorem is any guide. We would (in later pages) turn to Scripture for possible answers after looking at further scientific researches.

Electromagnetic Undercurrent

> For the invisible things of him from the creation of the world are clearly seen, being understood by the things that are made, even his eternal power and Godhead. *(Romans 1:20a)*

Dr Lawrence Fagg, a Research Professor of Nuclear Physics (retired) at the Catholic University of America in Washington, DC reflected upon the above scripture when he wrote "The Wonder and Sacredness of Nature's Physical Undercurrent" in Metanexus magazine on February 15, 2003. He said:

"Among the multitude of things that have been made, Paul was undoubtedly affected by the cornucopia of plant and animal life that graces this planet. Butterflies, sunflowers, rabbits, palm trees, and deer all testify to the fecundity and rich diversity of this life.

Some seven years ago it struck me, as a physicist, how beneath this prolific diversity was a myriad of electromagnetic phenomena. Knowing that the electromagnetic force activates all of chemistry and biology, I realized that this force has been vital in the evolution of, and ultimately

underlies, all of earthly nature from rocks to plants and animals, including humans and their brains.

It was then that I thought how this unceasing, invisible electromagnetic activity was a beautiful way of getting a spiritual glimpse at what the indwelling or immanence of God might be like. I sensed it as an engaging, evocative pointer to that immanence, and as such could be thought of as a physical analog to God's inner presence. Thus I was inspired to write a book describing these thoughts: "Electromagnetism and the Sacred: at the Frontier of Spirit and Matter."

In reflecting now on what I wrote in the book and the questions it poses; I feel that there is one especially wonder-provoking question. How is it that four simple properties of electromagnetic radiation can combine with such minute sensitivity to make physically possible the presence of everything on earth, animate and inanimate, including our consciousness? These properties characterize not only the photons of visible or detectable radiation, but also the unobservable photons that quantum electrodynamics tells us transmits the electromagnetic force. Each of these properties displays inexhaustible variety due to its capacity to vary through a continuous range.

Specifically, they are intensity (or strength), wavelength or frequency, phase, and polarization. Intensity can vary by any tiny amount from the most subtle, animating the neural system of a fruit fly, to that energizing a huge power transformer. Wavelengths can be fine-tuned with incredible precision over a virtually infinite spectrum extending from the longest of radio waves to the shortest of astonishingly energetic gamma rays from outer space. Two waves can be in or out of phase so that they mutually reinforce or cancel, respectively, with all possible relative phases in between, no matter how incrementally different. Finally, a wave can be polarized like the light waves that have filtered through your sunglasses and can be varied in polarization by an infinitesimal amount over the entire range of possible angles.

How these four basic properties can be orchestrated to provide the physical basis for the incredible richness of nature and of human life and interaction on this earth is to me the most awesome and profound question. As a physicist I can understand how two hydrogen atoms and an oxygen atom can combine to form a water molecule, and how water molecules can agglomerate to create the exquisite hexagonal symmetry of a snow flake. But understanding the principles of the

marvelous organizing action that utilizes these innumerable quantum electrodynamic "tools" as agents to fashion the creatures of this earth, I believe, is a challenge that will be with us far into the indefinite future."

Professor Fagg continues: *"Their extreme subtlety is quantified in experiments in microbiology, which show that voltage gradients as low as one ten millionth of a volt per centimetre and frequencies between 0 and 100 cycles per second are involved in the interaction between cells in living creatures. All plant and animal life are bathed in, and interacts with, a sea of such very low frequency radiation that envelopes the earth. This is independent of the radiation superimposed by technology. … Virtually all of modern technology depends on electromagnetic interactions for its operation. This is so from the precisely focused laser beams for eye surgery to the massive motor generators furnishing electric power for our homes. … Furthermore, we are almost entirely dependent on electromagnetism and its radiation for our knowledge of the microscopic and cosmologic worlds. There is no quantum measurement that does not need some electromagnetic interaction for its accomplishment. Essentially all of our information of the cosmos is transmitted to us via some part of the electromagnetic radiation spectrum."*

Dr Fagg went on to say that a central feature of physical nature is light, which is electromagnetic radiation.

"Light has served as a primary medium for the spirituality of men and women since the dawn of human consciousness. It has been an essential component in the creation myths of cultures worldwide. It has been the principal focus for the spirituality expressed in rituals of religions throughout the world for millennia."

"It is this abiding reverence for nature, this perception of its being spiritually imbued that prompts me to posit that the ubiquity of electromagnetic phenomena on earth is an evident and compelling analogy for the ubiquity of God's immanence. But I need to emphasize that electromagnetism is not God, nor God's immanence, but it is a provident means for us to have some conception of the nature of that immanence. I hold that it should be considered as such by any theology that seeks to interpret nature."

Dr Fagg concluded:

"Therefore, there is a vast array of electrodynamic phenomena that fills the overwhelming majority of the world's space, so that we ourselves are immersed in an ocean of electromagnetic events; in fact, we are part of the ocean. This helps me see these electromagnetic phenomena as constituting the furthest frontier of the physical realm probing with its sensitive tendrils into the unknown gap between that realm and the realm of the conscious and spiritual. Thus, it plays a unique role in our unending search for a fuller cohesion of the whole continuum of existence from the material to the spiritual."

Why the creation?

Since all things are derived from the God-substance, are they therefore divine? Perhaps in a sense it undeniably is. Should we therefore revere all creatures as we revere God? Anticipating such a question, God in the beginning clarified the issue by telling man, the highest or potentially highest level of creation, to have dominion and stewardship over the whole created order, the animals and plants, notwithstanding the fact that these too were derived from the same God-substance. *(Gen 1:26)*

The lower created order is to provide service and learning to humanity created in God's image. Explanations from God are necessary for man to fathom His purposes and to make distinctions in the things created as He intended. Is one able to discover the ultimate purpose of life by going into a meditative state as one obtains a feeling of peace and "oneness" with the Creator? My answer is no. We may be able to arrive at the best hypothesis humanly possible, but it is one that we will not be certain about without revelatory confirmation. The feeling of oneness with the Creator is perhaps unavoidably present inherently in the things created by virtue of *ex-Deo*. I personally do not wish to be de-created (de-transformed) from and lose my unique individual identity and reality to turn myself back into the original God-substance, therefore ceasing to exist as "myself" (i.e. by becoming dead). If God is in the process of becoming, can anyone move successfully against this flow by desiring to *un*become? A fully satisfying answer to these and other fundamental questions (e.g. the prevalence of pain, sorrow and evil that seem to accompany all life forms and from which they seek to escape) could only come of necessity from expressed revelation from the Creator Himself. This is the way I see it, taking Gödel's Theorem as a pointer. And I intend

to probe for satisfying answers to these questions from what I can best determine as the Biblical perspective – in later pages.

At this stage, it is good to remember that the thing created is no longer a part of God though it may be said to be in God. The "real self" or "true self" ***is*** the very thing created and is not a mask in disguise. I believe that I am a real self and not a false one in camouflage. To me, what is real is what exists in space as an enduring substantial complete entity in its whole form as distinct from fleeting thought processes and dreams that one experiences. The butterfly is as real as the intermediate stage it went through (the pupa) which in turn was equally as real as the yet earlier stage the pupa went through (the caterpillar) which again in turn was just as real as its stage of the egg. The stages of life that the butterfly goes through are realities in nature, and can be scientifically observed and studied. They are not illusions. Even my thought processes and dreams must be real in the sense that they exist in space and are experienced and interpretable by me.

I do not wish to *un*become (disintegrate or die) and return to the point of origin and lose my identity. Notwithstanding my wish, however, I will have to face the inevitability of death, and when I die, I will *un*become – no more myself. I will disintegrate into my former constituents (from which I was created) – back to the God stuff or the primordial source. This is the natural and logical conclusion that forces itself on me. I, my personality, will be no more. My desire to be an immortal self will not know whether it will be fulfilled. What is there then to live for if not for the prospect of a future life for "me"? When in life, I can now have a sense of oneness with the Divine. But when in my death, only the Divine has a sense of oneness with what was once a part of Himself from whom I came. His sense of oneness with previous me would be only in His memory. 'My' life becomes a futility, a vanity, though not an illusion, if this is the only life I live. This is the limit I encounter in reasoning logically. What is beyond my death is up to the Divine to decide. I cannot know what is beyond my natural human perspective. Revelation must come in to provide the answer.

Fortunately, there is divine revelation to tell me that my "self" will yet be granted immortality at some stage, which can still be called "I" or "me". There is a strong unconscious desire no doubt for the thing created *ex-Deo* (separated from God) to be intimate (longing to

be in union again) with the Creator, as this is particularly felt when one is in a relaxed meditative mood. Scientists in recent times have pointed out that we humans are hard-wired for God, an ever-present desire to seek the Divine, an ever-existing hope for a continuation of life in an ideal state, minus all the pains and sorrows. In revelation, we are told there is a desire on the part of the Creator to complete His workmanship in us.

> You would call, and I would answer you. *You would have a desire to the work of your hands.*
> *(Job 14:15)*

God's desire for completing the work of His hands results in His work becoming transformed (according to the Scripture, at some stage in the future) into glorious entities, separate from Him, who can interact with Him personally in reality and not in God's memory only. Fourth century theologian Augustine had famously said that our heart finds no rest until it finds its rest in God.

Dissolving oneself is not the only way to achieve "oneness" with God. There is a distinct meaning of the "*oneness with"* the Creator in the Christian sense that can still allow the individual to retain its own individual identity whilst at the same time allow all individuals to experience oneness with the Divine in real time. It is well known in musical circles that properly tuned musical instruments will respond sympathetically to one another. Pluck or bow a finely tuned string on one instrument and other instruments will respond with the same note. The two individual objects begin to resonate in unison as one instrument. Two separate things are now intimately and dynamically connected at the innermost harmonics.

It has been said that we came into this world without our consent and leave it against our wish. The desire of the self to live is strong. Can we find or achieve immortality? Or do we already have it? Again, we need to seek the divine answer from the book of revelation. A true revelatory answer does not contradict the brute facts of science.

Footnotes:

**1. The Secret Life of Plants by Peter Thompkins & Christopher Byrd, p 95-117*

**2. The Life and Work of Sir Jagadis C Bose by Patrick Geddes, p 86-204*

**3. Encyclopaedia Britannica 1997*

**4. Plants Response as a Means of Physiological Investigation; Comparative Electro-Physiology; Researches in Irritability of Plants; The Physiology of the Ascent of Sap; The Physiology of Photosynthesis; The Nervous Mechanism of Plants; and Motor Mechanisms of Plants. Some of the books (reprints) may be obtained from Borderlands Sciences Research Foundation. Website: www.borderlands.com.*

**5. The Life and Work of Sir Jagadis C Bose, p 97-98*

**6. Baker's Encyclopaedia of Christian Apologetics on "Cornelius Van Till"*

**7. The Secret Life of Plants by Peter Thompkins & Christopher Byrd*

**8. The Secret Life of Your Cells by Robert Stone*

**9. The Backster Research Foundation, Inc (website: www.primaryperception.com)*

**10. The International Journal of Biosocial Research (Vol 7(2) 1985)*

**11. The Michelson-Morley experiment was done to determine whether ether exists and the official conclusion was negative. This conclusion is however disputed by some scientists.*

**12. 1Cor 2:11*

**13. Website: www.worldgrid.net*

**14. Website: www.hado.net for more some pictures and other information.*