Ever Approachable, Never Attainable: Teasing the World and Human Nature

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Abstract

The Universe is not only queerer than we imagine, it is queerer than we can imagine." Following this perceptive comment, I want to take up a few scientific areas and show that the reality we live in, including our human existence is fascinating even beyond our capacity to imagine. Since there is always "a dimension of the more" or of "surplus of meaning," inherent in reality, there is always room for that "extra step" to march towards this dimension.

The aim of this paper is to indicate the following: (i) An amount of inadequacy is inbuilt into reality, an inadequacy that is both delimiting and enabling. (ii) There is room for further search and openness in the real world. (iii) Humans beings themselves are products of such an ever expanding horizon that is both elusive and enabling. Just as the horizon, humans can always approach each other, never arrive it. Just as the horizon invites us by its ever-receding nature, human beings are also ever-receding mystery unto each other.

The method I follow is simple. I base myself on ordinary and well-known scientific data, which is accessible to most educated audiences. This data will be used to lead us to the limits of our knowing and our existence. Finally, I shall raise few theological questions about the adequacy and limits of our knowledge. Such a procedure, it is hoped, will open us to be fascinated by the mysterious dimension of the all encompassing reality and ever eager to seek a more comprehensive knowledge about it.

We begin with a rather sketchy treatment of the seven colours of reality, the five senses of the brain, the three dimensions of being, the one directionality of time and zero attainability of heat (the heart). This, it is hoped, will be taken metaphorically for the very nature of reality and of human beings.

Keywords: *The Seven: Colours of Reality, The Five: Senses of the Brain, The Three: Dimensions of Being, The One: Directionality of Time, The Zero: Emptiness of the Fullness, The Ever Approachable Project***.**

1. The Seven: Colours of Reality

As children, we marvelled at the colours of the rainbow. As adults we are fascinated by the colours and contours of nature and try to comprehend its intricacies. It is generally accepted that light is composed of seven colours, which can be demonstrated through elementary experiments with a prism.[1]

Normally, we make a distinction between "primary" and "secondary" colours. The first things to realize here is that the number of "primary" colours depend on the type of creature looking at it. A human being sees things differently from the way a dog or a bird would see the same things.

Normal cones in the human eye sense light in broad colour bands in the red, green and blue-violet regions of the spectrum. Thus for humans, mixing various amounts of the three primary colours (red, green and blue) will produce all the colours that can be perceived. That is true for an additive source like a computer monitor or TV screen that produces light. The human eye is sensitive to broad bands of light wavelengths, and thus it interpolates colours depending which of the three cones is receiving light. Colour is actually how our eyes and brain interpret light. Our eyes can only see radiation with a wavelength of 380 nanometers to 740 nanometers.

Further, it is interesting to note that there are two ways of perceiving, for example, "yellow" light. Firstly, we can use equal amounts of red and green light. These stimulate the red and green cones, and the brain sees "yellow". Secondly, we can use a wavelength of light that is between red and green (about 565nm). Because the response of the red and green cones overlaps, this single colour also stimulates both the red and green cones. The brain sees "yellow" in both cases.

For pictures using paint or ink, things get a little more complicated because what happens to the light before it strikes the eye is a two-step process. Inks are subtractive. They block various colours of light and only the colours that are NOT blocked are reflected from the paper to the eyes.

In fact, there is rarely an object of one pure colour. Instead, an object appears red because it absorbs all colours except red. The red light is reflected to our eyes and we see red.

This difference explains why, when we mix red, green, and blue light sources we perceive white light, but if we mix red, green and blue colours we get black. The red colour absorbs green and blue, green absorbs red and blue and blue

[1] All these different sections were published as regular columns in *The Financial Chronicle*, on its regular feature column, "The Sacred Bull" in Jan-February 2009. They have been modified for the purpose of this article.

absorbs red and green. The net result is all colours of light get absorbed and we perceive black.

Similar to these primary colours, there are three types of colour blindness, depending on which colour sensor is defective in the receiver's eyes.

Going beyond primary and secondary colours, we can dwell a bit on the actual number of colours. To the important question of how many colours the eye can distinguish, the published literature is remarkably inefficient at providing an answer. An often quoted reference states that 10 million surface colours can be distinguished by the normal human eye under optimum observing conditions. Other estimates put it just 1 lakh colours.

Dogs, on the other hand, seem to have only two kinds of colour receptors in the eye. They see fewer separate colours. Many birds, however, have four or more types of cones (the extra one is ultraviolet). They therefore see potentially many more colours than humans, depending on how the brain perceives this colour. Birds would need to use a TV with four primary colours.

These questions raise some larger theological and religious issues: Does colour really exist? Does it exist apart from humans who perceive them? What justification do we have to classify nature into seven colours? How many colours do in fact, exist? How do we meaningfully quantify them? Isn't our recourse to reality enabled and limited by our colour perception? Will dogs and birds have a different perception of colour and reality? Isn't material reality much more complex than perceived by our eyes?

After these elementary observations on colour, we are in a position to move to the larger aspect of human life: the world of our senses. It is with our sense organs that we are able to relate to the reality around us. Obviously, the colour of light is just a subset of the larger domain of senses.

2. The Five: Senses of the Brain

The five senses work together all the time in order to allow our body to function properly in the world and to respond adequately to the external stimuli. The brain in fact is also the centre of the sensual body, which acts through the five senses.

To enable us to see something light bounces off the object we are looking at to the pupil. The light crosses the lens and the images gets focused upside down. The object, thus, shines on the retina of the eye. Then, the optic nerve carries the picture we see and this message is sent the brain. What the brain does after the message goes to the brain is that it turns the picture right side up. Then it figures

out what we are seeing and how we should respond to it. Having two eyes increases our angle of vision and it helps to judge depth. Having two eyes allows us to cover 180 degrees and three-dimensional objects. This gives us the depth of vision, so central to our movements.

Our ears send information about sounds to the brain in the form of nerve impulses. Sounds are collected in the outer ear and are sent through the ear canal to the eardrum. Three small bones in the middle part of the ear amplify the sounds. The receptor cells send impulses to the auditory nerve which goes to the brain. The brain receives impulses from the auditory nerve and gives meaning to the sound impulses. Because we have two ears, the sound usually hits one ear a fraction of a second before the other and produces stronger vibrations in that ear. This helps us to sense the direction of the sounds. Such directionality is crucial for human survival.

Taste helps us to determine the flavour and palatability of food. It even signals dangerous gases and toxic food. All over our tongue, there are little bumps called taste buds. There are four different types of taste buds, to taste sweet, sour, bitter or salty things.[2]

Touch enables our skin to have physical contact with another object. Touch or sensory receptors are located in clusters around the skin. When they are squeezed, the layers rub against each other causing an electrical nerve impulse. The most sensitive touch receptors are located at the face, back of the neck and chest.

Skin works together with the hypothalamus, which contains cells highly sensitive to heat and cold. The hypothalamus responds by increasing the number of nerve impulses transmitted by the brain. Skins helps to regulate the temperature of the body by preventing excess of heat (hyperthermia) or dearth of it (hypothermia).

Every time we breathe, air flows through the nasal cavity, facilitating the air flow down through the back of the mouth into the throat. Simultaneously some of it passes the olfactory organs. Any odour molecules in the air will pass by and get stuck to the mucus in our nose. The sensory hairs sense the odour and transmit messages to our brain. Our brain, therefore knows the odour. The smell receptor cell is located high up behind the nose and the receptor is sensitive to chemicals in the mucus in it.

The five senses are our window to the world. All our technologies are mere

[2] It is interesting to note that we have not developed a quantified measurement to predict the taste of a thing. No one really knows, for instance, the taste of arsenic. It is so poisonous that anyone who attempts to taste it will instantly perish.

extensions of our senses. Senses are much more intimately connected with our brain than we think. So the larger questions connected with the senses are: Are there not other senses that we are unaware of just now? Is mind another sense, as implied by Indian philosophy? If humans had collectively lacked one sense or had one more of it, what would our world look like? In fact, we are helped and hampered by our five senses. We are truly captivated and captured by our senses. Reality is far grander and greater than our wonderful senses can perceive.[3]

These reflections on the grandeur of the senses take us to another crucial and profound aspect of reality: the three dimensions of the spatial world, which is the door to the material objects we constantly interact with. It is here that we can perceive the depth and roughness of life.

3. The Three: Dimensions of Being

We are fortunate to live in a three dimensional world of space. The length, breadth and height constitutes the space around us and make up the reality we live in. It is marvellous to experience the depth of space that is possible only in a three dimensional world.[4]

However, it is plausible for us to imagine dimensions that are less than three. In a simplified one dimensional world, an ant – that has only length – can walk back and forth on a string that is stretched tight. Unaware of the other dimensions around it, the ant lives in a happy but isolated world.

A being on a two dimensional world can walk on the surface of a perfectly

[3] It is assumed that humans have another sense of "equilibrium" which is located in the inner ear. Equilibrioception is our sense of balance, perceived by the position of fluids in the inner ear. It can be sent off kilter if one spins around in a circle too many times. Having a sensory faculty for the perception of balance is essential for any bipedal species.
Proprioception is the perception of one's body in space. Like equilibrioception, the data for this sensory faculty comes from within the body rather than from the environment. Proprioception is what a police officer tests when they pull you to the side of the road on suspicion of drunk driving.
Thermoception and nociception were once thought to be simple variations on touch, but they are not. Thermoception is the sensation of heat and nociception is the sensation of pain. Thermoception of external heat sources is quite distinct from the sensation of internal body temperature, which uses a different apparatus. Also, nociception has sometimes been categorized as three senses rather than one, because different receptors perceive pain on the skin, the joints and bones, and the body organs respectively. For details see "How Many Human Senses Are There?" at http://www.wisegeek.com/how-many-human-senses-are-there.htm, accessed March 2009.

[4] According to the latest book, *The Grand Design*, 11 space-time dimensions. M-theory permits universes to create themselves from nothing, on a non-stop basis, each with physical laws with different values. The number of universes permitted by M-theory is at least 10^{500}, which is 10 multiplied by itself 500 times. To have an idea of how big this number really is, the estimated number of particles in our universe is about $10.^{80}$ See S.W. Hawking, L. Mlodinow, *The Grand Design: New Answers to the Ultimate Questions of Life*, Bantam Books, New York, 2010.

plane glass, and enjoy seeing the full 360 degrees around it. But if a human being puts down a coin on the glass, the appearance of the coin would be a miracle for this two-dimensional being. A downpour of the rain would also be another unexplained miracle for this being. Even basic features like absorption or digestion of food would be impossible for such a poor two dimensional creature.

The three dimensional world around us enables us to experience the fabulous reality as we see it. But the mathematics of dimensions itself does not put any limit on the possible number of dimensions as such to reality. Strictly speaking we can have more than three dimensions, which however would be impossible for us to imagine.

Some versions of the super string theory in physics assume that reality has eleven dimensions (M-theory). They assume that right at the beginning of the universe all these dimensions were active. Later they folded themselves up and so at present we can perceive only three dimensions. *Imagining the Tenth Dimension* by Rob Bryanton is an insightful but controversial book.[5]

The philosophical and religious challenges posed by these speculations are tremendous. When religions try to approach the Ultimate Reality, are we thinking of an existence with more than the three (or four?) that we are familiar with ? What would life after death look like? Is it a continuation of our space-time existence or a dimensionally different mode of existence?

God, the reference of all religions, must be experienced by us in our three-dimensional world. But that does not imply that God is limited to the three dimensions only. If He is the Creator, he would have created the other dimensions too. But it is very possible that he would be existing in a radically new dimension with the possibility of intervening in our three dimensional world.

Just as a two-dimensional being cannot understand how a coin has appeared on the surface of the glass plane, are we not really intelligent but limited beings who cannot experience the full depth and complexity of the rich physical reality around us?

Further, if human beings are able to create the initial conditions similar to the Big Bang, as is being tried at CERN, Switzerland, do we reach nearer to the complexity of reality? Will it be possible for humans to add new dimensions to their existence?

These questions are profound and worth pursuing. They do add to the

[5] Rob Bryanton, *Tenth Dimension: A New Way of Thinking about Time and Space*, Trafford Publishing, 2006. See also Kuruvilla Pandikattu, "Human Fulfilment Here and Now: Some Anthropological Considerations," *Satya Nilayam: Chennai Journal of Intercultural Philosophy*, Vol 15, Feb 2009, pp. 107-109.

magnificent data available to humanity that we can truly marvel at. They do challenge the way we live our spiritual and religious life. So the possibility of new discoveries by physicists must excite us. At the same time, we must remember that we have not exhausted the mystery and complexity of the three-dimensional world which we are sure of.

Let us continue to marvel at the robustness and roughness of our three dimensional being! But we can and must remain open to further realms of possibilities. The reality is truly and marvellously complex. If so, how much can we human beings be open to it? As human beings how much should we struggle to be open to such a reality? This leads us to the next section, where we deal with our finitude or temporality. We are beings in time and so we come to exist, grow and cease to be! This profound mystery of our temporality invites us to deeper reflections on our meaning system.

4. The One: Directionality of Time

It is a truism to say that we live in time. Time enables us to be born, to grow, to mature and finally to blow out. Time with its past, present and future is a key enigma. We are not much better than Augustine who claimed 1500 years ago: "I do know what time is if you do not ask me; but if you ask me I do not know."[6]

The simplistic view of the three aspects of time helps us to cope with the normal routine of life. But let us remember that the past is not merely something that has happened previously. Events in the past shape our present and the memory of the past helps us to live the present. In fact some philosophers are of the opinion that the "remembrance of the things past" truly makes up the present.[7]

In the same way, the future is not just something that will happen. We truly anticipate the future right now. Without that hope and anticipation of the future, the present does not make sense.

So the usual linear description of time as being divided into past, present and future is simplistic and inadequate, though useful. We need to appreciate the complex dimensions of the past intermingling with the present and being carried

[6] Saint Augustine, *Confessions*, Oxford University Press, New York, 1998, p. 230. The whole quote is insightful: "What is time? Who can explain this easily and briefly? Who can comprehend this in thought so as to articulate the answer in words? Yet what do we speak of, in our familiar everyday conversation, more than of time? We surely know what we mean when we speak of it. We also know what is meant when we hear someone else talking about it. What then is time? Provided that no one asks me, I know. If I want to explain to an inquirer, I do not know."

[7] Marcel Proust, *Remembrance of Things Past*, New York, Vintage Books, New York, 1982 has become a classic both as a novel and as a philosophy source material.

over into the future. The present now that we experience is, in fact, constituted also by the memory of the past and anticipation of the future.

One crucial difference of time, compared to other dimensions of reality, is its direction. Why does time always flow forward? In the case of space, we know we can move forward or backward and so no restrictions on the directionality of time are implied. So mathematically we can have reverse (or negative) time. At the same time we know that what makes human life as we know it possible, is this unique directionality of time.

The theory of relativity does take this directionality of time seriously. Most of us have not accepted the significance of the simple conclusion of the theory of relativity: that time is relative to the frame of reference. In other words the "common-sense" or absolute notion of time is possible only under certain limited conditions.

Time thus provides us with one of the enduring mysteries of life and reality. Many of our common-sense notions of everyday life are shattered by recent scientific discoveries. Further, according to the theory of relativity, under certain conditions, the simultaneity of two events cannot be always assumed. So too, in some rare cases involving quantum particles, the distinction between the past and the future vanishes.

This possibility, which would enable one to travel back in time, has spurred the imagination of science-fiction writers. What would happen if I were to go back in time and eliminate my grandmother? Would I be able to prevent my own birth, then?

Such questions may be entertaining, but there-in lies a deeper significance. If we live in a four (or even ten) dimensional space, what really limits or enables the directionality of time? What enables time to move only in one direction? Why can't time at least move sideways?

Physicists answer these questions by bringing in the law of entropy. Though physics can legitimately seek such answers, the metaphysical and religious quests cannot be ignored. In fact the metaphysical questions on time help us to marvel at the nature of the life-sustaining reality.

But the more profound query is: Why is reality so constructed that beings like us can grow, mature and die? What enables us to experience the joys and sorrows of life and affirm, "This too will pass away?" Can we make a better case for a "cyclic" or even a "spiral" time, which includes the non-linear dimensions of ordinary time? Such perceptive questions on time leads us another deep dimension, that of zero. When we genuinely look into our own selves, deep down

there are traces of nothings. It is these traces of emptiness that opens our eyes to the larger mystery of the totality, that we may paradoxically call fullness. So the next paradoxical section deals with the emptiness that emerges from and leads to fullness. This is truly reflective of our human condition, limited and enabled by time.[8]

5. The Zero: Emptiness of the Fullness

Indians are credited with the discovery of zero. The Greeks could not admit zero or infinity into their system of mathematics, since zero threatened to regard 'nothing' as 'something' and to smuggle a contradiction, like a Trojan horse, into their elegant logic.

If we divide any number by zero, we get infinity. If we add any number to infinity, we still get infinity.[9] This is the route Brahmagupta took in 628 AD to define zero and introduce the decimal system of arithmetic. He could easily write:

$$\text{Infinity} = 1/0 \text{ or } 0 = 1/\text{infinity}$$

That gave rise to the elegant mathematical system that contemporary science is so used to today.[10]

But in reality such elegance is unattainable. I shall illustrate this by the simple phenomenon of temperature. As physicists remind us, temperature is in fact the average measure of the energy or movement of a system. The higher the temperature, the faster the molecules move. Absolute Zero is the coldest possible temperature and it means the particles are in total rest. Since gas follows certain laws connecting pressure and volume we can easily deduce the relation between pressure, volume and temperature of a gas.[11]

One can calculate how cold we would have to make the gas, in order for the temperature to be zero. This calculated temperature is the same temperature for all quantities of all gases and is -273.16°C. This is the temperature at which a gas

[8] Time is, according to Albert Einstein, a "stubbornly persistent illusion."

[9] *Brihadaranyaka Upanishad* Chapters 5.1.1 says: "That is fullness, this is fullness. From fullness, fullness proceeds. If we take away fullness from fullness, even then fullness still remains."

[10] Though the decimal system has found universal acceptability today, the dated FPS System of units based on the foot, pound, and second as units of length, mass, and time, respectively is still being in many parts of the world today. . It has now been replaced for scientific work by the SI system. It is based on seven basic units: the metre (m) for length, kilogram (kg) for mass, second (s) for time, ampere (A) for electrical current, Kelvin (K) for temperature, mole (mol) for amount of substance, and candela (cd) for luminosity.

[11] Boyle's Law is named after the Irish natural philosopher Robert Boyle (1627-1691) who was the first to publish it in 1662. The mathematical equation for Boyle's law is: P.V = k, which may also be denoted as PiVi =PfVf. Charles' Law describes the relation between volume (V) and temperature (T) and is given by the equation Vi/Ti = Vf/Tf.

does not move and has zero volume. Since in reality, gas cannot have a zero volume and absolute zero temperature cannot be practically reached. So, absolute zero is an unattainable limit.[12]

Temperatures within a few billionths of a degree of absolute zero have been achieved in the laboratory. At such low temperatures, substances have been seen to enter a peculiar state, known as the Bose-Einstein condensate, in which their quantum wave-functions merge and particles lose their individual identities.

In theory, the lowest possible temperature denotes the lowest possible total energy of a system. Although it might be expected that all particle motion would stop at absolute zero, this is not in fact the case. The Heisenberg's uncertainty principle asserts that even at the minimum conceivable temperature, subatomic particles would still possess a residual kinetic energy known as zero point energy. A strange outcome of this is that closely packed electrons in a metal at absolute zero would have the same energy as an ordinary gas at 50,000°C. Thus, although at absolute zero a system's entropy is zero, the total energy of a system is not zero.

Another reason why the absolute zero temperature is physically unattainable, is the third law of thermodynamics. At first sight, this might seem unreasonable. There is no upper temperature limit, so why should there be a lower one? In trying to understand this, it is helpful to think in terms of temperature ratios rather than temperature differences – the ratio from 10,000 K to 1,000 K, say, being the same as that from 0.001 K to 0.0001 K. Just as by supplying more and more energy to a system we can add as many zeros before the decimal point of the Kelvin reading as we choose, so by continuing to take energy out of a system we can add an arbitrary number of zeros after the decimal point. Yet just as we can never reach an infinitely high temperature, so we can never attain an infinitely low one – absolute zero itself. In a profound sense, absolute zero lies at the asymptotic limit of low energy just as the speed of light lies, for particles with mass, at the asymptotic limit of high energy.[13] In both cases, energy of motion – kinetic energy – is the key quantity involved. At the high-energy end, as the average speed of the particles of a substance approaches the speed of light, the temperature rises without limit.[14]

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[12] For more details on zero see Pichalakkattu Binoy, "Dialoging with Symbols: Exploring Zero, Sunyata and Trinity for a Holistic Reality," *Omega: Indian Journal of Science and Religion* 5/2 December 2006, 25-41.

[13] In coordinate geometry, a straight line that a curve approaches progressively more closely but never reaches is an asymptote.

[14] This implies that even if we increase the velocity of a moving particle, it will only approach the speed of light, since so much of its energy is converted to higher temperature. Similarly a the lower energy level, of we try to reduce the energy, the velocity will tend to zero, but will never reach

Thus the real world, unlike the elegant and coherent world of the ideal mathematics, is the tensional in-between, bridging the two extremes, both of which are unattainable. The beauty of the real, including our own selves, lies in the fact that we can dream of the ideal, march towards the ideal, without ever attaining it. The elusive and fascinating horizon invites us always.

It is hoped that what we have been saying about the heat could be metaphorically or symbolically applied to the heart – the realm of human relationship and love. Just as is the case with heat, we can always love deeper, become more intimate, but never attain the complete union of hearts, which we so ardently long for. This may be called the "emptiness of the fullness."

6. Conclusion: The Ever Approachable Project

In this concluding section we want to sum up the crucial insights we have gathered above regarding the fascinating and ambiguous aspects of reality and human beings in terms of the horizon of reality and of human nature. Here we look at reality as ever approchable and humans as the finite search for the infinite.

A. World Horizon: Ever Approachable, Never Attainable

Though the Big Bang theory has not found acceptance among all scientists, it is still the most popular theory we have regarding the origin of the universe, of time and of space. Cosmological models of the "Big Bang" expansion of the universe have converged on a general framework in time, energy and temperature. Below is an attempt to show some of the features of the models on a time line as explained in the bestseller, *The First Three Minutes* by Nobel Laureate Stephen Weinberg.[15]

An overwhelming weight of evidence has convinced cosmologists that the universe came into existence at a definite moment in time, some 13.7 billion years ago, in the form of a super-hot, super-dense fireball of energetic radiation. Until the arrival of this Big Bang theory the universe was believed to be essentially eternal and unchanging, represented by the Steady State model.

It is necessary to understand that the Big Bang did not begin as a huge explosion within the universe, the Big Bang created the universe. A popular misconception is that it happened within the universe and that it is expanding through it. This causes people to wonder where in the universe it started, as if by

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zero, since much more of energy (reaching almost energy) is needed to reduce the temperature at close domains of zero.

[15] Stephen Weinberg, *The First Three Minutes: A Modern View of the Origin of the Universe*, Basic Books, New York, 1994.

running the clock backwards we would reach the point where all the galaxies come together in the centre of the universe. The universe does not have a centre, any more than the surface of a sphere has a centre, there is no preferred place that could be termed the centre.

The standard model of the Big Bang theory proposes that the universe emerged from a "singularity," at time zero. Scientists can describe all that has happened since 0.0001 of a second after this moment of creation. The temperature of the universe at that time was 1,000 billion degrees Kelvin and had a density that of nuclear matter, 10^{14} grams per cubic centimetre. Under these extreme conditions, the photons of the 'background' radiation carry so much energy that they are interchangeable with particles. Photons create pairs of particles and antiparticles which annihilate one another to make energetic photons in a constant interchange of energy. Because of a small asymmetry in the way the fundamental interactions work, slightly more particles were produced than antiparticles - about one in a billion more particles than antiparticles.

When the universe had cooled to the point that photons no longer had the energy required to make particles, all the paired particles and antiparticles annihilated, and the one-in-a-billion particles left over, settled down to become stable matter. One- hundredth of a second after time zero, the temperature had fallen 90% to 100 billion K. By one-tenth of a second after time zero, the temperature was down to 30 billion K. The temperature after 13.8 seconds was down to 3 billion K, and by three minutes and two seconds it had cooled to 1 billion K, only 70 times hotter than the centre of the Sun today. At this temperature nuclei of deuterium and helium could be formed and stick together despite collisions with other particles.

What is insightful is that astrophysicists have been able to describe the phenomenon of the Big Bang upto three minutes with a very high degree of precision. They can trace the origin of the Big Bang to say, 0.0001 seconds after its beginning and describe the situation satisfactorily. When they want to investigate the situation of the Big Bang close to zero seconds, it becomes more and difficult, and finally almost impossible. To describe the phenomenon closest to zero, we need to expend almost an infinite amount of energy.

This situation of the universe may be best described as a horizon, which remains always elusive. It is ever approachable and never attainable. It becomes almost impossible describe the beginning of the universe as time approaches zero ($T \rightarrow 0$).

B. HUMAN NATURE: FINITE SEARCH FOR THE INFINITE

If reality is ever approachable but never attainable, we can assert the same thing about human beings themselves.

To apply the phenomenon to humans, using the insights of Paul Ricoeur, we can claim that human beings themselves live the tension between the finite and the infinite. Limiting only to one aspect of human life, feeling or affectivity, we can trace a similar situation.

Ricoeur contends that human affectivity displays two directions or dimensions: pleasure and happiness. The finite pole is to be found in pleasure which, Ricœur contends, terminates in finite acts.[16] Pleasure is the movement of feeling towards the good fulfilled in the instant. As such it is precarious and perishable. Its focus is upon its bond with bodily life, and the fulfilment of pleasure is feeling at the existential condition for bodily life. In this condition, pleasure stands as the condition (or possibility) for all other good.[17] In itself pleasure has its own type of totality and is non-reducible. It has an "innocence", but it is a "menaced innocence" in that the potential for conflict with happiness is always present.

The pole of infinitude in the feeling is happiness (*bonheur*). Happiness or blissfulness is that dimension of feeling which revolves around the need for unity or wholeness in human life. It terminates in the existential project which is destiny. The feeling of happiness is intimately connected to the idea of well-being, but is more than merely an idea, since it is the fulfilment of this direction in beatitude.[18]

So we can talk of human affectivity and its two dynamic polarities of finitude and infinite. The infinite in us is both bound and enabled by the finite. We remain always open to the infinite and rooted in the finite. The swing between the two makes us the unique creatures that we are. It is in this unique "in-betweenness" that we can situate and understand our own freedom.

As an infinite god who is bound to finite matter and as a final being who reaches out to the unlimited we lead a "tensional existence." Here emerges precious freedom that we are capable of. Here we perceive also our fragility. It is precisely in its fragility that the beauty and uniqueness of the human shines forth!

Given such a human situation, where the voluntary is in the involuntary, the

[16] Paul Ricœur, *Philosophie de la volonté. Vol. 2. Finitude et Cultpabilité.* Livre 1: *L'homme faillible.* Livre II: *La symbolique du mal* (Philosophie de l'espirit), Aubier, Paris 1960 Reprint 1988, p. 109. See also D. Ihde, *Hermeneutic Phenomenology: The Philosophy of Paul Ricœur,* Northwestern Univ Press, Evanston, 1971, p. 132.
[17] *Ibidem,* p. 110.
[18] *Ibidem,* p. 109.

material is in the spiritual, the quest for human nature and freedom will always remain precarious with us. The urge to reach out to the infinite will enable us to remain humans. This quest can be stifled only at the cost of being human. Thus humans are the limited embraced by the unlimited, the material overwhelmed by the spiritual.

Just as the material reality is ever approachable, but never attainable, so human beings too could be understood in this paradoxical and ambiguous manner. So it is ever approachable and never attainable. So human beings, including our ideals, perfections, our relationship and even happiness, are approachable, but never realizable.

Therein lies the precious and precarious nature of reality and human beings. In such a scenario, our human endeavour is to make sense of this ambiguous project, the ever widening mystery, that is human life. So the role of philosophy and theology is to mediate these two tensional aspects of life: that of the material and the beyond. If we understand by religion the spiritual realm, and by science the material then we can understand the insight of Whitehead: "Philosophy attains its chief importance by fusing ... religion and science into one rational scheme of thought."[19] Thus philosophy and theology is a creative attempt to cope existentially with the adventure of life and make sense of the ambiguous and fascinating aspects of ourselves and of reality.).

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