Pandikattu, Kuruvilla
Jnana-Deepa Vidayapeeth, Pune, India

Draft Only

Human Beings Today: At the Crossroads of Collective Extinction or Cosmic Expansion

Abstract: *Basing ourselves on the present technological and scientific possibilities, an attempt is made to analyze existentially the two crucial possibilities confronting humanity today. On the negative side, we can eliminate ourselves and along with us, possibility even the whole life from the planet earth. Nuclear catastrophes, genetic calamity, inhuman injustice, growing violent fundamentalism, world-war, etc., could eventually wipe out the very life that we are part of. On the positive side, we are in a position to enhance ourselves genetically, socially and spiritually. We have the technology to remove hunger from the planet earth and we are the know-how to bring about better health and social security for ourselves.*

We are in a privileged position, technologically and scientifically, to enhance the evolution, which has made us what we are. The genetic technology available to us enables us to engineer life, accelerate and even modify the very evolution of which we are all part. In short the choice confronting us collectively is either cosmic extinction or collective extension. After elaborating on these choices further, we shall respond to this choice from moral and philosophical perspectives.

1. Introduction

„The significant problems we have cannot be solved at the same level of thinking with which we created them."[i] This quote attributed to Albert Einstein is an invitation to raise our level of thinking or of consciousness in shaping, confronting and unravelling the contemporary issues, social, moral and philosophical. This is an explorative paper that tries to situate human beings in the contemporary context, explores the awful possibilities and dangers that humanity today encounters which pose the philosophical challenges of unimaginable magnitude.

In the first part of this article, we study the possibility of reaching out to the space, made possible by the technological prowess of modern humanity. Then we see the opportunities opened to us to reach inward and encounter the great enigma that we are to ourselves. This is followed by the real possibility made available to us by the contemporary technology of annihilating ourselves. Confronted by these possibilities, philosophers cannot be indifferent but be passionately committed to the cause of furthering humanity and cosmos.

For this paper, I base myself on Stephen Hawking (1942-), who though not a professional philosopher, has raised wider philosophical issues. The presupposition behind this paper is that philosophical vision, ideas and ideals have much greater in guiding the destiny of humanity than technological marvels. So a more adequate philosophical analysis of human beings (which include also God and the cosmos) is the pressing need of our times.

2. Toward the Outer Space

Technology has made it possible not only to move beyond ourselves but also to colonise the planets and to transplant ourselves. So in this section, I study how humanity can reach beyond ourselves.

2.1 Stephen Hawking's Call to Spread Out

We start with an audacious plea by Stephen Hawking who emphasised that the „survival of the human race depends on its ability to find new homes elsewhere in the universe because there's an increasing risk that a disaster will destroy the Earth. The British astrophysicist told a news conference in Hong Kong in 2006 that humans could have a permanent base on the moon in 20 years and a colony on Mars in the next 40 years. „We won't find anywhere as nice as Earth unless we go to another star system," added Hawking. He further maintained that if humans can avoid killing themselves in the next 100 years, they should have space settlements that can continue without support from Earth.[ii]
„It is important for the human race to spread out into space for the survival of the species," Hawking said. „Life on Earth is at the ever-increasing risk of being wiped out by a disaster, such as sudden global warming, nuclear war, a genetically engineered virus or other dangers

we have not yet thought of."[iii] The 64-year-old scientist – author of the global best seller *A Brief History of Time* – is wheelchair-bound and communicates with the help of a computer because he suffers from a neurological disorder called amyotrophic lateral sclerosis, or ALS, believes that the survival of the human race depends on whether or not we colonize other planets.

„The long-term survival of the human race is at risk as long as it is confined to a single planet," he said during a radio interview with BBC. „Sooner or later, disasters such as an asteroid collision or nuclear war could wipe us all out. But once we spread out into space and establish independent colonies, our future should be safe."

The idea of 'warp drive', popularized by science fiction writers and televised in the series *Star Trek*, enables space ships to travel vast distances in a short time. According to the renowned scientist," unfortunately, this would violate the scientific law which says that nothing can travel faster than light." Still using a yet-to-be developed 'matter/anti-matter annihilation' propulsion system, space travel velocities could approach the speed of light, according to Hawking. The closest stars could be reached in 6 years. „It wouldn't seem so long for those on board," he said.[iv]

2.2 Discovery of Sister Earth

A very recent scientific discovery,[v] about the possible discovery another earth-like planet, has caused tremendous fascination in the general public. As it was reported by many newspapers, it answered at least partially the human search for extra-terrestrial life and the possibility of human migration, that Hawking refers to..

If extraterrestrial life were to exist, it would need a planet on which to evolve. It was noted that all but one of 200-or-so planets outside the solar system that have so far been discovered by astronomers would be quite unsuitable since they are composed mostly of hot gas. Yet the one whose discovery was announced recently.[vi] Astronomers think it is rocky, like the Earth, and that it may harbour liquid water. This makes it the best candidate yet for supporting life.

The new planet orbits a star, called Gliese 581, that lies a mere 20 light years away in the constellation Libra. The temperature of our sun is such that it supports a nuclear-fusion reaction that generates bright sunlight. By contrast, Gliese 581 is a red dwarf, so-called because the star is small and the fusion reaction proceeds slowly, creating a dim

glow. Nevertheless, because the new planet is much closer to its star than the Earth is to the sun, it lies in what astronomers call the „habitable zone" – the space surrounding a star where water would be in its liquid form.

Seeing remote planets is difficult. Astronomers used to detect them indirectly, by spotting a small wobble in the position of the star, which indicated that it was being pulled very slightly to and fro by an orbiting planet. New telescopes and techniques have found other planets outside the solar system – so-called „exoplanets" – directly, from the slight dip in the luminosity of the star as the planet crosses its face. But these techniques work only with giant planets and, in general, giant planets are gaseous.

Looking for planets orbiting red dwarfs is easier because the stars are less massive. This not only means that any planets are likely to circle it more closely (to remain in orbit) but also that the wobbles are more readily seen. The researchers – led by Stéphane Udry of the University of Geneva – used an indirect method called the „radial velocity" technique. This exploits the Doppler effect – familiar when a siren changes pitch as a fire engine passes you – to reveal changes in the velocity of the star as it wobbles. This is sensitive because it is easier to measure small changes in the wavelength of light than luminosity.

The new planet, called Gliese 581c, is more than three times the size of the Earth. It has five times the mass of this planet and orbits its star every 13 days. The astronomers who discovered it had earlier found another planet, a gaseous giant similar to Neptune, orbiting the same star every 5.4 days.[vii] They say they have strong evidence for a third planet in the same system that has about eight times the mass of the Earth and orbits every 84 days. The evidence is reported in a paper submitted to the prestigious scientific journal *Astronomy and Astrophysics*.

According to normal understanding, a planet the size and mass of Gliese 581c should be rocky, like the Earth. It could be covered in oceans, perhaps completely. The mean temperature on the surface of the planet is thought to be between 0°C and 40°C, making it far more hospitable than either Venus or Mars, Earth's nearest neighbours.

The race is now on to detect whether the planet has an atmosphere and whether it contains water. Towards the middle of April, 2007, astronomers using the *Hubble* space telescope identified for the first time water vapour in the atmosphere of an exoplanet, albeit a gaseous one some 150 light years away. The planet, called HD209458b, shows

its face to Earth every three-and-a-half days, giving plenty of chances to take measurements. If water exists on Gliese 581c, detecting it there will be much harder.[viii]

Even if Gliese 581c is not yet inhabited by little green men, there is plenty of time for that to change. The Earth gets its warmth from a sun that is thought to be about 5 billion years old and halfway through its lifetime as a „main sequence" star. After that it is expected to become a red giant, at which time the Earth's atmosphere and water will be boiled away, leaving it uninhabitable.

Red dwarfs to which Gliese 581c belongs, by contrast, burn for hundreds of billions of years. This not only gives plenty of time for life to evolve on the recently discovered planet. It may make Gliese 518c a useful bolthole in some 5 billion years' time.[ix]

That's what makes Gliese special for philosophers and scientists. Like Earth, it is a small planet – 1.5 times Earth's diameter, in fact. Planets of that size are not blobs of gas but rocky. It also orbits its parent sun at a distance where liquid water could exist (the estimated temperature is between 0 and 40 degrees). And liquid water could mean life. It is, in other words, the first potentially habitable planet. „There's probably millions or billions of them out there, but this is the first one to be found," said Malcolm Walter, director of the Australian Centre for Astrobiology at Macquarie University.[x]

3. Into the Inner Space of Consciousness

Consciousness is a quality of the mind generally regarded to comprise qualities such as subjectivity, self-awareness, sentience, sapience, and the ability to perceive the relationship between oneself and one's environment. It is a subject of much research in philosophy of mind, psychology, neuroscience, and cognitive science.[xi] Like life and love, everybody knows what it is but nobody can adequately define it. Consciousness is an evolutionarily derived imperative. Basically, its function is to provide an arena where *computational* and *non-computational* brain-mind functions are carried out, in order to assist the organism to manifest appropriate behavior. Therefore though consciousness may be related to the Spirit, Mind, or Soul, or the awakened subconscious. it cannot be identified with them.

Consciousness came into being when the organism acquired the ability to *modify reflexive behavior* and, over time, improved its quality which implies a simultaneous increasing complexification of the brain circuits. It is possible to designate different levels of consciousness. A basic form is found in animals where brain activity is geared to presenting an emerging situation in a coherent fashion, providing the options to 'fight,' 'take flight' or 'pretend your dead'. A more sophisticated higher order consciousness evolved in humans. Other brain functions for which consciousness is essential like memory, speech, conceptual thinking and awareness of personhood to name a few, would have of necessity, developed in tandem. We study these possibilities briefly in the next sections.

3.1 Teilhard de Chardin's Vision of Humans as Evolution

Pierre Teilhard de Chardin, S.J. (1881-1955) was a French Jesuit priest trained as a paleontologist and a philosopher, and was present at the discovery of Peking Man.[xii] Teilhard conceived such ideas as the Omega Point and the Noosphere and urged the scientists and theologians to respect each other and to move forward in the evolutionary journey of life.

Teilhard's primary book, *The Phenomenon of Man*, set forth a sweeping account of the unfolding of the cosmos as evolutionary. He abandoned traditional interpretations of creation in the Bible in favor of a less strict interpretation which is accepted by the Church today. Teilhard's position was opposed by his church superiors, and his work was denied publication during his lifetime. But after his death he has been highly acclaimed and he is at present studied as a synthesiser between scientific ventures and religious visions.

Teilhard's masterpiece, *The Phenomenon of Man*, equally based its speculations on science, while emphasizing the back-and-forth interplay of individuality and collectivity over the course of cosmic history. Specifically, Teilhard saw the potential for human beings, like molecules and bacteria before them, to come together in a higher integration or „megasynthesis" of a new evolutionary potential. He wrote: „The way out for the world, the gates of the future, the entry into the superhuman, will not open ahead to the privileged few, or to a single people, elect among all peoples. They will yield only to the thrust of *all together* (even if it were from the influence and guidance of an elite) in the direction

where all can rejoin and complete one another in a spiritual renewal of the Earth."[xiii]

In his masterwork he writes: „For invincible reasons of homogeneity and coherence, the fibers of cosmogenesis require to be prolonged in ourselves far more deeply than flesh and bone. We are not being tossed about and drawn along in the vital current merely by the material surface of our being. But like a subtle fluid, space-time, having drowned our bodies, penetrates our soul. It fills it and impregnates it. It mingles with its powers, until the soul soon no longer knows how to distinguish space-time from its own thoughts. Nothing can escape this flux any longer, for those who know how to see, even though it were the summit of our being, because it can only be defined in terms of increases of consciousness. For is not the very act by which the fine point of our mind penetrates the absolute a phenomenon of *emergence*? In short, recognized at first in a single point of things, then inevitably having spread to the whole of the inorganic and organic volume of matter, whether we like it or not evolution is now starting to invade the psychic zones of the world."[xiv]

He adds further that the human discovers that, "in the striking words of Julian Huxley, we are *nothing else than evolution become conscious of itself*. It seems to me that until it is established in this perspective, the modern mind...will always be restless. For it is on this summit and this summit alone that a resting place and illumination await us.... All evolution becomes conscious of itself deep within us.... Not only do we read the secret of its movements in our slightest acts, but to a fundamental extent *we hold it in our own hands:* responsible for its past and its future."[xv]

In the same book he asserts that we are faced with a harmonised collectivity of consciousnesses equivalent to a sort of super-consciousness. The vision is that of the earth not only becoming covered by myriads of grains of thought, but becoming enclosed in a single thinking envelope so as to form – similar to the world wide web that he never experienced – functionally, "no more than a single vast grain of thought on the sidereal scale, the plurality of individual reflections grouping themselves together and reinforcing one another in the act of a single unanimous reflection."[xvi]

Thus for Teilhard, cosmos is evolving and we human beings, however puny and tiny we might be are evolution that has become conscious of itself.[xvii] Elsewhere I have tried to show that today this definition of Teilhard may be modified and we can assert that humans are „evolution

consciously capable of eliminating itself or enhancing itself." The very process of evolution of which we are part, can be eliminated or enhanced by the contemporary humans! Not a mean achievement, if we remember that this was not possible even twenty years ago and it speaks of the technological leap that humanity is experiencing today.

3.2 Neurotheology to Foster Consciousness Studies

The evolutionary consciousness that forms part of Teilhardian vision of humanity is being accelerated by two technological features: the internet[xviii] and Human Genome Project.[xix] Both these phenomena, it is hoped will throw light on our brain and hence lead to further advancement of consciousness. The subject that deals with the interconnection of neuroscience, conscience and theology may be called neurotheolgy.

The term „neurotheology", combines *reductionist* neurological science (that explains the mechanics, or, (the HOW, of brain activity) and *beliefs*, incorporated in theology that should provide reasons for the WHY, behind religious experience and faith. Neurotheology in other words is primarily concerned with identifying the mechanisms underlying brain functions like the conceptualization of God, moral values, spiritual experiences, guilt, faith and transcendental longings that have become an integral part of human personality. It does not address the subject of theology, per se, except to acknowledge that all the above and mystic experiences, beliefs, inner promptings, which may belong to *another dimension of reality*, are also necessarily brain based.

Though the 'neuro' in Neurotheology assumes that the *material world* as we perceive it is the only *reality*, thereby implying that all the functions of the brain/mind begin and end in the brain, by virtue of the word theology being incorporated in the word, it becomes obligatory that neuro does not omit epistemological and ontological questions just as theology cannot ignore completely, its brain based reductionist dimension.

The discipline of Neurotheology is applicable to *all religions* that includes in its purview – spirituality, consciousness, behavior – moral or otherwise, belief in a transcendental being or an outside agency, to name a few commonalities. It realised that in the 21st century, it is

important for scientists and theologians alike to adopt the practice of 'Consilience'. The word consilience used in this context means that scholars in the field of neurosciences and theology maintain openness to all possibilities and interpret their findings accessing all that science, in the realm of natural sciences, quantum physics or cosmology is able to contribute on the one hand, while including a spiritual dimension, and its scientific conceptualization and purposiveness on the other.

In the past, dialogues between science and theology did not prove always successful because, they tried to speak to each other over a divide that brooked no building of bridges between the two. Today consilience, appears to be the logical methodology available for achieving a balanced and holistic view of matters that involve matter and spirit.

The term Neurotheology has been in common use only for the last 15 or more years, though the term was first used by Aldous Huxley in his book entitled 'Island' in 1964. The discipline of Neurotheology developed very rapidly because of the tremendous innovations in mapping of brain functions utilizing fMRI, SPECT, PET, EEG and related techniques and promises to fill a very important hiatus in our understanding of transcendentalism. These techniques graphically demonstrate the various regions of the brain work that work in specific situations. These new techniques have been used to map regions of the brain involved during deep meditation, spiritual experience, drug consumption, speaking falsehoods and other tasks. The brain activity in serial killers who exhibit no remorse for their actions and a study of brain injured patients who suddenly exhibit abnormal or non-ethical behavior have also been used to delineate areas involved in abnormal human behavior.

The biggest problem with the term Neurotheology is that there is no theology at all in its scope if, the definition of theology is restricted to the study of the attributes of God. A radiological display of changes in metabolism or blood flow in specific brain regions does not tell us anything about God. One should therefore be sure to separate the experiencing of God by the brain and God. Furthermore, Neurotheology has not addressed the finding in many instances of a remarkable change in behavior patterns of the individual after a transcendental experience. The study of consciousness is related to neurotheology. For without consciousness, we would not be discussing what consciousness

is in the first place. Such studies in neurotheology, it is hoped, will enlighten us further on the role of consciousness in human beings and may be even in the cosmos (starting of course with cybernetics and computers).

So using the resources available to us, we can enhance ourselves physically, psychologically and even spiritually. So far we have explored the two possible ways of human and cosmic advancement: the outward movement through extra planetary exploration and the inward movement though the development of inner consciousness. Now we go to the other possibility confronting us: that of cosmic annihilation. Since much has been written on the dangers facing humanity I limit myself to the philosophical level and speaks only of the Doomsday arguments and a long quote from Stephen Hawking.

4. Unto Utter Zero

After appreciating the possibilities opened to us by today's technology, both to reach to the outer space and explore our own inner space, we study briefly some of the salient the dangers that confront us. Since we do not want to dwell elaborately on this topic, we deal only with one philosophical argument and the brief analysis of Stephen Hawking.

4.1 Doomsday Arguments and Total Annihilation

The Doomsday argument is a probabilistic argument that claims to predict the future lifetime of the human race given only an estimate of the total number of humans born so far.
It was first proposed in an explicit way by the astrophysicist Brandon Carter in 1983, from which it is sometimes given the name „the Carter catastrophe"; and was subsequently championed by the philosopher John Leslie. It has since been independently discovered by J. Richard Gott and Holger Bech Nielsen. Similar principles of eschatology were proposed earlier by Heinz von Foerster, among others.
From seemingly trivial premises it seeks to show that the risk that humankind will go extinct soon has been systematically underestimated. Nearly everybody's first reaction is that there must be something wrong with such an argument. Yet despite being subjected to intense scrutiny by a growing number of philosophers, no simple flaw in

the argument has been identified.
It started some fifteen years ago when astrophysicist Brandon Carter discovered a previously unnoticed consequence of a version of the weak anthropic principle. Carter didn't publish his finding, but the idea was taken up by philosopher John Leslie who has been a prolific author on the subject, culminating in his monograph *The End of the World.*[xx] Versions of the Doomsday argument have also been independently discovered by other authors. In recent years, there have been numerous papers trying to refute the argument, and an approximately equal number of papers refuting these refutations.[xxi]

4.2 Hawking's Dilemma and Hope

This section I want to conclude by a long quote from Stephen Hawking who first raised the question: „How can the human race survive the next hundred years? I don't know the answer. That is why I asked the question, to get people to think about it, and to be aware of the dangers we now face."[xxii]
Then he enumerates the various catastrophes that we have been facing.
Before the 1940s, the main threat to our survival came from collisions with asteroids. Such collisions have caused mass extinctions in the past, but the last one was 70m years ago, so the likelihood that we will need the services of Bruce Willis [Allusion to Film: Armageddon (1998)] in the next hundred years is very small.
A much more immediate danger, is nuclear war. America and Russia, each have more than enough warheads to kill everyone on Earth, several times over, and the same may now be true of China. The world came perilously close to nuclear annihilation on more than one occasion in the last 50 years. With the ending of the cold war, the threat has become less acute, but it has not gone away. There are still enough nuclear weapons stockpiled to kill us all, and their use might be triggered by an accident that convinced a country that it was under attack. There is now a new danger from small and potentially unstable countries acquiring nuclear weapons. Such minor nuclear powers might cause millions of deaths, but they would not threaten the survival of the entire human race, unless they sparked a conflict between the major powers.
These dangers of asteroid collision and nuclear war, have now been joined by a host of other threats to our survival. Climate change is happening at an ever increasing rate. While we are hoping to stabilise it,

and maybe even reverse it, by reducing our CO2 emissions, the danger is that the climate change may pass a tipping point at which the temperature rise becomes self sustaining.

The melting of the Arctic and Antarctic ice reduces the amount of solar energy that is reflected back into space and so increases the temperature further. The rise in sea temperature may trigger the release of large quantities of CO2, trapped at the bottom of the ocean, which will further increase the greenhouse effect. Let's hope we don't end up like our sister planet Venus with a temperature of 250C and raining sulphuric acid. There are other dangers, such as the accidental or intentional release of a genetically engineered virus.[xxiii]

And his conclusion sounds both foreboding and terrifying:

Each time we increase our technological powers, we add new possible ways in which things could go disastrously wrong. The human race faces an increasingly dangerous future. There's a sick joke that the reason we haven't been visited by aliens is that when a civilisation reaches our stage of development, it becomes unstable and destroys itself. In fact, I think there are other reasons why we haven't seen any aliens, but the story shows how perilous the situation is. The long-term survival of the human race will be safe only if we spread out into space, and then to other stars. This won't happen for at least 100 years so we have to be very careful. Perhaps, we must hope that genetic engineering will make us wise and less aggressive."[xxiv]

Hawking is concerned and committed to the concerns and issues of the real world. He wishes that the human race will come out of this travail. So elsewhere Hawking makes an impassionate plea:

If this race manages to redesign itself, to reduce or eliminate the risk of self-destruction, it will probably spread out, and colonise other planets and stars. However, long distance space travel, will be difficult for chemically based life forms, like DNA. The natural lifetime for such beings is short, compared to the travel time. According to the theory of relativity, nothing can travel faster than light. So the round trip to the nearest star would take at least 8 years, and to the centre of the galaxy, about a hundred thousand years. In science fiction, they overcome this difficulty, by space warps, or travel through extra dimensions. But I don't think these will ever be possible, no matter how intelligent life becomes. In the theory of relativity, if one can travel faster than light, one can also travel back in time. This would lead to problems with people going back, and changing the past. One would also expect to

have seen large numbers of tourists from the future, curious to look at our quaint, old-fashioned ways.[xxv]

Hawking remains hopeful and his hope is based on scientific and technological progress.[xxvi] He adds: „It might be possible to use genetic engineering, to make DNA based life survive indefinitely, or at least for a hundred thousand years. But an easier way, which is almost within our capabilities already, would be to send machines. These could be designed to last long enough for interstellar travel. When they arrived at a new star, they could land on a suitable planet, and mine material to produce more machines, which could be sent on to yet more stars. These machines would be a new form of life, based on mechanical and electronic components, rather than macromolecules. They could eventually replace DNA based life, just as DNA may have replaced an earlier form of life."[xxvii]

Truly we can eliminate ourselves and along with us, possibility even the whole life from the planet earth. Nuclear catastrophes, genetic calamity, inhuman injustice, growing violent fundamentalism, world-war, etc., could eventually wipe out the very life that we are part of. This is the dilemma and hope of Hawking, which I wish that philosophers take seriously.

5. Philosophical Response

In our analysis of our situation confronting us, we have been focussing on Stephen Hawking, himself not a philosopher. Let me explain why I am interested in bringing him here in a philosophical seminar. In 1988, Stephen Hawking wrote *A Brief History of Time.* It became an instant bestseller, spawning a documentary movie and a 10th anniversary edition. In the book Hawking describes his cosmological search for the origins of the universe to a general audience. He uses anecdotes and analogies to explain the complex principles of general relativity, quantum mechanics, the laws of thermodynamics and other ideas associated with theoretical physics. His discourse makes what is often considered complex and scientific, accessible and philosophical at the same time. He also employs the language of theology and seeks to place the idea of God in his diagram of the universe.

His book is heavy on philosophy and theology and light on science. As Carl Sagan states in the introduction:
This is also a book about God. . . or perhaps about the absence of God. The word God fills these pages. Hawking embarks on a quest to answer Einstein's famous question about whether God had any choice in creating the universe. Hawking is attempting, as he explicitly states, to understand the mind of God. And this makes all the more unexpected the conclusion of the effort, at least so far: a universe with no edge in space, no beginning or end in time, and nothing for a creator to do.[xxviii]

In addition to the theological questions he poses, Hawking invokes the philosophical thought of Aristotle, Augustine, Kant and Wittgenstein. He also engages in a great deal of philosophical thought himself. In fact, the book and the companion documentary are a mixture of popularized science and personal biography. He takes a page from St. Augustine and mixes his scientific discourse with what amounts to his version of Augustine's *Confessions*. However, it is when quoting Wittgenstein that Hawking laments the divide between science and philosophy that we need to overcome.

Hawking further affirms:
Up to now, most scientists have been too occupied with the development of new theories that describe what the universe is to ask the question why. On the other hand, the people whose business it is to ask why, the philosophers, have not been able to keep up with the advance of scientific theories. In the eighteenth century, philosophers considered the whole of human knowledge, including science, to be their field. . . However, in the nineteenth and twentieth centuries, science became too technical and mathematical for philosophers. . . Philosophers reduced the scope of their inquiries so much that Wittgenstein. . . said „the sole remaining task for philosophy is the analysis of language."[xxix]

In this paper it is my plea to philosophers, whether they are religious or not, to take up the concerns of life and the possibility of its enhancement seriously. Responding to the question asked by Hawking already in 1988 is the need of the hour today. Based on the existential situation of today, philosophers need to articulate a deeper understanding of the human person, of and of nature. Such a vision, it is hoped will instil a moral vision that is larger than ourselves, a community spirit that is responsible to the larger cosmos and an

understanding of ourselves that enables us to respect the whole of cosmos.[xxx] Such a revised philosophical vision can help us cope realistically and responsibly the future that is awaiting us. That would widen the horizon of our understanding and enhance our way of life.

6. Conclusion: A Philosophy of Commitment and Compassion

We are at the cross roads of enhancing life or eliminating existence, between cosmic expansion or collective expansion. As philosophers, we need to respond to the issues confronting us critically, creatively and carefully. The philosophical vision and understanding of the universe, God and the human beings do contribute to contribute to the making of the universe, much more than the technological and biological progress that drives us forward.[xxxi] This involves engagement, commitment and passion, both theoretically and practically.[xxxii] So I want to conclude with a plea against indifference and for commitment and compassion for the whole cosmos.

In a way, to be indifferent to that suffering is what makes the human being inhuman. Indifference, after all, is more dangerous than anger and hatred. Anger can at times be creative. One writes a great poem, a great symphony, one does something special for the sake of humanity because one is angry at the injustice that one witnesses. But indifference is never creative. Even hatred at times may elicit a … The political prisoner in his cell, the hungry children, the homeless refugees – not to respond to their plight, not to relieve their solitude by offering them a spark of hope is to exile them from human memory. And in denying their humanity we betray our own. … Indifference, then, is not only a sin, it is a punishment. And this is one of the most important lessons of this outgoing century's wide-ranging experiments in good and evil.[xxxiii]

Select Bibilography

Hawking, Stephen. *A Brief History of Time: From the Big Bang to Black Holes.* New York: Bantam Books, 1988.

Hawking Stephen. (ed.) *Stephen Hawking's A Brief History of Time: A Reader's Companion.* New York: Bantam Books 1992.

Teilhard de Chardin, Pierre, *The Phenomenon of Man*, Collins, London, 1940.

Madison, Maureen „Is Stephen Hawking Modern?: A Study of *A Brief History of Time* in Relation to the Theories of Bruno Latour" The George Washington University, http://findarticles.com/p/ articles/mi_qa3724/ is_200101/ai_n8939564, Accessed April 2007.

ENDNOTES

[i] http://www.quotationspage.com/quote/23588.html, accessed April 2007.
[ii] http://www.dailymail.co.uk/pages/live /articles/news/news.html?in_article_id=390524&in_page_id=1770.
[iii] http://www.foxnews.com/story/0,2933,199293,00.html, accessed April 2007.
[iv] http://en.wikinews.org/wiki/ Stephen_Hawking_believes_going_to_ other_planets_is_necessary_for_human_survival, accessed April 2007.
[v] http://www.theage.com.au/, accessed April 2007.
[vi] The discovery of such a planet was reported on April 26, 2007.
[vii] http://www.theage.com.au/
[viii] http://www.theage.com.au/
[ix] http://www.economist.com/science/displaystory.cfm?story_id=9070902
[x] http://www.theage.com.au/
[xi] http://en.wikipedia.org/wiki/
[xii] http://en.wikipedia.org/wiki/Pierre_Teilhard_de_Chardin
[xiii] http://www.andrewcohen.org/teachings/history-evolutionary-spirituality2.asp
[xiv] Teilhard de Chardin, *The Phenomenon of Man*, 1940.
[xv] Teilhard de Chardin, *The Phenomenon of Man*, 1940.
[xvi] http://www.webcom.com/gaia/tdc.html.
[xvii] This may be compared to what the German philosopher Friedrich Schelling wrote „History as a whole is a progressive, gradually self-disclosing revelation of the Absolute,"
[xviii] Lack of space does not permit me to elaborate. Briefly it may be said that the elaborate networking of ideas and information made available online and the consequence of it leads to both technological and ideational progress.

[xix] Completed in 2003, the Human Genome Project (HGP) was a 13-year project coordinated by the U.S. Department of Energy and the National Institutes of Health,

- *identify* all the approximately 20,000-25,000 genes in human DNA,
- *determine* the sequences of the 3 billion chemical base pairs that make up human DNA,
- *store* this information in databases,
- *improve* tools for data analysis,
- *transfer* related technologies to the private sector, and
- *address* the ethical, legal, and social issues (ELSI) that may arise from the project.

Though the HGP is finished, analyses of the data will continue for many years. The analysis of similarities between DNA sequences from different organisms is also opening new avenues in the study of the theory of evolution. In many cases, evolutionary questions can now be framed in terms of molecular biology; indeed, many major evolutionary milestones (the emergence of the ribosome and organelles, the development of embryos with body plans, the vertebrate immune system) can be related to the molecular level. Many questions about the similarities and differences between humans and our closest relatives (the primates, and indeed the other mammals) are expected to be illuminated by the data from this project
(http://en.wikipedia.org/wiki/Human_Genome_Project).

[xx] Routledge, 1996.

[xxi] For an elaborate treatment of doomsday arguments see the Oxford philosopher, Nick Bostrom *„A Primer on the Doomsday argument" at* http://www.anthropic-principle.com/primer1.html

[xxii] http://www.mi2g.com/cgi/mi2g/ frameset.php?pageid=http%3A//www.mi2g.com/cgi/mi2g/press/ 060906h.php, September 2006.

[xxiii] http://www.mi2g.com/cgi/mi2g/frameset.php? pageid=http%3A //www.mi2g.com/cgi/mi2g/press/ 060906h.php. This analysis, of course, is not deep. But we must admit that Hawking is not giving a systematic exposition of the problems of the world. His intention is to draw our attention to the seriousness of the global problem. We may also note that social issues like

inhuman injustice, growing violent fundamentalism, etc., could eventually wipe out the very life that we are part of.

[xxiv] http://www.mi2g.com/cgi/mi2g/frameset.php? pageid=http%3A //www.mi2g.com/cgi/mi2g/press/ 060906h.php.

[xxv] http://www.hawking.org.uk/text/public/life.html

[xxvi] I am of the opinion that the solution to the problem can lie only in science and technology. Philosophical broadmindeness, moral vision and religious commitment – byproducts of *Bewusstseinserweiterung* or enlargement of consciousness – are absolutely necessary.

[xxvii] http://www.hawking.org.uk/text/public/life.html. Some of these ideas appear to be a bit simple. But it may be noted that Hawking is speaking to the general public.

[xxviii] Hawking, *Brief History of Time*, p. x

[xxix] Hawking, *Brief History of Time*, p. 17.

[xxx] Though I generally go along with the analysis of Stephen Hawking, I need to note that escaping from the earth is not really going to solve our human predicament. The very moral and philosophical vision that has given rise to our human predicament („orginal sin" in Christian tradition) must be squarely faced, if we need to „redeem" ourselves.

[xxxi] That is why it is usually said, „An idea can change the world," or „The most practical thing is a good theory," which is normally attributed to G. K. Chesterton.

[xxxii] So Teilhard could assert: "Die wahre Wissenschaft ist die Wissenschaft von der Zukunft, die nach und nach durch das Leben verwirklicht wird." Pierre Teilhard de Chardin, aus "Geheimnis und Verheissung der Erde", p. 50

[xxxiii] Holocaust survivor and Nobel Laureate, Elie Wiesel, gave this impassioned speech, „The Perils of Indiference," in the East Room of the White House on April 12, 1999, as part of the Millennium Lecture series, hosted by the then President Bill Clinton and First Lady Hillary Rodham Clinton of USA.