Chapter 1 **INTRODUCTION: CLIMATE SCIENCE, MYTH, AND CULTURAL EVOLUTION**

When studying English Civil War tracts years ago as a young research student in the British Museum reading-room in London, where Marx wrote *Das Kapital,* I used to marvel at the extent of the library's vast collection of books. But I would also often think about its destruction - and all the knowledge it embodied - in the event of a nuclear holocaust. At that time the Cold War dominated international affairs and nuclear war, we knew, was tantamount to "omnicide" - the annihilation of all life. How did one make sense of this, I wondered: that the several millennia of human history mirrored on the Library's shelves - the apparent pinnacle, as I then saw it, of four and a half billion years of the Earth's evolution - could be obliterated in a matter of hours. It was beyond comprehension - though to the millenarian movements I was studying it might have been no surprise.

The British library has remained intact and is now in its new incarnation on Euston Road. The danger of a nuclear holocaust has receded and we are still here. But now there is another apocalyptic threat to our future - the prospect of ecological catastrophe predicted within this century unless we are able to change our way of life dramatically and imminently. As a result of climate change this 21st century could bring unimaginable conflict and suffering. Apart from growing competition for resources, drought may initiate water wars while flooding cause disruption and death on unprecedented scales. In addition to the warming poles and the Greenland ice peninsula, the Himalayan glaciers – those "reservoirs in the sky" or "third pole" – are melting, putting hundreds of millions at risk in Asia. If this happens there will be environmental refugees across the whole world.

Geologists - and, increasingly, other natural and human scientists - now talk of the Anthropocene Age, in referring to the huge changes we have made, through our technology, to the surface of the planet. In her book, *Field Notes from a*

Catastrophe, the environmental writer, Elizabeth Kolpert, quoted the work of the Nobel Prize-winning Dutch chemist, Paul Crutzen:

> No longer, he wrote, should we think of ourselves living in the Holocene. Instead, an epoch unlike any of those which preceded it had begun. This new age was defined by one creature – man – who had become so dominant that he was capable of altering the planet on a geological scale. Crutzen dubbed this the "Anthropocene". [i]

The consequences of human activity for the biosphere are just as alarming. According to our science we are responsible in the last fifty years for the loss of half the world's forests, wetlands, and grasslands and we are systematically eradicating many of the habitats that make up the world's ecosystems. One in four mammals and a third of all amphibians are on the endangered list, including the iconic tiger! We used to lose a thousand species every year. Now it is between 15,000 and 60,000 as we progressively push more and more species to the edge of extinction.

And the rate of extinction is accelerating. In E.O. Wilson's words, "it will reach biblical proportions within a few decades". [ii] Thomas Lovejoy, the biologist who was credited with first using the term "biological diversity" pointed out the great irony "that we are living at the optimum moment to date in the history of life on Earth and rather than glorying and revelling in it, we're busily collectively destroying it". [iii] In so doing we may also be destroying ourselves. Martin Rees, the British Astronomer Royal and past President of the Royal Society, has even asked whether this might be "our final century". [iv]

Geologists seem to show remarkable equanimity in the face of our possible extinction. Iain Stewart, the Scottish geologist, is in no doubt about the very serious threat we currently pose to ourselves and the Earth but, in his television series for the BBC, *Earth: The Power of the Planet* [v] he also set out the geological deep-time context for "human civilization". We are a very recent phenomenon in Earth's history. Geologists know our planet has experienced catastrophes before and believe it will

survive - whatever we do - and regenerate, give or take some tens of millions of years or so.

Geologists also maintain that apparent catastrophic episodes in the Earth's history constitute further evolutionary steps in its development. Although our own extinction would not be a disaster for the Earth, what also stands out in Stewart's astonishing account - given the staggering violence of the universe and the utterly amazing and complex sequence of conditions that has allowed us to evolve - is what an improbable miracle we - the human race - appear to be.

We might begin to ask how it is that with all our ingenious science we have brought ourselves and much of nature to the brink of extinction. Responses to the prospect of ecological collapse vary - ignorance, denial, a sense of helplessness or indifference on the one hand and alarmism or the advocacy of urgent action on the other. Those who claim to be awake to the danger say "business-as usual" is not an option. Among the activists there is a spectrum of opinion with the pessimists – or "realists" - at one end and the optimists at the other. The pessimists think that the Earth is beginning to take her "revenge" on us [vi] while for the optimists hope is a powerful force which, when marshalled and organised, can be the agency of renewal. [vii] This is not a simple polarisation, for optimism doesn't come any easier as the years pass while the danger with pessimism is that it can become self-fulfilling.

Most books on climate change focus on the material and technological changes that we need to make to save the environment and the doomsday consequences if we fail. But if all we are looking for is a technological solution, then we will have missed the point. The issue is not just about our survival but our understanding of ourselves and our relationship with the world about us. In the next fifty years we will surely be challenged to reassess many of the scientific, philosophical, political, social, and psychological premises on which Western civilisation is based and from which the current crisis has, arguably, emerged.

Myths of Destruction and Renewal

Myths pick up the pieces where philosophy throws up its hands.

Wendy Doniger

When societies or civilisations face a crisis they often draw consolation from the myths that underlie their belief systems. In the modern world not only have we turned our back on our religious and spiritual heritage but we have also relegated the world of myth and mythology to the category of falsehood, in contradistinction to the "truth" of science.

No culture, however, lives without its myths even if, in our rational scientific hubris, we have imagined that we do. The European Enlightenment myths of the Eighteenth century were noble ones at the time – encyclopaedic knowledge, the dignity of reason, and the values of liberty, fraternity, and equality – but these have crystallised into our modern secular and unexamined myths: the myth of the universe as a machine; the myth of man as separate from the rest of nature; the beliefs that the Earth is here for us, its resources are infinite, and that we can exploit them without consequences for ourselves; the myths of human progress and endless material and economic growth. Now we are beginning to see these unacknowledged myths. [viii] But what do we have to put in their place?

One of the universal myths of all civilisations is about the central theme of destruction and renewal. Ancient Greece offered us the conflict of *Eros* and *Thanatos* – life and death - while ancient India revered the eternal triad of *Brahma,* the creator*, Shiva*, the destroyer, and *Vishnu*, the preserver. In Indian mythology *Shiva* and *Vishnu* are twin gods, the same deity but with two faces, unlike *Eros* and *Thanatos* who are thought to be in opposition to each other. In Indian thought destruction and renewal are inextricable. The one is inconceivable without the other.

In their book, *Conversations About the End of Time* [ix]*,* the French playwright, screenwriter, and Buddhist, Jean-Claude Carriere, discussed with Umberto Eco, Stephen Jay Gould, and Jean Delumeau his preferred stories about apocalypse. In

his own section, “Answering the Sphinx“*,* Carriere refers to the Hindu belief that we are now living in what they call the *Kali Yuga,* the age of destruction. According to Hindu lore the destruction of the world is an inevitable process and Shiva, who is the god of destruction [x], will defeat and prevail against Vishnu, who seeks to preserve the world. At the end of the cycle of *yugas* the world and everything in it will disappear though this is not for the first time. We cannot resist this destruction because the forces sweeping us away are infinitely more powerful than us.

It is difficult to establish how long a *yuga* is, perhaps because the Indians, unlike us, regard “time’’ as cyclical and think in terms of vast eons while we have different linear and numerical times. We separate cultural, historical time, which is very short, from geological deep time which we have only just appreciated in the last 150 years. Orthodox Christianity’s literal belief until quite recently that the Earth was a mere few thousand years old has blinded us not only to the reality of deep time but to the notion of time as cyclical in the sense of beginning-less and endless. Our sense of cultural history still fits with finite Biblical time. But now that we ourselves can be the cause of the world’s destruction we are no longer dependent on “eonic” time. We do not need to wait on divine wrath or the forces of nature. It is as if we are the mythic power now. We are Shiva - the potential destroyer - and have done his work for him. We have brought the *Kali Yuga* forward.

But destruction is only one side of the equation. Shiva’s twin, Vishnu, represents the forces of renewal. According to the legend, when the world ends, Vishnu sleeps. He sleeps for a very long time upon a boundless ocean. And while he sleeps he dreams and in his dreams he is said to preserve the beauties of the world that has disappeared, until such time as the world is reborn and he can give them back to “us”. The Indologist, Heinrich Zimmer, described one of Vishnu’s archetypal transformations as “a majestic wild gander, the sound of whose breathing is the magic melody of the creation and dissolution of the world”. [xi]

What Vishu dreams depends on us. Just as we are Shiva we are also Vishnu. The great irony of present times is that, while we are becoming increasingly conscious of the damage we are doing to the ecosphere and ourselves, we see

more clearly into the amazing beauty and complexity of the Earth and of the universe. We see this the more vividly and acutely as we seem to be on the point of losing it. The issue again is not about our survival but how "we" might be part of Vishnu's re-creation when it comes.

Cultural Evolution

> The consciousness of each of us is evolution looking at itself, and reflecting upon itself. Teilhard de Chardin.

Given the doomsday predictions for this coming century, pessimists might think that we will see the worst in human nature unfold – fear, insecurity, aggression, greed, selfishness, ignorance etc. There is plenty of apparent evidence of this. Yet there are many who look on this as a time when our nature could also be transformed and our intellectual, emotional, and social capacity extended. We know a lot about biological evolution, but what about cultural evolution? In addition to life, mind also evolves even, or especially, in times of adversity.

The notion that we, as a phenomenon of nature, evolve - psychologically and culturally - is relatively recent. Hegel described the "dialectic of consciousness" at the beginning of the nineteenth century in his *Phenomenology of Spirit* and went on to analyse the course of the Absolute - which he identified with abstract Reason - within human history. He foreshadowed the dynamic movement of Marxian ' dialectical materialism, Marx's analysis of "Spirit" as it expressed itself in material and earthly terms. Hegel even perhaps anticipated the sense of Darwinian Evolution, though the latter was interpreted as driven by blind and random "natural selection", not as a mode of consciousness.

Just as we began to discover space in the European Renaissance - the invention of perspective, the geographical exploration of the Earth, and the telescopic mapping of the heavens - so at the beginning of the nineteenth century we found time – the "deep time" of geology and the dynamic revolutionary time of contemporary history. Despite Hegel's analysis of consciousness the cue had been to interpret spirit

materially. It wasn't until the twentieth century that Hegel's challenge was taken up again in a way that embraced both the immaterial and the material.

The idea that evolution might be a creative process rather than simply a blind mechanism of natural selection belongs initially to Henri Bergson - the contemporary and philosophical inspiration of Marcel Proust. Bergson had written about time as "duration" - time as a dynamic impulse or *elan vital* that endures through – and inspires - the measured moments of rhythmic time whether the motions of the stars and planets, the procession of seasons that follow the Earth's rotations, or human clock time. [xii]

With duration Bergson tried to capture the essence of time, not as mechanical and measured but as experiential, time as we each differently feel and conceive it - time as consciousness. This is time experienced less moment by moment but as continuous flow, much as the spirit of music is more than the sum of the individual notes that depict it. Past, present and future, for instance, are not separate but are contained "at the same time" in duration. This time is heterogeneous rather than homogeneous. It has a unique, unrepeatable character for each person.

The *elan vital*, the creative spirit within evolution, is also a form of consciousness. It is a life force which creates irreversible and unrepeatable change, not towards some predetermined end but, in overcoming the resistance of matter, towards a sense of openness and freedom. And that sense of the creativity of evolution is continuous, not a once-only event – "the universe is not made, but is made continuously".

Almost contemporary with Bergson Alfred North Whitehead, in his notion of reality as process, also conceived of consciousness as an aspect of the whole universe, not just something that lived within *homo sapiens.* Like Bergson he thought of the whole of nature as creative rather than composed of lifeless matter. Its outward forms have a kind of inner "awareness". Atoms, for example, do not possess the kind of consciousness that we do but they have a primitive form which Whitehead called "prehension", a quality which, in enabling them to interact with other atoms,

demonstrates a form of primordial awareness. In this way atoms also had a continuity with the forms of life and mind which evolved out of them. [xiii]

This "process" philosophy has not sat well with the mainstream thinking of twentieth century modernity, but four more thinkers particularly stand out during the course of the century in their commitment to the notion of cultural evolution. One is a little-known German poet and cultural philosopher who wrote his main work just after the Second World War but whose ideas are only now beginning to be appreciated. Jean Gebser believed that we are living through a time of profound cultural transformation which he identified as the transition from a rational, analytic, atomising culture to a more integral, or holistic form of consciousness. [xiv]

Gebser outlined the evidence, as he saw it, for the evolution of structures of consciousness throughout human history. Modern man has had a developing awareness of space and time but Gebser believed that we were now becoming "space-free" and "time-free". We are beginning to understand that space and time are human constructs, not *a priori* absolutes. Our construction of space has in the past been a way of freezing time – hence the sense of a fixed and static quality of the Great Chain of Being. [xv] Our new sense of time in the last two centuries has given that vertical chain a dynamic and horizontal quality. But in turn we have made absolutes of our own time – the ages of rational and irrational man, Enlightenment and Romanticism, Marxism and psychoanalysis - and this has led to a disconnection with the reality of nature and the universe. Becoming space-free and time-free is a liberation from exclusive identification with our own age and its material and temporal preoccupations.

As this happens we can begin a process of re-integration. The modern Enlightenment separated itself from the magical and mythical thinking of earlier modes of consciousness by privileging rationality over them and, in doing so, lost that spirit of coherence and unity that enabled us to make narrative sense of the universe and ourselves within it. As we progress to a more integral consciousness we are able to regain the aesthetic and moral dimensions that magical and mythic sensibilities bring to our scientific culture.

A better known contemporary of Gebser was the French palaeontologist and Catholic philosopher, Teilhard de Chardin, whose writings were scientific and heterodox at the same time. Like Gebser De Chardin believed we had reached a new "threshold of reflection" - both as individuals and collectively. He defined this in terms of the evolving complexity and "interiorisation" of humankind. [xvi] He described, using his own neologistic terminology, the emergence of what he called the "noosphere" in our "psychozoic era". The noosphere was the mind sphere of the Earth – "us" - by correspondence to the physio-sphere – matter – and the biosphere – life. De Chardin imagined – colourfully - that to a Martian "capable of analysing sidereal radiations psychically no less than physically the first characteristic of our planet would be, not the blue of the seas or the green of the forests, but the phosphorescence of thought". He was an Idealist but was also clear about the challenge we face:

> The greatest revelation open to science today is to perceive that everything precious, active and progressive originally contained in that cosmic fragment from which our world emerged, is now concentrated in a "crowning" noosphere. [xvii]

For de Chardin this was the phenomenon of man - humanity discovering, to borrow a phrase from Julian Huxley, that it is "nothing else than evolution become conscious of itself".

A voice that came from the other side of the planet also warned of the present evolutionary crisis. Shri Aurobindo was an Indian educated in Manchester and Cambridge and was able to combine an understanding of India's spiritual wisdom with knowledge of Western philosophical and human sciences. As a younger man he joined the Indian movement for freedom from British rule and was active politically until imprisoned in 1908 by the British. In the seclusion of prison he underwent a personal transformation and thereafter spent the rest of his life developing his own vision of human progress and spiritual evolution. He practised and taught what he

called Integral Yoga, believing the crisis of the modern world could only be addressed initially by an inner transformation.

Aurobindo was critical of the Indian spiritual tradition that held the phenomenal world to be *maya* – illusory and unreal – and therefore to be escaped in the introspective quest for *nirvana.* But he was also critical of a Western culture that divided matter and mind crudely, rendering the phenomenal world as material and the spiritual as ghostly and unreal. For Aurobindo evolution – the development of natural forms - made no sense without the corresponding movement of involution – the originating impulse of spirit giving life to form. The essential dynamic was between the material and the immaterial. Neither made sense without each other. Hence the importance for Aurobindo of an integral practice and theory in which they were continuous. He conceived of a "supermind" which was nothing less than the whole of dynamic creation in both its visible forms and invisible essence. Evolution was an expression of a supramental unfolding. The challenge for us is to experience our own minds as a part of this. [xviii]

One figure today who prominently continues this perennial tradition of thought, particularly in the psychological domain, is the American, Ken Wilber. Wilber had a formal education in science and in bio-chemistry but also a life-long interest in all forms of perennial wisdom. When only 23 he published his first book, *The Spectrum of Consciousness.* [xix] It is based on a simple but ingenious notion: just as in physics the electro-magnetic spectrum is understood as a multi-banded expression of a single unified electro-magnetic wave, so the human mind and personality can be viewed as a multi-levelled expression of a single consciousness. Different and discreet disciplines study a particular level, or "wavelength" of consciousness but often make the mistake of assuming their understanding applies to the whole spectrum. Wilber used his extensive knowledge of both Eastern and Western psychological traditions to illustrate how "spectral psychology" can integrate different approaches by showing how they each speak to a different wavelength of awareness – from the "higher" states of awareness cultivated in Eastern practices to the developmental and dynamic psychologies of the West.

Since the publication of *Spectrum* in 1977 Wilber has gone on to write some twenty more books exploring an integral approach to many disciplines and areas of human endeavour. His major work is *Sex, Ecology, Spirituality,* [xx] written before the turn of the century and "summarised" soon after by the intriguingly titled and popular *A Brief History of Everything.* [xxi] *Sex, Ecology, Spirituality* is written on a grand scale, an extraordinary intellectual feat which must stand out as one of the books of the century. It is prefaced by a mandala-like quadratic diagram of modern day human and scientific knowledge illustrating the course of evolution emerging in four dimensions from the moment of the big bang.

Wilber's initial *Spectrum* may have been his own modern chain of being, an attempt to map consciousness vertically. In *SES* he augments this with his "Four Quadrants", introducing not only evolutionary time to the spectral levels of his earlier thinking but also suggesting a horizontal dimension: in fact evolution unfolds from a single matrix in four different directions, or dimensions, subjectively and objectively, both in singular and plural forms. Thus consciousness evolves subjectively as the intentional, individual "I" and, in plural form, as the cultural "we". Our subjectivities also take form as individual material bodies and as collective social entities. Consciousness is not just subjective and inter-subjective, it is also objective and inter-objective. An integral approach to consciousness must take account of all dimensions.

Cultural leap

As a result we can now experience ourselves differently, less as individuals living separately on the planet and more as an interconnected species, dependent inwardly and outwardly on all the life around us. Some think we are entering into a period of major cultural transformation, [xxii] perhaps equivalent in cultural terms to what certain evolutionary thinkers have called *punctuated equilibrium* - those accelerated periods of development, or leaps in an otherwise gradual evolutionary unfolding. [xxiii] This evolutionary step has value and importance in itself, independent of the issue of whether we survive or not in the near future.

An example of such a cultural transformation in human history is what the philosopher, Karl Jaspers, called the Axial Age - in the first millennium BCE. The Axial Age saw an expansion of consciousness which resulted in the emergence of sophisticated contemplative cultures across the world and which many think could provide inspiration again for us now. [xxiv] The wisdom that these various cultures had in common have come to be known, in the philosopher, Leibniz's phrase, as "the perennial philosophy", perennial because the profound insights as expressed in their literatures constitute an ageless wisdom. There was a remarkable emergence of wisdom teachers at this time - these include: the teachings of Lao Tzu, Chang Tzu, and Confucius in China; the sages of the Upanishads and Gautama Buddha in India; Zarathustra in Iran; the old Testament prophets in Palestine; and the Pre-Socratics, Socrates himself, Plato, and the great poets and philosophers of Ancient Greece. Karen Armstrong has recently written at length about them in *The Great Transformation*. [xxv]

The one movement that has kept the strongest connection with the spirit of the Axial Age is Buddhism, or *Buddha Dharma* as it is normally referred to in the East. *Buddha Dharma* is truly integral in that it takes many forms, religious or otherwise. Buddha Shakyamuni always stressed the practical and the therapeutic, rather than the theoretical side of his teachings and that has enabled *Buddha Dharma* to engage impressively with so many of the cultures it has come into contact with - from the more traditional forms it takes in Sri Lanka and Southern Asia to the highly metaphysical thinking of India, the practical mysticism of China where it has married well with the spirit of Taoism, the sophisticated Zen forms it also takes in Japan and Korea, and to the magical mysticism of Tibet. In Tibet the connection with the original genius of Indian Buddha Dharma was so strong until recently because it was a culture with a continuous and secluded lineage dating back to the Eighth Century.

"Buddhism" began to arrive in Europe and the West at the end of the eighteenth century and, though it influenced the Romantics, it was met with misunderstanding and suspicion throughout the nineteenth century. Zen Buddhism found its way across the Pacific to a sympathetic West Coast of North America in the first half of the Twentieth century and the Chinese invasion of Tibet in the 1950s led to the

exodus of the lamas and the formation of a teaching diaspora which has since spread across the whole world. The story of Buddhism's engagement with Western culture, particularly our science and philosophy, is a fascinating one.

Buddhism and the Modern West

From our point of view, taking inspiration from the introspective traditions of other cultures is not about converting to their ways, but allowing their insights to show how our own spiritual and scientific traditions may be enriched and developed. There are many who believe that the coming of Buddhism to the West may have been the most important event of the Twentieth Century and that Buddhism, unencumbered by a belief in a conventional God but in touch with profound spiritual realities, has answers to many of the perplexities and limitations of modern scientific thinking. Buddhism is the one religion not afraid of modern science. In fact, as Buddhism migrated to Southern and Northern Asia – particularly to China, Korea, Tibet, and Japan – it respected and adapted to the national cultures, giving us a rich variety of forms.

This theme is taken up by Stephen Batchelor, whose writings stress the importance of re-interpreting Buddhism for our own age. [xxvi] In *The Awakening of the West* he narrates the connections between "Buddhism" – the word was coined in the nineteenth century - and Western traditions throughout the two and a half millennia of its development - through ancient and medieval history to modern times and to the discovery in Eighteenth Century Europe of such classic Indian sacred texts as *The Upanishads* and *The Bhagavad-Gita*. The latter were known to the German Idealist philosophers such as Hegel, Schelling, and Schopenhauer and had a considerable influence on the European Romantic movement. Buddha Dharma and Gautama Buddha were unknown in Europe at this time and it was the research work of such explorers in the early nineteenth century as the Hungarian, Alexander Csoma de Koros, and the Englishman, Brian Houghton, that led eventually to the "construction of Buddhism" by the French Sanskrit and Pali scholar, Eugene Burnouf.

As Batchelor points out, what we know as Buddhism was a European

construction, an Orientalist creation of the European imagination. The impact of the discoveries, for instance, of Csoma, who spent nine years studying Tibetan at monasteries in Ladakh and Zanskar in preparation for the publication of a Tibetan grammar and a Tibetan-English dictionary in 1831, on Burnouf can be gauged by the conclusion the latter made to his 1833 inaugural lecture at the College de France when he declared:

> We should not close our eyes to the most brilliant light that may ever have come from the Orient, and we shall attempt to comprehend the grand spectacle offered to our gaze..... it is more than India, gentlemen, it is a page from the origins of the world, of the primitive history of the human spirit, that we shall try to decipher together. [xxvii]

What Csoma did for Tibetan, Brian Hodgson also did for Sanskrit, sending dozens of Sanskrit texts back to Calcutta, Oxford, and London for his imperial masters. These volumes were ignored until twenty-four of them arrived in Paris in 1837 and came to the attention of Burnouf who understood their significance and was best equipped to make sense of them. A scientific philologist, Burnouf published his mammoth *L'Introduction a l'histoire du buddhisme indien* in 1844, the "first detailed scientific survey of Indian Buddhist history, doctrines and texts". In Batchelor's opinion, "The sheer scope of Burnouf's book, relying entirely on unknown writings in Sanskrit and Tibetan, is awesome".

The impact of Burnouf's work was felt widely throughout the Western world and gave rise to a flood of books by philologists, linguists, writers and poets. Buddhism, as Batchelor observed, had made a sudden entrance into a Europe which was already in the midst of cultural and political turmoil. Political and scientific revolution was in the air. Marx and Engels had published *The Communist Manifesto* in 1848 and Darwin, *On the Origin of Species* in 1859. One Abbe Paul de Broglie wrote nervously in 1886: "The appearance of this little known religion on the terrain of science has produced a profound surprise. It seems to destroy the entire basis of Christian apologetics, and even some of the proofs for the existence of God". It is, perhaps, not surprising that Buddhism was treated with suspicion. The concept of

"the void" or *nirvana,* bewildered and intimidated many. Nor was Buddhism always understood by enthusiasts . Schopenhauer's interpretation of its pessimism was quite wrong and Nietzsche, who was at first attracted to Buddhism, came to regard it wrongly as a thoroughly negative and nihilistic philosophy.

The twentieth century benefited from the spread in North America and Europe of Eastern wisdom through the theosophical movement at the end of the nineteenth century, Following the cataclysmic First World War, people were more open to ancient Indian, Chinese, Japanese, and Tibetan traditions of thought, as they were disseminated, for example, throughout North America – particularly Zen Buddhism from across the Pacific – and within European Buddhist associations in France, Germany, and Britain, such as the one, founded in London by the theosophist, Christmas Humphreys, after the War. Books on Buddhist teachings also found more of an audience. Such figures as the inspired Japanese scholar, D.T. Suzuki, and the Englishman, Alan Watts, were widely read both in North America and Europe.

In the second half of the twentieth century the knowledge of Buddhism in the West has expanded further, for instance, through the Tibetan diaspora, following the Chinese invasion of Tibet in the fifties. The Dalai Lama set up his government-in-exile in Dharamsala in North Eastern India and instructed his fellow lamas in exile to teach in many of the major cities and countries of the world. Tibetan Buddhism is unique in combining and developing the philosophical understandings of Indian Mahayana Buddhism with the more practical spirit of Chinese Chan, or Zen, as well as retaining some of the practices and teachings of its own ancient Bon tradition. This has resulted in a very dynamic form of Buddhism whose psychological and philosophical insights and contemplative practices are attractive to many Westerners.

As the Buddhist writer, Jean Carriere, explained, according to Indian thought the main difficulty during the *Kali Yuga* is "to maintain *Dharma,* [xxviii] to maintain the (moral) order of the world and the integrity of our own actions". These are all connected in Indian thought because we are all in part responsible for the smooth running of the universe. It is up to each of us to observe his own personal *dharma*.

If we do this, as the legend suggests, if we accomplish what we came into the world to do, "the universe will proceed along its course, and one day the world will be reborn." [xxix] It is important that we continue to strive for D*harma,* even, or especially, in the face of our inevitable destruction. Insofar as we have failed to maintain our *Dharma*, the world will be destroyed and we will reap what we have sown. But at the same time what we reap may provide us with new insight and understanding.

New Values

Whether, or however, we survive the climate change emergency, it must be clear by now to many that we cannot continue living as we are. This is not just about changing our consumption habits, using less energy, or committing to sustainable growth, important though these all are. Nor is the crisis only about the environment or the future of the earth. It is about us, the human race - about how we think and how we live in relation to ourselves, as well as to nature.

Jean Carriere's insistence on striving for *Dharma* in the face of suffering and privation - even annihilation – is not just an ethical imperative. The Hindus refer to it as "the eternal religion" and in Buddhism it is the universal law and the totality of the Buddha's teachings. With danger comes opportunity, with the threat of destruction, the chance for renewal. Renewal depends on the discovery of new values. These are not simply about a new sense of the outward interdependence of all things in the world but also a feeling of inner connection. The Vietnamese Buddhist monk, Thich Nhat Hanh, refers to this as "interbeing", without which the outer connections have far less power and effectiveness.

The fourteenth Dalai Lama has also tirelessly stressed the reality of our interdependency with the Earth and each other as well as the importance of taking personal responsibility for our actions and our thinking. In the past our technology was not powerful enough to put the Earth at risk but the balance of nature has now been upset and to ignore this is to reap the consequences. But the Dalai Lama also sees the climate crisis as an opportunity for individual and collective transformation. In *A Buddhist Response to the Climate Emergency* he leads the way:

> On closer examination the human heart, the human mind, and the human environment are inseparably linked together. We must recognise we have brought about a climate emergency in order to generate the understanding and higher purpose we need. On this basis we can create a viable future – sustainable, lasting, peaceful co-existence.....
>
> In the face of such global problems as the climate emergency, individual organisations and single nations are helpless. Unless we all work together, no solutions can be found. Our Mother Earth is now teaching us a critical evolutionary lesson – a lesson in universal responsibility. On it depends the survival of millions of species, even our own. [xxx]

Some two and a half millennia ago Shakyamuni Buddha taught the values of right ethics, right thinking, and right wisdom, values which touch on all aspects of living in any age. We urgently need to address ourselves to all of these today - howsoever they are expressed in different cultures and languages – for only then will we secure a future for ourselves together. We have an opportunity, not only to draw back from the climate emergency we have created, but also to discover a depth and horizon to the human mind that could amaze and astonish us.

Ethical values must also be grounded in right knowledge - or true science - and the sense of unity and pattern in the universe which aesthetics provides. These three are essentially interdependent. Plato called them the Good, the True, and the Beautiful. Truth and morality without beauty are impoverished, beauty without the other two is diminished. All three go together. This primary triad underlies all the thought in this book.

Buddhism is the one Axial tradition that is capable of adapting itself to other cultures and is very much alive today in the West. Its value is less as a religion but as a wisdom teaching as well as an ethical and contemplative practice. Many people find it offers clarity and direction in this confusing modern world. Its effectiveness in

the West depends on how well it can respond to the traditions of our natural and human sciences.

NOTES

[i] See Elizabeth Kolpert, *Field Notes from a Catastrophe. A Frontline Report on Climate Change,* (Bloomsbury 2007). In her last chapter, 'Man in the Anthropocene', she referred to an essay in *Nature* ("Geology of Mankind" vol. 415, 2002) by Crutzen. Kolpert also points out that this neologism had, however, also been coined in the 1870s by the Italian geologist, Antonio Stoppiani. Stoppiani had argued that human influence was ushering in a new age which he called the "anthropozoic era". (Kolpert p 183)

[ii] Quoted in *Planet Earth: the future, what the experts say.* Environmentalists and biologists, commentators and natural philosophers in conversation with Fergus Beeley. BBC Books 2006. P 16

[iii] Ibid. P 13

[iv] Martin Rees *Our Final Century. Will Civilisation Survive the Twenty-First Century?* London: Arrow Books, 2003.

[v] Iain Stewart, *Earth: the Power of the Planet,* BBC Worldwide, 2008. There is also a book. Stewart, an energetic Scottish geologist, at home in front of the camera, captures forcefully the power and complexity of the biosphere in its volcanic, geological, oceanic, and atmospheric systems and shows how we, its most dangerous species, is now threatening its current equilibrium with potential catastrophic consequences for ourselves, if not for the long-term life of the Earth.

[vi] See, for instance, James Lovelock, *The Revenge of Gaia. Why the Earth is Fighting Back – and How We Can Still Save Humanity.* London: Allen Lane, 2006.

[vii] See Jonathan Porritt, *Capitalism as if the World Matters.* London: Earthscan, 2006.

[viii] The political theorist, John Gray, has analysed the pervasive myths of the Enlightenment in many of his writings and argues persuasively that the humanist values of the Enlightenment – rationality, science, liberalism – are fated to undermine themselves and lead inexorably to the disenchantment and nihilism of the modern age. According to Gray this nihilism is expressed through the technological will to power of Western civilisation, its arrogant, universalising policies of political and economic globalisation, its colonialism towards other cultures and the suppression of cultural diversity, and its attempted domination of nature, leading to the ecological crisis which we now face on a global scale. See *Enlightenment's Wake (1995),* now a Routledge Classic (2008), which brings to a conclusion his work on Liberalism, post-Liberalism, and the failure of the neo-Liberalist Right. See also *False Dawn. The Delusions of Global Capitalism (1998), Straw Dogs* (2002), *Alqaeda and What It Is to Be Modern* (2003, 2007), *Heresies* (2005) and *Gray's Anatomy* (2009) for further detailed reflections on these and other themes. His 2008 edition of *Enlightenment's Wake* includes a new updated introduction.

Interestingly, chapter 10 of *Enlightenment's Wake* concludes with the thought that 'any prospect of cultural recovery from the nihilism that the Enlightenment has spawned may lie with non-Occidental peoples, whose task will then be in part that of protecting themselves from the debris cast up by Western shipwreck.' (p 276)

[ix] Umberto Eco, Stephen-Jay Gould, Jean-Claude Carriere, and Jean Delumeau, *Conversations About the End of Time*. Produced and edited by Catherine David, Frederic Lemoir, and Jean-Phillipe de Tonnac. Translated by Ian Maclean and Roger Pearson. London: Penguin, 1999. Produced in dialogue form, this has to remain one of the essential books to read about the Millennium.

[x] Shiva, as Carriere explains, is one of the most significant and meaningful figures in the whole Hindu pantheon. He is often depicted with four arms. The top two are at the same height and in one hand Shiva holds a small drum to indicate that the world was created to the sound and rhythm of a drum, while in the other hand he holds a flame, signifying that everything that has been created will be destroyed. With his third hand Shiva makes the famous *abhaya* gesture of the Buddha, which tells us not to be afraid. Fear is an illusion. Everything that has been created will also be destroyed, so why worry? Why be alarmed? Shiva's fourth hand has a finger pointing to his feet. He is standing on one leg and crushing a demon. His other foot is raised from the ground and seems to point back to the drum, symbol of the creation of the world and suggesting that one day everything will begin again and the cycle will continue. In Carriere's view:

> We all have our own little *Kali Yuga* in us, our sense of apocalyptic doom. There's even something strangely inviting about the sense that the end is nigh. If so many periods in history have experienced it, that's probably because the feeling is part of us, deep down, and surfaces on this or that occasion as evidence of our fear, of our sense of guilt. In India, too, they are familiar with this human sense of being haunted by an ending. They simply respond to it in their own way, p 103.

[xi] Heinrich Zimmer, *Myths and Symbols in Indian Art and Civilisation,* edited by Joseph Campbell, New York: Harper Torchbook, 1962 (1946), p 35.

[xii] Henri Bergson, *Creative Evolution,* translated by Arthur Mitchell, Mineola, New York: Dover Publications, 1998 (1911). See also Suzanne Guerlac, *Thinking in Time. An Introduction to Henri Bergson,* Cornell University Press, 2006.

[xiii] Alfred North Whitehead, *Process and Reality. An Essay in Cosmology, Gifford Lectures delivered in the University of Edinburgh, 1927-28,* edited by David Ray Griffin and Donald W. Sherburne, New York: The Free Press, 1985 (1978).

[xiv] Jean Gebser, *The Ever Present Origin. PART ONE: Foundations of the Aperspectival World. A Contribution to the History of the Awakening of Consciousness. PART TWO: Manifestations of the Aperspectival World. An Attemp[t at the Concretion of the Spiritual.* Authorised Translation by Noel Barstad with Algis Mickunas, Ohio University Press, 1985. The original German was entitled *Ursprung and Gegenwart,* the two parts published in 1949 and 1953. See also Georg Feuerstein, *The Structures of Consciousness. The Genius of Jean Gebser. An Introduction and Critique.* Lower Lake, California: Integral, 1987, for a clear account of Gebser's innovative thinking.

[xv] See Arthur Lovejoy's *Great Chain of Being,* Harvard University Press, 1964 (1936).

[xvi] Teilhard de Chardin, *The Phenomenon of Man, w*ith an Introduction by Sir Julian Huxley. New York: Harper Perennial, 1975. First published as *Le Phenomene Humain* by Editions Du Seuil in 1955. First English translation by Bernard Wall published by Collins in 1959. A m ore recent translation is Sarah Appleton-Weber, *Teilhard the Human Phenomenon,* with a Foreword by Brian Swimme, Brighton: Sussex Academic Press, 2015 (1999)

[xvii] Ibid. pp 183-4

[xviii] Sri Aurobindo's classic is *The Life Divine,* Sri Aurobindo Trust, 1990 but first published in the monthly review, Arya 1914-20. *The Future Evolution of Man: The Divine Life Upon Earth* is a compilation of his writings with a summary and notes by P.B.Sainte~Hilaire, Twin Lakes ,Wisconsin: Lotus Press, 2003 (1963).

[xix] Ken Wilber, *The Spectrum of Consciousness,* Wheaton, Illinois: Quest, 1977.

[xx] Ken Wilber, *Sex, Ecology, Sprituality: the Spirit of Evolution.* Boston: Shambhala, 2000, (1995).

[xxi] Ken Wilber, *A Brief History of Everything,* Boston: Shambhala, 2000, (1996).

[xxii] John C. Landon is an example. See his *World History and the Eonic Effect. Civilisation, Darwinism, and Theories of Evolution.* Eonix Books, 2008. *A*lso his internet website for a more concise account of his arguments. Landon, taking his cue from Kant's 1784 essay, *Idea for a Universal History with a Cosmopolitan Purpose,* looks at world history in the light of evolution. He questions whether evolution really occurs at random and claims to detect a non-random pattern in the record of civilisation itself. If we begin to analyse the data of the last five thousand years of history, he claims, we are able to discern an 'eonic' pattern emerging through the centuries. This is macro history and he refers to Karl Jaspers' notion of the Axial Age and the emergence of new forms of human consciousness that accompanied that phenomenon in the first millennium BCE. The Axial Age is evidence of a 'drumbeat' in history that is not confined to one period only but is evidence of the unfolding of a deep structure. Landon is interested to speculate whether the modern scientific age of the last five hundred years is a continuation of the Axial spirit in a form we are only just beginning to recognise.

[xxiii] See Stephen Jay Gould and Niles Eldredge "Punctuated Equilibrium Comes of Age" in *Nature,* 1993, vol 366, pp 223-237. In this article Gould and Eldredge introduced the idea – not without controversy among gradualist evolutionary thinkers – that species often come into existence quite rapidly by geologists' standards and then remain in a state of equilibrium until this is overtaken by further rapid changes. By 'rapid' they thought in geological terms, say 50,000 years, as opposed to the possible 2 million year life-span of the species thereafter. Cultural 'punctuations' could be considered to happen much more quickly since cultural 'time' is of a different order and occurs almost 'instantaneously' in comparison with geological deep time. See Kim Sterelny *Dawkins Vs. Gould. Survival of the Fittest,* 2001, Icon Books, chapter 8, for a discussion of the concept among evolutionary scientists.

[xxiv] Karl Jaspers, *The Origin and Goal of History,* Abingdon, Oxon: Routledge, 2010, (1953). See chapter 1, "The Axial Period".

[xxv] Karen Armstrong, *The Great Transformation: The World in the Time of Buddha, Socrates, Confucius and Jeremiah*. London: Atlantic Books, 2006.

[xxvi] See Stephen Batchelor, *The Awakening of the West. The Encounter of Buddhism and Western Culture.* Berkeley: Parallax Press, 1994, where he fascinatingly discusses the evolution of Buddhism as it has developed in different historical and cultural settings during the last two and a half millennia. Batchelor's *Buddhism Without Beliefs. A Contemporary Guide to Awakening,* London: Bloomsbury 1997, is a best-selling, clear, and jargon-free account of how Buddhism, as 'dharma practice' rather than religion, can lead to the culture of awakening that our modern age desperately needs.

[xxvii] Quoted in Batchelor, *The Awakening of the West* p 239.

[xxviii] In Hindu thought *Dharma* is a comprehensive term used to refer to that which determines our true essence; righteousness; the basis of human morality and ethics, the lawful order of the universe, and the foundation of all religion. Hindus refer to their tradition of *sanatana-dharma* as the 'eternal religion'. See entry in *The Rider Dictionary of Eastern Philosophy and Religion*, (1989)

According to Damien Keown in his *Oxford Dictionary of Buddhism* (OUP, 2003) *Dharma*, derived from the Sanskrit root 'dhr' meaning to bear or support, is a term of great significance:

> 'First, it refers to the natural order or universal law that underpins the operation of the universe in both the physical and moral spheres. Secondly, it denotes the totality of Buddhist teachings, since these are thought to accurately describe and explain the underlying universal law so that individuals may live in harmony with it..... '

[xxix] Eco, Carriere et al. 1999 Op.cit. p 99

[xxx] The Fourteenth Dalai Lama, Tenzin Gyatso, 'Mind, Heart, and Nature. Universal Responsibility and the Climate Emergency' in John Stanley, David R Loy, and Gyurme Dorje (Ed.s) *A Buddhist Response to the Climate Emergency,* Boston: Wisdom Publications, 2009. This is an important collection of contributions from many prominent Buddhist teachers of all traditions – Zen, Vajrayana, Theravada, Vipassana, both East and West – published, prior to the Copenhagen conference in December 2009, as a call to action and a beacon of hope. John Stanley, himself a research scientist and Buddhist, covers the issues with an account of the up-to-date science and, with David Loy, sets out the Buddhist perspective on the planetary crisis. The book has emerged from Stanley's website at ecobuddhism.org where he sets out the issues clearly and invites Buddhists to sign the declaration on the climate emergency. The Dalai Lama was the first to sign.