

it. Hawking's, Einstein's and Koestler's acknowledgments of the order developing, integrative process when, as Koestler said, '**mechanistic**' science has maintained such a dedicated, '**hypnotic**' denial of it, were bold indeed.

³²²In summary then, selflessness, specifically unconditional selflessness or altruism, *is* the theme or meaning of existence. And since love means unconditional selflessness, love *is* the theme of existence—it *is* the meaning of life. The very great truthful, denial-free-thinker or prophet Christ emphasised the unconditionally selfless significance of the word 'love' when he said, '**Greater love has no-one than this, that one lay down his life for his friends**' (Bible, John 15:13). And of the biblical references to love cited above, Colossians 3:14 perfectly summarises the integrative significance of love: '**And over all these virtues put on love, which binds them all together in perfect unity.**'

³²³But, unfortunately, while the unconditionally selfless nature of love is acknowledged in the Bible (as virtually all the great truths are), in our everyday world we couldn't admit that love is unconditional selflessness and, therefore, the theme of existence until we could explain *why* humans don't behave lovingly and are so seemingly at odds with the integrative process. In fact, in the human-condition-avoiding mechanistic scientific paradigm it is considered improper, unscientific, to *even* use the word 'love'. The linguist Robin Allott summed up mechanistic science's attitude to love succinctly when he wrote that '**Love has been described as a taboo subject, not serious, not appropriate for scientific study**' ('Evolutionary Aspects of Love and Empathy', *Journal of Social and Evolutionary Systems*, 1992, Vol.15, No.4). Indeed, love has been deemed so '[in]appropriate for scientific study' that it has been reported that '**more than 100,000 scientific studies have been published on depression and schizophrenia (the negative aspects of human nature), but no more than a dozen good studies have been published on unselfish love**' (*Science & Theology News*, Feb. 2004). So mechanistic science has determinedly resisted analysis of one of humanity's most used, valued and meaningful words! The psychologist Harry F. Harlow was another who highlighted this discrepancy when he observed that '**Psychologists, at least psychologists who write textbooks, not only show no interest in the origin and development of love or affection, but they seem to be unaware of its very existence. The apparent repression of love by modern psychologists stands in sharp contrast with the attitude taken by many famous and normal people. The word "love" has the highest reference frequency of any word cited in Bartlett's book of Familiar Quotations**' ('The nature of love', *American Psychologist*, 1958, Vol.13, No.12). The concept of 'unselfish love' has certainly been an unbearable area of scientific enquiry for us selfish, seemingly non-loving and unlovable humans!

Chapter 4:3 'God' is our personification of Integrative Meaning

³²⁴So, 'love' has been '**a taboo subject**' for science, and yet if 'love' or unconditional selflessness forms only an *aspect* of Integrative Meaning, how much more unbearable has the *overall* tenet of Integrative Meaning itself been? The answer is the Negative Entropy-driven integrative, cooperative, loving, selfless, order-developing theme or meaning or purpose of existence has been an almost completely unfrontable truth for the psychologically upset, competitive, aggressive and selfish human-condition-afflicted human race. In fact, we have lived in *such* terrified fear and awe of the truth of Integrative Meaning, have been *so* confronted, condemned and intimidated by it, *so* unable to deal with it on any sort of an equal footing, that we deified the concept—and not just as a

God, but *the one and only* God, *the* most universal and fundamental, yet completely unconfontable, of truths.

³²⁵ Monotheism, the belief that there is only one God, is an insight that goes back as far as 4,000 years ago to two very great denial-free thinkers or prophets—the Hebrew prophet Abraham, who lived around 2,000 BC, and the pharaoh Akhenaton, who reigned in Egypt from approximately 1,350 to 1,335 BC. The very great Persian prophet Zoroaster also recognised that there is only ‘one supreme deity’, as this reference to the faith describes: **‘sometime around or before 600 BC—perhaps as early as 1200 BC—there came forth from the windy steppes of northeastern Iran a prophet who utterly transformed the Persian faith. The prophet was Zarathustra—or Zoroaster, as the Greeks would style his name. Ahuramazda [the supreme being or wise lord] had appeared to Zoroaster in a vision, in which the god had revealed himself to be the one supreme deity, all seeing and all powerful. He represented both light and truth, and was creator of all things, fountainhead of all virtue. Ranged against him stood the powers of darkness, the angels of evil and keepers of the lie. The universe was seen as a battleground in which these opposing forces contended, both in the sphere of political conquest and in the depths of each man’s soul. But in time the light would shine out, scattering the darkness, and truth would prevail. A day of reckoning would arrive’** (*A Soaring Spirit: Time-Life History of the World 600-400 BC*, 1988, p.37 of 176). And in approximately 360 BC, that other very great denial-free-thinking prophet, Plato, *similarly* recognised that God is Integrative Meaning, writing that **‘God desired that all things should be good and nothing bad, so far as this was attainable. Wherefore also finding the whole visible sphere not at rest, but moving in an irregular and disorderly fashion, out of disorder he brought order, considering that this was in every way better than the other’** (*Timaeus*; tr. B. Jowett, 1871, 30).

³²⁶ But *until* we could explain the human condition and explain in first-principle-based, scientific terms who, or more precisely, what God is—namely our personification of the Negative Entropy-driven integrative theme, purpose and meaning of life—and why we needed to resort to deification in the first place, we had no choice but to leave the religious concept of God in that safely abstract, undefined state. And so despite Integrative Meaning being an *extremely* obvious truth, with evidence of the hierarchy of the order of matter everywhere we look, without understanding of our divisive condition it was imperative for humanity that human-condition-avoiding mechanistic science found a way to deny such a seemingly totally condemning truth. This was easily achieved through the simple assertion that there is no meaning or purpose or theme to existence and that while change *does* occur, it is a random, purposeless, directionless, meaningless, blind process. And, as stated, to cope with the imbued recognition of integrative ideality and meaning in the religious notion of God, mechanistic science simply left the concept undefined and undefinable, maintaining it was a strictly abstract, metaphysical and spiritual notion unrelated to the scientific domain; if ‘God’ existed in any form, it was as an inexplicable deity, a supernatural being seated on a throne somewhere in a remote blue heaven who could be worshipped from afar as someone superior to us ‘mere mortals’, thus nullifying any direct and confronting comparisons with our own upset state. Religion and science were firmly demarcated as two entirely unrelated subjects. Indeed, E.O. Wilson succinctly captured mechanistic science’s view on the matter when he said, **‘I take a very strong stance against the mingling of religion and science’** (‘Edward O. Wilson From Ants, Onward’, *National Geographic*, May 2006).

³²⁷ But of course, the truth is, to use Nobel Prize-winning physicist Charles H. Townes’ words, **‘they [science and religion] both represent man’s efforts to understand his universe and must**

ultimately be dealing with the same substance. As we understand more in each realm, the two must grow together...converge they must' ('The Convergence of Science and Religion', *Zygon*, 1966, Vol.1, No.3). The physicist Max Planck (another Nobel winner) similarly recognised that **'There can never be any real opposition between science and religion; for the one is the complement of the other'** (*Where Is Science Going?*, 1932, p.168). As my headmaster at Geelong Grammar School, Australia's greatest ever educator, Sir James Darling, said, **'The scientist can no more deny or devalue the truths of spiritual experience than the theologian can neglect the truths of science: and the two truths must be reconcilable, and it must be of importance to each of us that they should be reconciled'** (*The Education of a Civilized Man*, ed. Michael Persse, 1962, p.68 of 223). And with understanding of the human condition now found, **'converge'** they *have*; ideality (which religions and the truthful, denial-free-thinking, God-confronting-not-avoiding prophets they were founded around represented) and our search for understanding of our non-ideal reality (which science represented—the word 'science' literally means 'knowledge') have finally been **'reconciled'**. Yes, with the human condition now explained and our divisive, seemingly non-integrative state finally understood, *all* humans can at last safely admit and recognise that there has only been one God, one all-dominating and all-pervading theme or meaning of existence, which is Integrative Meaning—a truth we recognise when we say **'God is love'** (Bible, 1 John 4:8, 16).

³²⁸ It should be mentioned here that despite the fact that the admittance of Integrative Meaning first required solving the issue of our divisive human condition, a rare few holistic scientists have not only courageously defied the almost universal need to deny the development of order of matter on Earth, or Integrative Meaning, they have actually acknowledged that it is what we mean by God. If we include more of what the aforementioned giants of physics, Stephen Hawking and Albert Einstein, said earlier about order being the main characteristic of change in the universe, we can see that they both regarded God to be the personification of Integrative Meaning. In 1989 Hawking said, **'I would use the term God as the embodiment of the laws of physics'** (*Master of the Universe*, BBC). In 2002 he went further, saying, **'The overwhelming impression is of order [in the universe]. The more we discover about the universe, the more we find that it is governed by rational laws. If one liked, one could say that this order was the work of God. Einstein thought so... We could call order by the name of God'** (Gregory Benford, 'The time of his life', *The Sydney Morning Herald*, 27 Apr. 2002; see <www.wtmsources.com/170>). Einstein's views on the matter were chronicled in the 1997 PBS documentary *Einstein Revealed*, which reported Einstein as saying that **'over time, I have come to realise that behind everything is an order that we glimpse only indirectly [because it's unbearably condemning]. This is religiousness. In this sense, I am a religious man.'** Einstein was also recognising that God is order or harmony when he said, **'In view of such harmony in the cosmos which I, with my limited human mind, am able to recognize, there are yet people who say there is no God'** (Hubertus zu Löwenstein, *Towards the Further Shore*, 1968, p.156). Einstein's friend and occasional collaborator, the Nobel Prize-winning physicist Erwin Schrödinger, was another leading scientist who acknowledged that integrative unity is what we have been terming God when he wrote that **'Science is reticent too when it is a question of the great Unity...of which we all somehow form part, to which we belong. The most popular name for it in our time is God—with a capital "G"'** (*Nature and the Greeks and Science and Humanism*, 1954, p.97 of 184). Schrödinger's contemporary and fellow Nobel Prize-winning physicist, Werner Heisenberg, also recognised the relationship between the integrative meaning of existence that science is able to point to, and the concept of God that religion recognises, when

he wrote, **‘I have repeatedly been compelled to ponder on the relationship of these two regions of thought [science and religion], for I have never been able to doubt the reality of that to which they point’** (‘Scientific and Religious Truth’, *Across the Frontiers*, 1974, p.213). Yes, the **‘reality’** of **‘order’** or **‘harmony’** or **‘unity’** is apparent everywhere and it is what our **‘religiousness’**, our belief in **‘God’**, is concerned with acknowledging. I might mention that while Mahatma Gandhi was an inspired leader of the Indian nation rather than a scientist, he was another who bravely acknowledged that **‘There is an orderliness in the Universe, there is an unalterable law governing everything and every being that exists or lives...That law then which governs all life is God’** (Louis Fischer, *Gandhi: His Life and Message for the World*, 1954, p.108 of 224)—as did Plato, who referred to **‘God, the orderer of all’** (see par. 173).

³²⁹In his 1987 book, *The Cosmic Blueprint*, another holistic physicist, the Templeton Prize-winner Paul Davies, actually went so far as to protest against the denial of Integrative Meaning in the world of science, writing that **‘We seem to be on the verge of discovering not only wholly new laws of nature, but ways of thinking about nature that depart radically from traditional science [p.142 of 232] ...Way back in the primeval phase of the universe, gravity triggered a cascade of self-organizing processes—organization begets organization—that led, step by step, to the conscious individuals who now contemplate the history of the cosmos and wonder what it all means [p.135] ...There exists alongside the entropy arrow another arrow of time [the Negative Entropy arrow], equally fundamental and no less subtle in nature...I refer to the fact that the universe is *progressing*—through the steady growth of structure, organization and complexity—to ever more developed and elaborate states of matter and energy. This unidirectional advance we might call the optimistic arrow, as opposed to the pessimistic arrow of the second law. There has been a tendency for scientists to simply deny the existence of the optimistic arrow. One wonders why [p.20].’**

³³⁰We can now appreciate the reason **‘why’** **‘Science is reticent when it comes to a question of the great Unity’**—the reason **‘why’** **‘scientists’** **‘deny’** **‘the optimistic arrow’** of Integrative Meaning—is because it was far too psychologically dangerous to acknowledge without first finding the biological reason, and thus defence, for our divisive, apparently non-integrative, un-Godly human condition. No wonder we have been, as we say, a **‘God-fearing’**—in fact, so in awe of God to the point of being a God-worshipping—*not* a **‘God-confronting’** species; as Berdyaev put it, **‘He cannot [man struggles to] break through to paradise that lies beyond the painful distinction between good and evil, and the suffering connected therewith. Man’s fear of God is his fear of himself, of the yawning abyss of non-being [alienation] in his own nature’** (*The Destiny of Man*, 1931; tr. N. Duddington, 1960, p.41 of 310).

³³¹Our species’ immense fear, and thus denial, of the truth of Integrative Meaning is, of course, the subject of Plato’s famous allegory of the human condition, referred to in par. 83, which describes humans as being imprisoned in a cave. As ‘prisoners’ in this metaphorical cave, we are only able to envisage the outside world via shadows cast on the back wall of the cave. These shadows, which symbolise our limited and distorted, human-condition-avoiding, dishonest, immensely alienated **‘phony’** and **‘fake’** view of the world, are thrown by the light of a fire that, situated in the entrance to the cave, effectively prevents any escape from it. Explaining the symbolism of the fire, Plato wrote that **‘the light of the fire in the [cave] prison [corresponds] to the power of the sun’** (*The Republic*, c.360 BC; tr. H.D.P. Lee, 1955, 517), from which we have to **‘turn back’** because if we/the cave prisoner were to go **‘out into the sunlight, the process would be a painful one, to which he [we] would much object’** (515-516). Plato explained that the sun represents the **‘universal, self-sufficient first principle’**

(511), the **'absolute form of Good'** (517) and the **'highest form of knowledge'** (505), which we can now understand is Integrative Meaning.

³³²Fire is a common theme in many mythologies, appearing as a metaphor for the integrative, Godly ideals of life whose condemning, scorching glare we had to **'turn back'** from. In the Zoroastrian religion, **'Fire is the representative of God...His physical manifestation... Fire is bright, always points upward, is always pure'** (Edward Rice, *Eastern Definitions*, 1978, p.138 of 433). In Christian mythology, the story of Genesis features **'a flaming sword flashing back and forth to guard the way to the tree of life'** (3:24). The Bible also records the Israelites as saying, **'Let us not hear the voice of the Lord our God nor see this great fire any more, or we will die'** (Deut. 18:16). The biblical character Job was another who pleaded for relief from confrontation with the unbearably depressing integrative, Godly ideals when he lamented, **'Why then did you [God] bring me out of the womb?...Turn away from me so I can have a moment's joy before I go to the place of no return, to the land of gloom and deep shadow, to the land of deepest night [depression]'** (Job 10:18, 20-22). Christ also recognised the problem of the exposing **'light'** of truth that he was an unresigned, denial-free spokesman for, when he said, **'the light shines in the darkness but... everyone who does evil [becomes upset sufferers of the human condition] hates the light, and will not come into the light for fear that his deeds will be exposed'** (John 1:5, 3:20). Like Plato's use of the light of the sun metaphor, the rock band U2's 1992 song *Staring At The Sun* contains these lyrics that reveal just how unbearably confronting the cooperative, loving, integrative ideals of life have been of our corrupted human condition: **'It's been a long hot summer, let's get under cover, don't try too hard to think, don't think at all. I'm not the only one staring at the sun, afraid of what you'd find if you take a look inside. Not just deaf and dumb, I'm staring at the sun, not the only one who's happy to go blind.'**

³³³So, again, while Integrative Meaning *is* the most obvious, profound and thus important of all truths it is clearly also the truth that has appeared to most condemn humans—and in the absence of the explanation as to *why* we, as a species, appear to be so at odds with the integrative meaning of life, we humans have sensibly taken one of two options: we either practised denial of Integrative Meaning, and even of God, and thus of the issue of our self-corruption, or we indirectly acknowledged our self-corruption by acknowledging the existence of God and embracing some expression of faith that a greater dignifying understanding of our divisive condition does exist and would one day be found. To cope with our less-than-ideal human condition there has only ever been either denial or faith.

³³⁴To counter the utter dishonesty of mechanistic science's denial of the existence of Integrative Meaning/God, support for an extremely literal interpretation of God, in the form of so-called 'Creationism' and 'Intelligent Design', emerged. While still having to avoid the human condition and, therefore, the truth of Integrative Meaning, these movements did acknowledge God, but only in a fundamentalist way in which God took the form of an actual being who 'designed' life on Earth, or 'created' the world in just six days. In truth, both the mechanistic approach and these more literal attitudes were immensely dishonest in that mechanistic scientists wanted to pretend to be rational and either deny any semblance of Integrative Meaning by refuting the existence of the concept of God, or acknowledge the concept of God but claim it has nothing to do with science, while supporters of Creationism and Intelligent Design chose to admit to a semblance of Integrative Meaning in the form of a God who is literally a special being or deity, with the

downside being that such a stance necessarily meant abandoning all attempts at rationality. We can see that the *real* issue neither party was willing or able to acknowledge is the issue of Integrative Meaning and its human-condition-confronting implications. (I should mention that advocates of Intelligent Design would have us believe that their position is different to that of Creationists. The main website for Intelligent Design states that **‘The theory of intelligent design...[is concerned with] whether the “apparent design” in nature...is genuine design (the product of an intelligent cause) or is simply the product of an undirected process such as natural selection acting on random variations’**, and that **‘unlike Creationism, the scientific theory of intelligent design does not claim that modern biology can identify whether the intelligent cause detected through science is supernatural’** (Center for Science & Culture; see <www.wtmsources.com/116>). In other words, Intelligent Design acknowledges Integrative Meaning, the development of order of matter, *but doesn’t discount that a supernatural-type creator/being/God might be involved*—so Intelligent Design is trying to have it both ways, appear to be scientific but still allow for a supernatural creator; it is still fundamentally similar to Creationism, which unscientifically supports the idea of a supernatural creator.)

³³⁵ Indeed, the truth of Integrative Meaning and its human-condition-confronting implications have been *so* unbearably confronting that in recent years mechanistic science has, in an insidious attempt to keep the issue even further at bay, evasively steered the discussion toward whether the concept of God has been irrevocably undermined by physicists’ ongoing discoveries about the big bang origin of the universe, the extinction of time before the big bang and, more recently, the possibility of multiple universes! This is classic ‘displacement’ behaviour—**‘an unconscious defense mechanism whereby the mind redirects affects from an object felt to be dangerous or unacceptable to an object felt to be safe or acceptable’** (Wikipedia; see <www.wtmsources.com/138>). The fact is that starting with the boundaries of our reality of matter, space and time, and drawing on the laws of physics within which we live, we can construct the human condition, and also solve it—and, by so doing, make it possible to demystify God, and, indeed, bring to an end the whole debate about ‘His’ existence. The enormous issue of ‘God’ that has existed in the lives of humans relates *entirely* to the integrative process of the development of order of matter that occurs in the world within which we live that is bounded by the elements of matter, space and time and the effect the laws of physics have on those elements as we experience them. The insecure state of the human condition that caused us to so fear and revere all manner of gods, and then just one God, is created and solved within that realm. Science’s task has been to be a winnow of mystery and superstition, with the ultimate mystery it needed to solve being the human condition. So our ability now to understand the human condition necessarily ends the fear, confusion, bewilderment and mystery that fuelled such superstitious thought; it ends ignorance. Paul Davies was emphasising the Integrative-Meaning-related *real* issue about God when he said, **‘So where is God in this story [of physics]? Not especially in the big bang...To me, the true miracle of nature is to be found in the ingenious and unswerving lawfulness of the cosmos, a lawfulness that permits complex order to emerge from the chaos’** (‘Physics and the Mind of God: The Templeton Prize Address’, 3 May 1995).

³³⁶ Yes, with understanding of the human condition now found, it is at last psychologically safe to demystify God as Integrative Meaning, and, by so doing, finally reconcile religion and science. From the religious perspective, *this* is the time the prophet Isaiah was looking forward to when reconciling understanding of the human condition

would be found and we could 'revere' instead of fear the truth of Integrative Meaning/God: **'Why, O Lord, do you make us wander from your ways and harden our hearts so we do not revere you?...Do not be angry beyond measure...do not remember our sins for ever...all that we treasured [before the human condition emerged] lies in ruins. After all this, O Lord, will you hold yourself back? Will you keep silent and punish us beyond measure?'** (Isa. 63-64). And from the scientific side of the fence, when the scientist-philosopher Pierre Teilhard de Chardin wrote in 1938 that **'I can see a direction and a line of progress for life, a line and a direction which are in fact so well marked that I am convinced their reality will be universally admitted by the science of tomorrow'** (*The Phenomenon of Man*, p.142 of 320), he too was recognising how obvious the truth of Integrative Meaning is, and how it wouldn't be able to be 'universally admitted' until the human-condition-reconciled 'science of tomorrow' emerged.

³³⁷I should mention here that there have been a few scientists in addition to Hawking, Einstein, Koestler, de Chardin and Davies who 'jumped the gun' and '**admitted**' Integrative Meaning, as the titles (particularly the words I have underlined) of the following books (including three by Davies) illustrate—for instance, David Bohm wrote *Wholeness and The Implicate Order* in 1980; Ilya Prigogine and Isabelle Stengers wrote *Order Out of Chaos* in 1984; Paul Davies wrote *God and the New Physics* in 1983, *The Cosmic Blueprint* in 1987 and *The Mind of God: Science and the Search for Ultimate Meaning* in 1992; Charles Birch wrote *Nature and God* in 1965, *On Purpose* in 1990 and *Biology and The Riddle of Life* in 1999; M. Mitchell Waldrop wrote *Complexity: The Emerging Science at the Edge of Order and Chaos* in 1992; Roger Lewin wrote *Complexity: Life at the Edge of Chaos, the major new theory that unifies all sciences* in 1993; Stuart Kauffman wrote *The Origins of Order: Self-Organization and Selection in Evolution* in 1993, *At Home in the Universe: The Search for the Laws of Self-Organization and Complexity* in 1995 and *Anti-chaos* in 1996; and Richard J. Bird wrote *Chaos and Life: Complexity and Order in Evolution and Thought* in 2003. But such admissions are, nevertheless, an anomaly, because, as has been emphasised, the vast majority of scientists haven't been prepared to go *anywhere near* the historically unbearably confronting truth of Integrative Meaning, and, as stated in chapter 2:12, in coming off such a dishonest base it is impossible to find a true understanding of our world and place in it—which de Chardin *also* understood when, in 1956, he wrote that **'biology cannot develop and fit coherently into the universe of science unless we decide to recognise in life the expression of one of the most significant and fundamental movements in the world around us...the vast universal phenomenon...of complexification of matter. This is something that must be clearly appreciated if we are to get away to a good start in our study of man [p.19 of 124] ...This [complexification of matter] is a very simple concept, but the more we think about it, the more, in fact, are we led to see the world of life as a vast sheaf of particles rushing headlong...down the slope of an indefinite corpusculisation...First, there are the regressive currents: entropy, dissipation of energy...But there are progressive, or constructive, currents too...a growing complexity...the passage from an unordered to an ordered heterogeneity...[where, at a certain point in this progression, vitalisation occurs, and] one portion of the cosmic stuff not only does not disintegrate but even begins—by producing a sort of bloom upon itself—to vitalise [as will shortly be explained in par. 348, this is when the replicating DNA molecule appeared and 'made a business' of actively resisting disintegration] [pp.31-33] ...life can no longer be regarded as a superficial accident in the universe: we must look on it as...ready to seep through the narrowest fissure at any point whatsoever in the cosmos—and, once it has appeared, obliged to use every opportunity and**

every means to reach the furthest extremity of everything it can attain: the ultimate, externally, of complexity, internally of consciousness [p.35]' (*Man's Place in Nature*).

³³⁸ Plato was another who recognised this inherent limitation of the Integrative-Meaning-denying mechanistic approach when, long ago, he wrote that **'the Good [as explained in par. 331, the Good is Integrative Meaning]...gives the objects of knowledge their truth and the mind the power of knowing...[just as] The sun...makes the things we see visible...The Good therefore may be said to be the source not only of the intelligibility of the objects of knowledge, but also of their existence and reality'** (*The Republic*, c.360 BC; tr. H.D.P. Lee, 1955, 508-509). Yes, this loss of **'the power of knowing'** has been very serious indeed. Koestler also who felt it, bemoaning the crippled, stalled, atrophied state of all of science, but of biology and psychology in particular, when he said that blind, reductionist, mechanistic science's denial of Integrative Meaning has **'taken the life out of biology as well as psychology'**, writing that **'although the facts [of the integration of matter] were there for everyone to see, orthodox evolutionists were reluctant to accept their theoretical implications. The idea that living organisms, in contrast to machines, were primarily active, and not merely reactive; that instead of passively adapting to their environment they were...creating...new patterns of structure...such ideas were profoundly distasteful to [Social] Darwinians, behaviourists and reductionists in general [p.222 of 354] ...Evolution has been compared to a journey from an unknown origin towards an unknown destination, a sailing along a vast ocean; but we can at least chart the route...and there is no denying that there is a wind which makes the sails move...the purposiveness of all vital processes...Causality and finality are complementary principles in the sciences of life; if you take out finality and purpose you have taken the life out of biology as well as psychology [p.226]'** (*Janus: A Summing Up*, 1978).

³³⁹ As was pointed out in par. 188, towards the end of *The Origin of Species*, Charles Darwin anticipated that **'In the distant future I see open fields for far more important researches. Psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity by gradation. Light will be thrown on the origin of man and his history'** (1859, p.458 of 476). Given Koestler's comment that **'if you take out finality and [the 'integrative tendency' or] purpose you have taken the life out of biology as well as psychology'**, what was required to bring about Darwin's **'new' en-'light'-ening 'foundation' for 'far more important research' in 'biology as well as psychology'** was not only acknowledgment of the involvement of our conscious **'mental power'** but also of **'integrative' 'purpose'**.

³⁴⁰ So, what *is* the **'far more important research'** that results from thinking from the **'new' en-'light'-ening 'foundation'** of accepting the truth of **'integrative' 'purpose'**?

Chapter 4:4 The denial-free history of the development of matter on Earth

³⁴¹ In commencing this denial-free analysis of the development of matter from a perspective that takes into account the truth of Integrative Meaning, we first need to replace the word **'evolution'** with the word **'development'**, for while evolution implies that organisms *do* change or evolve it avoids acknowledging that there is a direction and purpose to that change, which is to *develop* the order of matter.

³⁴² As the study of physics has shown, our world is made up of three fundamental ingredients — time, space, and energy — with, as Einstein revealed in his famous formula $E = mc^2$, energy taking the form of matter, which comprises the 94 or so naturally occurring elements that, when subjected to the laws of physics, particularly the law of