

We are the Bees of the Invisible: Physics, Metaphysics and the Spiritual Path

by Charles Upton

for Scott Whittaker, 1952-1998*

*Mathematician, Platonist, Faqir of the Mariamiyah Shadhili Tariqa, Orthodox Christian at the hour of his death, unacknowledged (even by himself) rediscoverer of Pythagorean mysticism, and dear spiritual friend, who transmitted to me, in his last years, in the course of our many long conversations, across the language barrier separating his profound mathematical knowledge from my ability in the field of English prose, the essence of the last seven paragraphs of this essay, which precisely complete my own cosmological vision, received when I was eighteen years old, in the summer of 1967. May our collaboration continue until we stand, all speculation at an end, faceto-face with the Object of our quest.

"...our task is to stamp this provisional, perishing earth into ourselves so deeply, so painfully and passionately, that its being may rise again, "invisibly," in us. We are the bees of the invisible... Transitoriness is everywhere plunging into a profound Being...The earth has no other refuge except to become invisible: in us, who, through one part of our nature, have a share in the Invisible....only in us can this imitate and enduring transformation of the visible into an invisible no longer dependent upon visibility and tangibility be accomplished, since our own destiny is continually growing at once more actual and invisible within us."

(from a letter of Rainer Maria Rilke, 1925)¹

It is common nowadays for many to imagine that the universe, in line with progressive and evolutionary ideas, must somehow be advancing spiritually. If we come to the conclusion that the spiritual evolution of the macrocosm is not possible, we may even wonder what is the worth or profit in material existence. What good is it? What is it for? For fear of becoming "Gnostics" who deny the value of terrestrial life, we end by denying the eternal significance of this very life.

The problem with the concept that the universe evolves to higher levels of organization, which is basic to the doctrines of Teilhard de Chardin, Rudolph Steiner, and many other New Age teachers (as well as to the attempt within Judaism to apply Lurianic Kaballah—and within Ismailism, to apply the "unveiling" of spiritual realities—to historical evolution) is the Second Law of Thermodynamics. This law states that, via entropy, the overall order of matter/energy in the universe is always decreasing, a decrease which is inseparable in principle from the expansion of the universe, starting at the Big Bang. At one point scientists posited the existence of large amounts of "dark matter" which would allow the universe to contract again, via gravitation, after the momentum of the Big Bang is spent. As of this writing, however, scientific opinion is apparently moving away from this hypothesis. So it would seem that the material universe must continue expanding, and its disorder increasing, forever.

This is strictly in line with traditional metaphysics. "This whole world is on fire," said the Buddha. 2 "All is perishing," says the Qur'an, "except His Face."³ Creation, in the traditional view, is a successive "stepping down" of higher orders of reality to lower ones. God, who in His Essence

is totally beyond form, number, matter, energy, space and time, must—as Frithjof Schuon never tired of pointing out—“overflow” into these dimensions of existence simply because He is Infinite; no barrier exists in His Nature which would prevent the radiation of His superabundant Being.⁴

The face of the Divine turned in the direction of this overflow into manifestation is the First Intellect, the Logos. The Logos may be considered either as God in the role of Creator or as the universal act of this Creator. In any case, the primal vibration of the Logos manifests, first, the spiritual universe, then the psychic, then the subtle or animic, and lastly the material. The “bursting through” of the creative impulse from the animic to the material plane is what physicists have named the Big Bang. It is at this point at which God’s creative act enters time, thus creating it. “Before” this point, the “stepping down” of creation to less ordered levels is expressed in terms of the ontological precedence of one plane of Being over another, not in terms of successive temporal stages. The temporal unfolding of the universe is nonetheless a reflection, on a lower ontological level, of the eternal Hierarchy of Being as it exists on higher levels. In the words of Plato from *Timeus*, “Time is the moving image of Eternity.”⁵

From the standpoint of the material level alone, it seems that the state of the universe at the Big Bang was materially simpler than the universe is today. Simple hydrogen atoms came later than the Big Bang; more complex atoms later than that; molecules, still later; and the complex structures of life even later. How, then, can the Second law of Thermodynamics, which scientists as a whole accept, be true? If material structures are becoming more complex, how can entropy be valid?

Entropy is defined as the inevitable decrease in temperature differentials between the various parts of the universe. The total amount of heat is the same, but higher temperatures become progressively rarer. Where the temperature is higher, the frequency of the electromagnetic energy is also higher—higher-frequency blue stars, for example, are hotter than red stars—and higher frequencies of energy can carry greater amounts of “information,” which is another way of defining “order.” According to the laws of physics, the creation of complex structures of matter necessitates a greater expenditure of energy, a greater evening out of the overall temperature of the universe, and thus a greater increase in entropy, than the order which is gained by the increasing complexity of matter can overcome. So, although the complexification of matter, which reaches its greatest extent in life—specifically human life—is apparently an-entropic, the net entropy of the universe is still always increasing.

But is an increasing complexity of material structures really an-entropic? In terms of the net entropy of the universe, clearly it is not. The higher temperatures of the early universe, while they worked against the complexification of matter, apparently made possible, in the form of energy, a higher density of “ordering information” than did the later and lower temperatures, which allowed matter to coagulate and complexify; this is the only conclusion possible in view of the fact that increase in entropy and increase in material complexity seem to go hand-in-hand. A higher degree of order must therefore be possible in certain states of energy than is possible in any state of matter. Such a higher state of order must be expressed in terms of a synthetic simplicity, as opposed to lower states, which must tend in the direction of analytic complexity. Therefore all material structures must be incomplete, lower-level translations of higher and more capacious levels of ordering energy, just as the material universe as a whole—matter, energy, space and time—is a lower-level translation of the eternal hierarchy of Being as it exists “before” the Big Bang.

Therefore, in terms of the entire thermodynamic economy of the universe, more complex forms of matter—Man himself being the most complex—actually represent higher states of entropy, not in relation to less ordered states of contemporary matter, but in relation to earlier stages of the universe when more information was stored in energy and less in matter than is presently the case. (In still later stages of the universe, entropy may have increased to the point where complex material structures again become impossible, not because the density of ordering energy is greater than will allow “room” for such structures, but because it is less than will support them). However, the complexification of matter is an-entropic in another, and special, sense: insofar as it gives rise to the potentiality for self-reflexive consciousness, latent in simpler life-forms but fully-formed in Man. But this an-entropic re-concentration of energy, this flow of existence back to its “earlier” energy-levels through ascension to higher degrees of order, higher levels of Being, is not material. To believe that it is material—to project upon the material dimension what can only happen in the dimension of consciousness—is the fundamental error of the New Age, as well as of all evolutionary-utopian conceptions of history.

According to the Qur’an, “Unto God all matters are returned.”⁶ But they do not return to Him materially. The universe does not again contract till it forms the “primeval atom” which supposedly came before the Big Bang. Materially, it expands, its entropy increases, until it approaches—but never reaches, at least in material terms—the pole of Substance, the *prima materia*, which in Aristotelian philosophy (especially in its esoteric implications as developed within Islam) is the pure formless receptivity underlying all matter—the “waters” upon which the Spirit of God moved in Genesis. The universe returns to its Source in only one way: through the consciousness of self-reflexive beings who, by virtue of the free will inherent in this self-reflexiveness, have chosen to transcend themselves, to return consciously to their Creator, to walk the spiritual path. The macrocosm can only expand and decay; the conscious microcosm alone, insofar as it dis-identifies with this expansion and decay, becomes the avenue for the an-entropic flow of all things back to God. Only man, and other self-reflexive and potentially self-transcending beings in the universe (since according to traditional metaphysics the Human Form is the synthesis of all material and immaterial creation) can bring the universe back to the “primeval atom.” This is precisely the “gathering of the scattered sparks of the Godhead” which constitutes the *tikkun* or universal restoration in the Kaballah of Isaac Luria.⁷ In Aristotelian terms, it is Man’s return to the pole of Essence, the *imago dei* which dwells within the spiritual Heart, by virtue of his ascent along the ontological ladder of his own being. The Essence is expressed in terms of the Logos: the ordering energy of all levels of universal manifestation at its greatest point of synthetic simplicity. It is the Image of God, eternally radiating its own Being, through its Logos, its Word, into dimensional existence. The echo of this eternal radiation, in the world of space and time, is the Big Bang.

Manifestation is by nature expansive and entropic. If there were no entropy in stars, they would not shine, and consequently nothing could be seen. If there were no entropy in matter, then the friction which produces sounds and tactile sensations would not exist; the universe would be silent, and numb. Without entropy, the processes by which conscious life is materially embodied would not exist, nor would any potentially embodied life would be capable of experiencing its environment including its spacio-temporal self, since no information from this “environment” could ever reach it. And there is absolutely no logical way of determining whether the environment experienced or the capability of experiencing it has precedence, since neither is possible nor conceivable without the other: where there is no existence, there can be no experience; where there is no experience, there can be no existence. This is the real

significance of the “anthropic principle,” which is essentially the same as the doctrine of the Primordial Man, found throughout traditional metaphysics and mythology. According to this universal doctrine, God created the universe first in the form of the Primordial Adam, the insan al-kamil—the eternal self-reflexiveness inherent in the Divine Nature—who contained within himself the entirety of spiritual and material creation. The manifestation of the Primordial Adam, the “motion” from eternity to time, is visible. The reintegration of the manifest universe as the form of the Primordial Adam, the “motion” from time to eternity, is secret and invisible. If the Big Bang radiated energy, the Spiritual Path, as it were, absorbs it; the Path is, in the words of Seyyed Hossein Nasr, “the reversal of the cosmogonic process.” (According to Stephen Hawking in *A Brief History of Time*, even black holes do not absorb energy such as to violate or reverse the Second Law of Thermodynamics).⁸ This is the true meaning of the Hindu concept of a cyclical universe, termed “the outbreathing and inbreathing of Brahman.” In Muslim terms, it is the polarity between ar-Rahman, God’s all-manifesting creative mercy which generates the macrocosm, and ar-Rahim, His particular and saving mercy which, as the principle of the Spiritual Path, is ultimately directed only to the individual, the microcosm. The analogous concepts from Hinduism are Avidya Maya, the manifestation of God which progressively veils Him, and Vidya-Maya, the intimation of God as transcending manifestation, which ultimately reveals Him. In the words of St. Paul from First Corinthians, “It is sown a physical body, it is raised a spiritual body” (I Cor. 15:42).

The psycho-material universe, then, might be termed a “subject/object wave,” where objective, material existence is constantly radiating, expanding, and increasing in entropy, while subjective, psychological existence—insofar as it truly transcends itself, and thus realizes the indwelling Subject, the atman, the Absolute Witness which is higher than the psyche—is eternally gathering and concentrating itself an-entropically, eternally rising to higher levels of order and Being, which are higher levels, not of analytic complexity, but of synthetic simplicity.

The objective, sensual universe manifests in terms of energy, the subjective universe in terms of consciousness. Experience is the process whereby energy is transformed into consciousness. If experience is not also transcended, however, the consciousness it produces remains on the level of memory, which is merely psychic. The memory of physical events, stored on the psychic plane (in what the Hindus call the “akashic record”) in the form of “impressions” (sanskaras), becomes the seed of future events; this is the process of karmic causality resulting in “reincarnation,” though in reality no single individual soul reincarnates; what is transmitted is merely the potentiality of event/experience, via lesser subject/ object waves contained within the single great subject/object wave which is the psycho-physical universe. The full return of material manifestation to its unmanifest Source via the road of consciousness only happens in those cases of “annihilation in God” or “union with the Godhead” or “perfect total enlightenment,” where the psychic plane—experience itself—is transcended.

The subject/object wave we call the universe is, like all waves, a cycle —which is why our word “universe,” in Latin, means “one turn.” In terms of space and time, the material universe seems to give evidence of its own cyclical nature; such evidence is never perfect, however, and always contradicted by other evidence, because the universe, as a subject/object wave, is in reality a standing wave, like the vibration of a plucked string. Unlike a wave of the sea, it does not “pass” in time (even though it is “composed” of time) since there is no time-frame outside it through which it could pass. This quality of time, greater than passing time but less than Eternity, is that denoted by the Greek word aion; it is what Eastern Orthodox Christians call “aeonian time.” If there is only one cycle, then the material universe, depending upon our point-of-view, appears

either as cyclical or as eternal, precisely because, as a product of the first “event” in spacio-temporal manifestation. It essentially exists on the border between time and Eternity.

Scientists can posit a Big Bang, find evidence of it through its effects. What they admittedly cannot do is answer the question: “Why was there a Big Bang in the first place?” Reality “before” the Big Bang is also “before” (in metaphysics, we would say “ontologically prior to”) matter, energy, space and time. Therefore none of the physical laws which describe the behavior of matter, energy, space and time can explain why, or if, the Big Bang was necessary. It might just as well never have happened.

The fact that the Big Bang, which produced all material manifestation, did in fact happen, coupled with the impossibility of declaring that such an event was necessary, is the reflection, in physics, of the principle, from metaphysics, of the Transcendence and Immanence of God.

God, according to traditional metaphysics, is necessarily both absolutely beyond the universe—since He Himself is the Absolute while all manifestation partakes of relativity—and also entirely immanent within it, pervading it everywhere, everywhen, and in every mode. Because God is Absolute and Infinite, He cannot be contained by the dimensional, quantifiable universe. But—because He is Absolute and Infinite—He necessarily also pervades it; it is as if the universe were actually contained in Him.

The principle of God’s Transcendence and Immanence means that the question “is the universe God?” always generated two answers: Yes and No. The material manifestation of “yes” is the Big Bang. The quasi-material manifestation of “no” is the impossibility of proving, on the material level, that the Big Bang was necessary.

This “yes” and “no,” eternally co-existing, are the origin of the eternal vibration of the plucking of the first and only string on God’s eternal lyre, whose result, on the material level, is the standing wave we call the universe. The eternal answer “yes” is the peak of the wave made by that vibrating string; the eternal answer “no” is the trough of the same wave. Thus, manifest Being is woven of existence and non-existence—and the vibration between the poles of existence and non-existence is the Logos itself, the primordial musical tone, the syllable Om, the first Word spoken, eternally, by God the Creator, when He created a universe which was, by metaphysical necessity, both Him and not-Him. This is one meaning of the first verse of John: “In the beginning was the Word, and the Word was with God, and the Word was God.” From the standpoint of the Logos, the manifestation and re-integration of the universe—creation and apacastasis—are simultaneous, not successive.

Traditional metaphysics represents this quality of manifestation as composed of existence and non-existence by such symbols as the T’ai-chi or the yin-yang sign; by the Hindu doctrine that all manifestation is maya, the magical self-revelation of Brahman, something which is never entirely unreal but never quite what it seems; or by the Buddhist concept that all manifestation is intrinsically void: in the words of the Heart Sutra, “Form is emptiness, emptiness is form.”⁹ Physics reflects this same concept, on a lower level, in such doctrines as that of matter and anti-matter, where “empty” space emanates a particle, leaving a “hole” in this space as the corresponding anti-particle.

The understanding that universal manifestation both exists and does not exist, because it is both God and other-than-God, is the basis of the Spiritual Path: the an-entropic return, via the

spiritual Heart in self-reflexive beings, of energy—as experience both lived and transcended—to its Absolute Source. If the universe were God, such return would be unnecessary, since material conditions themselves would be Divine. If the universe were not God, such return would be impossible, since no sign of God would exist to inform us of His Reality. But since the universe both is and is not God, it becomes the ladder of return to Him, a ladder with both rungs and space between them. In order to climb this ladder, the reality of our experience of the world must be both affirmed and denied, both embraced and transcended. In traditional mystical terminology, the affirmation is called cataphasis, and the denial, apophasis. In the true practice of contemplation, this affirmation and this denial happen with every conscious breath.

1 Rilke, Rainer Maria, *Duino Elegies*, New York: W.W. Norton & Company, 1963; pp.128-129.

2 from “The Fire Sermon”.

3 Qur’an, 28:88.

4 Cf. Schuon, Frithjof, *Survey of Metaphysics and Esoterism*, Bloomington: World Wisdom Books, 1996; pp.15-16.

5 Plato, *Timeus*, 37d.

6 Qur’an, 2:210; 8:44; 22:76; 35:4.

7 Cf. Scholem, Gershom, *Kaballah*, New York: New American Library, 1978; pp.139-144.

8 Hawking, Stephen, *A Brief History of Time: From the Big Bang to Black Holes*, New York: Bantam Book, 1988, pp.102-106.

9 Conze, Edward, et al, (editors), *Buddhist Texts Through the Ages*, New York: The Philosophical Library, Inc., 1954; p.152.