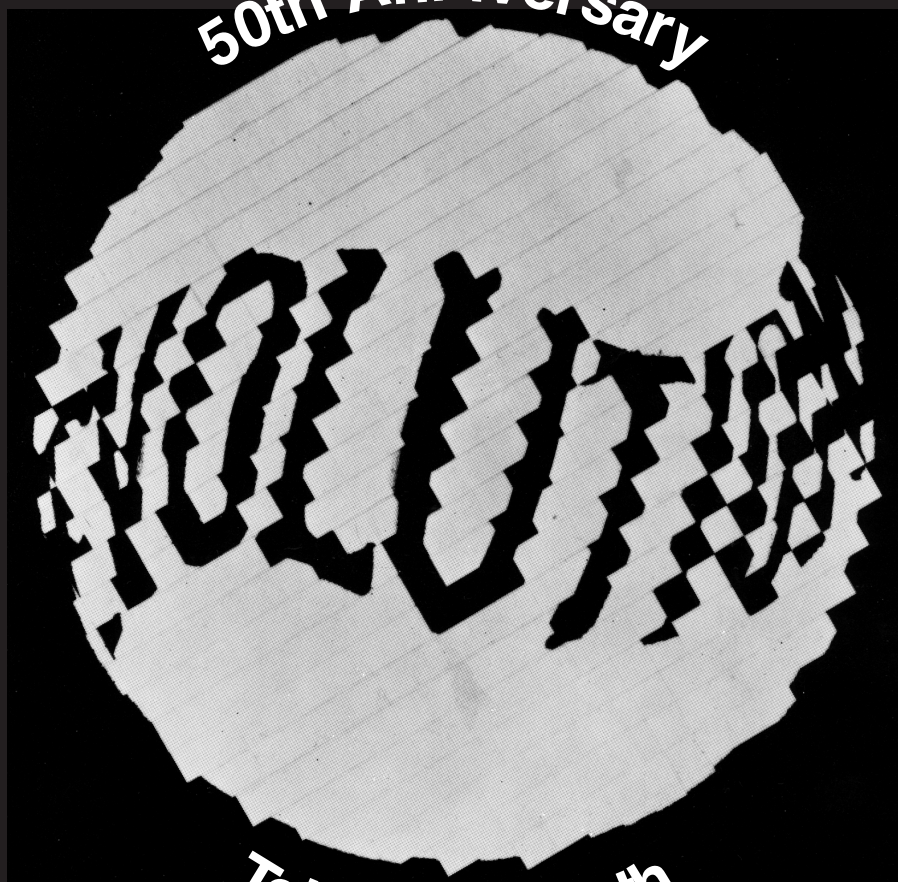


Teilhard's Vision of Evolution

John A. Grim

Mary Evelyn Tucker

50th Anniversary



Teilhard's Death

Teilhard Studies Number 50

Spring 2005

Teilhard Studies Number 50

Spring 2005

Teilhard's Vision of Evolution

**John A. Grim
and
Mary Evelyn Tucker**

TEILHARD STUDIES is a monograph series concerned with the future of the human in the light of the writings of Teilhard de Chardin. Two issues each year are planned, to be sent to members of the Teilhard Association.

TEILHARD STUDIES

Editor	Donald P. St. John	
Associate Editors	Thomas Berry	Kenneth DuPuy
	Brian Brown	Donald Gray
	John Grim	Ewert Cousins
	Mary Evelyn Tucker	
	Harry Buck, Editor Emeritus	

John Grim is President of the American Teilhard Association and Professor of Religion at Bucknell University. He is author of *The Shaman: Patterns of Religious Healing Among the Ojibwa Indians* (University of Oklahoma Press, 1983). John is co-editor with Mary Evelyn Tucker of *Worldviews and Ecology* (Orbis, 1994) and of a ten volume series on *World Religions and Ecology* (Harvard University Press). In the latter series, Grim is also editor of the volume, *Indigenous Religions and Ecology* (2001). John and Mary Evelyn are also founders and coordinators of the Harvard Forum on Religion and Ecology.

Mary Evelyn Tucker is Vice-President of the American Teilhard Association and Professor of Religion at Bucknell University. She is author of *Worldly Wonder: Religions Enter Their Ecological Phase* (Open Court, 2003) and *Moral and Spiritual Cultivation in Japanese Neo-Confucianism* (SUNY, 1989). She is co-editor with John Grim of *Worldviews and Ecology* (Orbis, 1994) and of a ten volume series on *World Religions and Ecology* which grew out of a series of ten conferences held at Harvard University (1996-1998). In addition, she is co-editor of the volumes: *Buddhism and Ecology* (1997), *Confucianism and Ecology* (1998) and *Hinduism and Ecology* (2000). With Tu Wei-Ming, Mary Evelyn has co-edited *Confucian Spirituality* (Crossroads).

Cover design by John J. Floherty, Jr. Woodcut by Kazumi Amano. Reproduced

Teilhard's Vision of Evolution

John A. Grim and Mary Evelyn Tucker

Abstract With Teilhard de Chardin's emphasis on "seeing" as a guide, this Study explores his evolutionary vision as a dynamic process in which the psychic character of physical matter ascends into ever-greater complexity and consciousness. Teilhard proposed that this axial rise of complexity-consciousness is especially evident in the appearance of humans. His special insight was to perceive the significance of complexity-consciousness as an emergent property of a matter-spirit process. What results is a unique phenomenology of an involution of matter, a metaphysics of union with spirit, and a mysticism of concentration of person. Finally, there are considerations of the vitality and limits of Teilhard's thought in light of contemporary issues

The deeper relationships of organic matter and human consciousness continue to challenge human understanding as exclusively mechanistic models of physical matter lose their explanatory power. One vision that still reflects one of the most inspired examinations of these evolutionary questions is that of Pierre Teilhard de Chardin (1881-1955), French Jesuit and paleontologist. Teilhard grappled with novel questions for his day, namely, the meaning and significance of traditional religions and their cosmologies in light of the scientific story of an evolving universe. Moreover, as his personal life story brought him into encounters with Asian cultures he had to assess the relationships, if any, of Western-based science to the religions of the world. Certainly, there were limits to his awareness of Asian religions and cultures, as well as historical constraints on his scientific knowledge, but the ongoing significance of Teilhard's thought is that it extends into current discussions regarding the relationship of religion and science, religion and evolution, and spirit and matter.

During the 20th century many thinkers pondered the relationship of human consciousness to material reality. From the standpoint of the empirical sciences, consciousness appears as an emergent phenomenon having come from nothing but inert, non-conscious matter that composes the known universe. Religious-oriented thinkers have often framed their inquiry in terms of divine and human interactions — that is, religious revelations in which a divine mediation is seen as having broken into the

¹ *This article appeared in an earlier version as the Introduction to Teilhard in the 21st Century, edited by Arthur Fabel and Donald St. John (2000). We thank Orbis Press for permission to reprint. Copyright Orbis Press.*

separated worlds of the human and created matter. Consciousness is imaged as having been extended from the divine realm to the human as if God reached across space to impart psychic vitality to the languid body of Adam.

Secular humanistic thinkers have emphasized a second, or human, mediation by highlighting the significance of personal interactions with other humans. Human agency is considered primary, divine agency is discounted. In these anthropocentric perspectives matter often occupies a subservient, secondary position as epiphenomenon in which the non-human life-world is seen largely as of service to or use by humans.

Teilhard took a different approach from either of these predominantly traditional religious or modern secular emphases. He offered a more holistic vision by situating consciousness as integral to the emerging universe. Teilhard proposed that the increasing complexity and consciousness of the evolution of the universe is manifest in the appearance of humans. Complexity-consciousness, for Teilhard, is an emergent property of matter itself that directly involves his position on spirit also. Using the phrase, “the spirit of the Earth,” he focused on the quantum of matter that successively evolves into the layered envelopes encircling the planet from the lithosphere of rock, the hydrosphere of water, and the biosphere of life. This “spirit of Earth” subsequently evolves into the consciousness humankind now displays in the thought sphere or noosphere surrounding the globe. Unwilling to separate matter and spirit, he understood these linked spheres as differential and interrelated dynamics operative within the same emergent reality. For Teilhard, the plural, diverse matter of the universe in the process of evolutionary change is ultimately pulled forward by the unifying dynamics of spirit.

Teilhard dedicated his life work to fostering an active realization by humans of their evolutionary roles in relation to emergent matter-spirit. This he framed as the challenges of *seeing*. To assist this seeing, Teilhard articulated a phenomenology of the involution of matter, a metaphysics of union with spirit, and a mysticism of centration of person. (Teilhard, 1974:205) This article investigates this challenge of “seeing” by means of brief reflections on Teilhard’s phenomenology, metaphysics, and mysticism. It concludes by highlighting some of the contributions and the limitations of Teilhard’s thought.

Teilhard's Life Question: Seeing

Born into a Catholic family in the Auvergne region of southern France, Teilhard entered the Jesuit religious order where he was encouraged to study early life forms or paleontology. It is not surprising that his readings in evolutionary theory and his field studies of fossils brought him to question the traditional Genesis cosmology of the Bible. As Teilhard in his late 20s came to understand an emerging universe that had changed over time, the Genesis story of creation in seven days became a less satisfying cosmology. The challenge, as Teilhard saw it, was to bring Christianity and evolution into a mutually enhancing relationship with one another. The path to this rapport was first to wake up to the dimensions of time that evolution opened up: "For our age, to have become conscious of evolution means something very different from and much more than having discovered one further fact...It means (as happens with a child when he acquires the sense of perspective) that we have become alive to a new dimension." (Teilhard, 1968a: 193)

Teilhard struggled to extend contemporary science beyond an analytical, demystifying investigation of the world towards a means of seeing the spiritual dimensions of space and time in the evolutionary process. In so doing his efforts became entangled in the Modernist controversy. Within the Roman Catholic Church this controversy was especially intense from the late 19th century into the first two decades of the 20th century. It involved in part an ongoing conflict between the conservative Curia in the Vatican and contemporary ideas, especially as articulated by French theologians and philosophers. Such ideas were considered a threat to Catholic orthodox thinking. This included, in particular, the Darwinian theory of evolution and critical methods for interpreting the Bible. Caught in these tensions, Teilhard struggled throughout his life to remain loyal to the teachings of the Catholic Church at the same time as he articulated an unfolding vision of what he saw as a vast creative universe.

At the very outset of his major work *The Human Phenomenon*, Teilhard spoke of the challenge for humans to see into the deep unity of evolution:

Seeing. One could say that the whole of life lies in seeing – if not ultimately, at least essentially. To be more is to be more united – and this sums up and is the very conclusion of the work to follow. But unity grows,

and we will affirm this again, only if it is supported by an increase of consciousness of vision. That is probably why the history of the living world can be reduced to the elaboration of ever more perfect eyes at the heart of a cosmos where it is always possible to discern more. Are not the perfection of an animal and the supremacy of the thinking being measured by the penetration and power of synthesis of their glance? To try to see more and to see better is not, therefore, just a fantasy, curiosity, or a luxury. See or perish. This is the situation imposed on every element of the universe by the mysterious gift of existence. And thus, to a higher degree, this is the human condition. (Teilhard, 1999:3)

For Teilhard evolution was a unific movement. Thus, he identified the perceived separation between matter and spirit as a central problem in comprehending the unity of evolution. This was evident, he observed, in the mechanistic, Cartesian science of his day that viewed matter as dead and inert. However, a split was also evident in dualistic religious worldviews that saw God as transcendent and apart from created matter. Thus, Teilhard sensed the deeper dualisms of the Western worldview manifest in both scientific and religious fields though he did not articulate the full cultural dimensions of his insight. He sought to unite his scientific affirmation of the world of matter with his formative Catholic faith in the divine. This unity, he felt, was manifest in evolution. In one of his most striking statements, Teilhard put forward an apologetics, or defense, of his personal belief that boldly proclaimed his faith in the world. (See Henri de Lubac, 1967:129-143) He writes:

If, as the result of some interior revolution, I were to lose in succession my faith in Christ, my faith in a personal God, and my faith in spirit, I feel that I should continue *to believe invincibly in the world*. The world (its value, its infallibility and its goodness) – that, when all is said and done, is the first, the last, and the only thing in which I believe. It is by this faith that I live. And it is to this faith, I feel, that at the moment of death, rising above all doubts, I shall surrender myself. (Teilhard, 1971b: 99)

Rather than leading away from Christianity, Teilhard argued that the scientific investigation of evolution would actually lead one toward a profound sense of the cosmic Christ in the universe, drawing evolution toward a greater personalization and deepening of the spirit. Teilhard coined the term “christic” as an expression of his experience of the Cosmic Christ of evolution. That is, the “omnipresence of transformation” in evolution, centrated in complexity-consciousness, draws matter forward.

(Teilhard, 1979: 94) According to Teilhard, the separation of spirit from matter so prevalent in the science and religion of his day overlooked this deep unitive quality of the emergent universe.

As evolutionary science since Darwin had reported, the universe is a cosmogenesis, namely, a state of continual development over time. This is in stark contrast to two major cosmological positions in the West: the one-time creation of all existence as presented in the biblical book of Genesis and the degeneration from a once perfected cosmos as in classical Neo-Platonism. Evolution displays dynamic, self-organizing processes from the atom to the galaxies. Thus, a new cosmology was emerging at the turn of the 20th century that described atoms as eventually forming into cells that evolved into multicellular organisms and on into higher forms of life. This is the process over which Teilhard puzzled when he noted that with greater complexity of life comes greater consciousness until self-reflection emerges in humans.

Disintegration, change, and suffering are, for Teilhard, inevitable dimensions of the evolutionary process in which the plurality of matter resists unity with spirit. "Christ is he," Teilhard writes, "who structurally in himself, and for all of us, overcomes the resistance to unification offered by the multiple, resistance to the rise of spirit inherent in matter." (Teilhard, 1971b: 85) Progress to higher states of complexity and consciousness requires a deficit as the flow of energy decays to unusable entropy. Corresponding to the individual person, an entropy of suffering has a redemptive function integrated into the larger transformations related to creative, universe processes.

As individuals "see," they will come to realize how they are participating in larger evolutionary dynamics and thus contributing to the flourishing of the Earth community. For Teilhard the ultimate human act was to bind one's energies with evolution and to unite one's personhood with that animating center which is drawing forward all of creation to a culmination of evolution in the christic, or Cosmic Christ.

Phenomenology: The Significance of Complexity? Consciousness

Teilhard attempts his fullest telling of the story of evolutionary processes in *The Human Phenomenon*, completed in 1940. This comprehensive synthesis first appeared in English in 1959 and a new translation

was published forty years later in 1999. There he suggests that any consideration of physical mass in the world entailed at least “three infinities.” The first two “infinities” were the realms of the infinitely large and the infinitely small. While scientific studies emphasized cosmos and atom (the large and the small), Teilhard proposed a third axis of biological complexity that provided a link to consciousness. This axial law of complexity-consciousness for Teilhard moves through matter and acts as its basis for organization. The evolution of matter in this perspective proceeds as an involuting, or inward-turning, progression that moves from a simple cellular stage toward greater complexity and conscious reflection. From particles and molecules to atoms, from single cells to multi-cellular organisms, from plants and trees to invertebrates and vertebrates, evolution displays a movement towards more complex organisms and toward greater sentience.

Teilhard accepted the idea of initial creation in the great flaring forth of the primal fireball. However, he clearly could not accept a biblical, literalist view of a completed seven-day creation in the form presented in Genesis. The facts of science stand in question of such a literal, textual explanation of the appearance of life. Moreover, it was his understanding of evolution and his explanation of evil as resulting from the energy-entropy flows of life’s progression that brought him into conflict with the Church. (Lukacs, 1977: 87-96)

From Teilhard’s perspective, all of matter was evolving toward higher forms of complexity-consciousness. Matter, then, could not be regarded as simply fallen or evil in the gnostic sense. Nor could matter be conceived as emanations from a higher consciousness into lower worlds of intelligence and form as in neo-Platonism. Instead, in Teilhard’s view matter is inexorably associated with spirit in which both work as a unified, vital instrument towards the growth of consciousness. This process culminates in the personalizing force of hominization, that is, the conscious reflection of the universe in the human.

In *The Human Phenomenon*, Teilhard posits three qualities of matter: plurality, unity, and energy. (Teilhard, 1999: 12) Plurality implies an endless degradation or breaking apart, a downward movement of things. Thus, there is in the universe an infinite possibility for differentiation. Unity arises in relation to plurality in that the different volumes of matter are co-extensive and bound to one another. Paradoxically, union differentiates into increasingly identifiable entities. Energy resides in the dynamic interaction of things, the power of bonding. It indicates an

upward movement, a power of building up. While complexity-consciousness is an emergent property, Teilhard also saw that the cosmos is being held together and drawn forward from above and ahead.

Teilhard emphasizes the wholeness of all of matter rather than its fragmentation. It is exactly that vision of wholeness in evolutionary processes that he strives to outline in *The Human Phenomenon*. He sees matter as differentiated by plurality, yet, simultaneously, an interconnected whole by unity — a quantum infused by energy.² An essential principle of this total system is the second law of thermodynamics that specifies the dissipation and the loss of usable energy. This basic dialectic of spirit-matter is at the root of the entire evolutionary process according to Teilhard. This dialectic is central for understanding how entropy or dissipation is a necessary corollary of forward movement.

In explaining the internal and external dimensions of spirit-matter Teilhard spoke of the psychic and physical dimension of things. His justification for such a view lies in inductive observation in which human consciousness is not situated as an evolutionary aberration or addendum, but as its defining emergent quality. He asserts:

Indisputably, deep within ourselves, through a rent or tear, an ‘interior’ appears at the heart of beings. This is enough to establish the existence of this interior in some degree or other everywhere forever in nature. Since the stuff of the universe has an internal face at one point in itself, its structure is necessarily *bifacial*, that is, in every region of time and space, as well, for example, as being granular, *coextensive with its outside, everything has an interior* (Teilhard, 1999: 24)

For Teilhard, then, evolution is both a psychic and physical process; matter has its within and its without. Teilhard describes two kinds of energy as involved in evolution, namely, *tangential* and *radial*. Tangential energy is “that which links an element with all others of the same order as itself in the universe.” Radial energy is that which draws the element “toward ever greater complexity and centricity in other words, forwards.” (Teilhard, 1999: 30) Teilhard observes that there are self-organizing principles or tendencies evident in matter that result in more intricate systems:

² This holistic view of evolution is currently being documented in the systems sciences and science of complexity. See, in particular, the annotated bibliography of these sciences done by Arthur Fabel, “The Emerging Discovery of a Self-Organizing Universe” available on the Forum on Religion and Ecology web site, <http://environment.harvard.edu/religion>

Left long enough to itself, under the prolonged and universal play of chance, matter manifests the property of arranging itself in more and more complex groupings and at the same time, in ever deepening layers of consciousness; this double and combined movement of physical unfolding and psychic interiorisation (or centration) once started, continuing, accelerating and growing to its utmost extent. (Teilhard, 1965: 139)

He suggests, then, that the evolution of spirit and matter are two phases of a single process: “Spiritual perfection (or conscious ‘centricity’) and material synthesis (or complexity) are merely the two connected faces or parts of a single phenomenon.” (Teilhard, 1999: 27)

Teilhard thus saw the deep weave of matter and spirit from the early formation of the universe to the emergence of life on Earth and into the appearance of the human. Matter is in a state of complex development that passes through certain critical phases of transformation. The first of these phases is that of granulation in which matter gives birth to constituent atoms and molecules are formed. Eventually, mega-molecules arise and, finally, the first cells. In all of this, Teilhard assumes vast spans of time as opposed to the seven-day creation story of Genesis. While Teilhard would clearly not have known the most current date for the age of the universe, namely, 13.7 billion years, he was abreast of the latest thinking of his scientific colleagues on many issues regarding evolutionary theory.

The thresholds of the evolutionary process as outlined by Teilhard are: first, *cosmogensis*—the rise of the mineral and inorganic world. The second is *biogenesis* in which organic life appears. Gradually, there is an increase in cephalization (development of a more complex nervous system) and cerebration (more complex brain) until *anthropogenesis* is reached. This third phase implies the birth of thought in humans and for the first time evolution is able to reflect upon itself. Humans become the heirs of the evolutionary process capable of determining its further progression or retrogression. This is an awesome responsibility and much of Teilhard’s later work explicates how humans can most effectively participate in the ongoing creativity of evolutionary processes.

Greater personalization, or “hominization,” of the individual and the species joins together the cosmological and ethical dimensions in Teilhard’s thought. The florescence of humans around the planet has resulted in natural processes being adapted into the human realm or noosphere. For example, the hominization of natural selection now results

in humans deciding in many instances what forms of life will survive in fragile ecosystems. As the mathematical physicist, Brian Swimme notes, it is another natural process, namely, neotony, or the observed characteristic of an extended juvenile stage among mammals that encourages play, which is hominized into an extended youth among humans manifest in such social expressions as celebrations and sports. (Swimme, 2001)

At our present stage of evolution, the human joining with the interior pull of complexity-consciousness results in an affection that draws forward all of evolution. Thus, a greater spiritualization of the universe is affected which Teilhard calls the transforming power of love, the amorization of things. By the increase of amorization and personalization in the individual, there arises a collective spirit of thought encompassing the globe that Teilhard terms *noogenesis*. The final threshold is when evolution moves towards its highest form of personalization and spiritualization in the Cosmic Christ of the universe. Having come to that which has been drawing evolution forward through all its millennia of movement, spirit-matter simultaneously arrives at the end that was its beginning, namely, the Omega point.

The implications, then, of Teilhard's phenomenology for human action can be summarized as follows:

The essential phenomenon in the material world is life (because life is interiorized).

The essential phenomenon in the living world is the human (because humans are reflective)....

The essential phenomenon of humans is gradual wholeness [totalité] of humankind (in which individuals super-reflect upon themselves). (Teilhard, 1975: 175)

Within this perspective the human plays a vital part in the evolutionary process through increased socialization and broadened planetization. This is because the human is that being in whom evolution becomes conscious of itself and looks back on the unfolding universe process. While significant questions can be raised regarding Teilhard's hierarchical arrangements of life on seemingly more progressive levels, the force and insight of his thinking about evolution are remarkable for his time.

The collective consciousness and action of humans now emerging in the noosphere were something that Teilhard realized had enormous potential for creating a global community. Thus, Teilhard sees a need for

increased unification, centration, and spiritualization. By unification, he means the need to overcome the divisive limits of political, economic, and cultural boundaries. By centration, he means the intensification of reflexive consciousness, namely, a knowing embrace of our place in the unfolding universe. By spiritualization, he means an increase in the upward impulse of evolutionary processes that creates a zest for life in the human. In all of this he sees the vital importance of the activation of human energy so as to participate more fully in the creative dynamics of evolution. Human creativity, for Teilhard, derives from a passionate dedication to meaningful work and productive research informed by the renewing dimension of the arts and cultural life.

As the human currently makes itself felt on every part of the planet, the challenge now is to enter appropriately into the planetary dimensions of the universe story. As Thomas Berry has suggested in drawing Teilhard's thought forward, this requires new roles for the human — ones that enhance human-Earth relations rather than contribute to the deterioration of the life systems of the planet. (Thomas Berry, 2003: 77-80) Because humans are increasingly taking over the biological factors that determine their growth as a species, they are capable of modifying or creating themselves. The full range of ethical issues in such a progress-oriented view of human cultural evolution was not fully considered by Teilhard. Teilhard's contributions, however, do lead to the realization that as we become a planetary species by our physical presence and environmental impact, we need also to become a planetary species by our expansion of comprehensive compassion to all life forms.

Metaphysics: The Dynamics of Union

Teilhard realized that his speculations regarding the inherent nature of the universe were preliminary. (Teilhard, 1975: 192) Yet, what he sought was a "universe-of-thought" that would increasingly build toward a unified center of coherence and convergence. Thought, as a form of animated movement, carries forth complexity-consciousness. Though Teilhard was influenced by the work of Henri Bergson, he did not draw on Bergson's work in the same way as the existential phenomenologists of the 20th century. Yet, he exhibits a tension similar to that between Edmund Husserl and Maurice Merleau-Ponty. That is, Husserl called for a return to "the things themselves," namely, a return to the world as the starting point

for understanding human consciousness. Yet, Husserl could not overcome the philosophical weight of the Kantian transcendent self that knows seemingly apart from the world. Merleau-Ponty was deeply influenced by Husserl's call to return to the immediacy of experience of the world, yet he broke with Husserl by locating human thought and consciousness not in a transcendent realm but in the human body perceiving the world. Teilhard's understanding of the evolutionary dynamics responsible for human thought as well as the role of thought in drawing evolution forward manifest a similar metaphysical tension. In a related sense, Teilhard argued that, "the moving body is physically engendered by the motion which animates it." (Teilhard, 1975: 193) Teilhard seems to have been influenced by Bergson's sense of the inherent vitality, or *lan vital* of evolution, yet he rejected both Bergson's interpretation of that vitality as aspiritual and random, and the resulting position of some phenomenologists of the human in the context of nothingness. Rather, Teilhard connects evolutionary vitality to a seeing, similar to Merleau-Ponty, that emphasized the shaping of the knowing body through the cosmological evolution of the world.

Unique to Teilhard, however, is his religious analogy of the Omega point as that which both allures and is positioned as the culmination of the evolutionary process. Teilhard describes this point as a pole of consciousness that is both immanent and transcendent. He sees the Omega point as: "... an ultimate and self subsistent pole of consciousness, so involved in the world as to be able to gather into itself, by union, the cosmic elements that have been brought to the extreme limit of their centration — and yet by reason of its supraevolutive (that is to say, transcendent) nature enabled to be immune from that fatal regression which is, structurally, a threat to every edifice whose stuff exists in space and time." (Teilhard, 1975: 185)

Such an animating and alluring center Teilhard recognizes is not directly apprehensible to humans, but its existence can be postulated from three points. The first is *irreversibility* in the evolutionary process, once put into motion, cannot be halted. Furthermore, there must be a supreme focus towards which all is moving or else a collapse would occur. The second point is that of *polarity*. This implies that a movement forward necessitates a stabilizing center influencing the heart of the evolutionary vortex. This center is independent but active enough to cause a complex centering of the various cosmic layers. The final principle is that of *unanimity*. Here, he suggests that there exists an energy of sympathy or

love that draws things together, center to center. However, the existence of such a love would be lost if focused on an impersonal collective. Thus, there must exist a personalizing focus — “If love is to be born and to become firmly established, it must have an individualized heart and an individualized face.” (Teilhard, 1975: 187)

Teilhard calls this the “metaphysics of union” for he claims that the most primordial notion of being suggests a union. (Teilhard, 1975: 193) He describes the active form of being as uniting oneself or uniting with others in friendship, in marriage, in collaboration. The passive form he sees as the state of being united, or unified by, another. He then describes the successive phases of the metaphysics of union. The first is that God in his triune nature contains his own self-oppositions. Thus God exists only by uniting himself. Second, at the opposite pole of the self-sufficient First Cause (God) there exists the multiple of matter. This is the passive potentiality of arrangement, yearning for union with the pole of Being. Finally, the creative act of God takes on a significant meaning—creation reflects the creator. The emergence of increasing complexity in matter and the participatory reflection of humans is an echo to the deepest personalization towards which the divine moves. “To create is to unite,” and thus by the very act of creation the divine becomes immersed in the multiple. This implies that the scope of the incarnation extends through all creation. Teilhard regards his metaphysics as being linked with the essential Christian mysteries. That is, there is no God without creature union. There is no creation without incarnational immersion. There is no incarnation without redemption. (Teilhard, 1975: 198; and King, 1989) Interestingly, Teilhard presents here a formidable challenge to the traditional anthropocentric Christian emphasis on redemption exclusively for humans by extending redemption into the cosmological context.

Mysticism: The Centering of Person in Evolution

The challenge for Teilhard of integrating his religious and scientific commitments placed him in a personal crucible that forged a creative, unitive vision. Traditional mysticism in the world’s religions, as Teilhard surveyed this spiritual perception, was generally understood as an interior experience that demanded a de-materialization and a transcendent leap into the divine. Teilhard, however, realized a radical re-conceptualization of the mystical journey as an entry into evolution, discovering there an

immanent sense of the divine.

As a stretcher-bearer during World War I, he had intuited the inherent directions of this call when he wrote, "There is a communion with God, and a communion with the earth, and a communion with God through the earth." (Teilhard, 1968b: 14) Eventually, Teilhard came to realize that human participation in this communion experience brought one into the depths of mystery. As Teilhard expressed it, "I see in the World a mysterious product of completion and fulfillment for the Absolute Being himself." (Teilhard, 1979: 54) The process of communion is for Teilhard the centration and convergence of cosmic, planetary, and divine energies in the human.

Teilhard defines mysticism as "the need, the science and the art of attaining the Universal and the Spiritual at the same time and each through the other." (Teilhard, 1975: 12) To become one with a larger whole through multiplicity was the goal of his mysticism. He sees mysticism as a yearning of the human soul towards the cosmic sense evident in many of the world's religions. (Teilhard, 1971a: 82) Teilhard understands mystical union as the deepest interiority that leads to a cosmic sense of being pulled forward into the whole without losing the personal. For Teilhard, this union is found at the heart of all art, poetry and religion.

Teilhard sees the mysticism that is needed for the future as the synthesis of two powerful currents: that of evolution and that of human love. "To love evolution" is to be involved in a process in which one's particular love is universalized, becomes dynamic, and is synthesized. As with all mystical visions, a paradoxical challenge unfolds in trying to relate the particular character of human love to the sense of an all-embracing, divine love. Teilhard extends this challenge to love without hesitation into the larger human family, but also into an increasingly expanding awareness of spirit and matter throughout nature. By universalized, then, Teilhard means "the Real is charged with Divine Presence." (Teilhard 1968a: 167; and 1970: 120) This mystical experience reaches back to those earlier experiences Teilhard understood as "communion." He wrote:

As the mystics felt instinctively, everything becomes physically and literally lovable in God; and God in return becomes intelligible and lovable in everything around us....as one single river, the world filled by God appears to our enlightened eyes as simply a setting in which universal communion can be attained. (Teilhard 1968a: 168)

This view embodies not simply an anthropocentric or human-centered

love, but a love for the world at large. Teilhard's mysticism is activated, for example, in scientific investigation and social commitment to research as well as in comprehensive compassion for all life. Mysticism is something more than passively enjoying the fruits of a contemplation of a transcendent or abstract divinity. For Teilhard, love is always synthesized in the personal. Here lies the point of convergence of the world for Teilhard — the center in which all spiritual energy lies. By means of this personalizing force at the heart of the universe and of the individual, all human activities become an expression of love. It is in this sense Teilhard conjectures that "...every activity is amorized." (Teilhard, 1968a: 171)

For Teilhard the mystical path leads to a sense of evolution in which individual personalization converges from the meridians of overwhelming plurality toward centration on a powerful intuition of the whole. This whole, for Teilhard, is the Divine Milieu within which we live, and breathe, and have our becoming.

Contributions and Limitations in Teilhard's Thought

Teilhard's particular legacy for the 21st century, then, includes a vastly deepened sense of an evolutionary universe that can be understood as not simply a cosmos but a cosmogenesis. This dynamic emergent universe can now be viewed as one that is intricately connected: from the great flaring forth of the original fire ball and the first hydrogen and helium atoms to the appearance of life in the original replicating cells and the gradual development of the myriad life forms. Teilhard shows us again and again how this process is at once unified and diversified. (Swimme and Berry, 1992)

The legacy of Teilhard's vision of cosmogenesis affirms the extraordinary interrelationship and interconnection of the whole. Teilhard describes the irreversible flow of increasing complexity in cosmic evolution and thus provides empirically documented evidence for seeing the profound relationality between and among all parts of the universe.

This interconnectivity changes forever the role of the human. We can no longer see ourselves as an addendum or something "created" apart from the whole. We are, rather, that being in whom the universe reflects back upon itself in conscious self-awareness. The deepening of interiority in the mind-and-heart of the human gives us cause for celebration and participation in the all-embracing processes of universe emergence. (Berry, 1988:

22, 219) The implications for a greatly enlarged planetary consciousness and commitment to ecological awareness are clear.

Such a perspective leads to a subtle but pervasive sense for Teilhard that the universe is threaded throughout with mystery and meaning. This is in distinct contrast with those who would suggest (often dogmatically) that the universe is essentially meaningless, that evolution is a completely random process, and that human emergence is a result of pure chance. For Teilhard, however, the evolving universe is not one he would describe as due to “intelligent design.” Rather, evolution is dependent on an intricate blending of the forces of natural selection and chance mutation, on the one hand, along with increasing complexity and consciousness on the other. This does not lead automatically to a teleological universe, but one nonetheless that holds out to the human both a larger sense of purpose and promise.

This promise at the heart of an innately self-organizing evolutionary process is also the lure toward which the process is drawn. (Haught, 2002) With this insight Teilhard provides a context for situating human action. This context of hope is indispensable for humans to participate with a larger sense of meaning in society, politics, and economics as well as in education, research, and the arts. A primary concern for Teilhard was the activation of human energy that results in a zest for life. The existentialist despair that pervaded Europe between the two world wars was something he wished to avoid. For Teilhard the spirit of the human needed to be brought together with the spirit of the Earth for the flourishing of both humans and the Earth.

In the face of enormous odds from a conservative religious opposition and from a materialist scientific perspective, Teilhard provided the human community with novel ways of understanding creation apart from the static cosmos pictured in the Genesis story. He dramatically shifted Christian theological agendas from an exclusively redemptive focus on the historical person of Jesus of Nazareth toward one cognizant of the dynamic picture of creation given by the evolutionary sciences. His sense of the Cosmic Christ embedded within and drawing creation forward constitutes a creative reading of the gospel of John, the epistles of Paul and the Church Fathers. As Thomas Berry suggests, his perspective moves from an exclusive preoccupation with redemption to a concern for creation, namely, an understanding of the universe at large (cosmology) and of Earth in particular (ecology). Rather than situating the human as an aberration in the random processes of evolution, Teilhard argued that con-

sciousness was an integral component of the axes of complexity evident in evolution. This is because his comprehensive incarnational spirituality affirms an increasingly centered, personalized universe radiating a numinous interiority. Teilhard struggled to understand this “within of things” in light of his scientific work and came to profound reflections on the mystical character of science itself in exploring the universe that are among his most original contributions.

Some limitations of Teilhard’s thought might be noted along with his contributions. (Berry, 1982) Teilhard inherited the modern faith in progress that was a particular legacy of the European Enlightenment. This accounts for his optimism with regard to the human ability to “build the Earth.” This led to Teilhard’s over-emphasis on technological achievements as the sign of progressive evolution. There is also a tendency toward an overstated anthropocentrism in his descriptions of the human as the culmination of universe evolution. In this sense, Teilhard’s eloquent reflections on scientific research as a mode of contemplation makes us aware that he inadvertently affirmed applied science without considering its implications for disrupting earth processes. For example, Teilhard appears unwilling or unable to consider the implications of nuclear waste and pollution when he wrote about the marvels of nuclear power in the late 1940s and early 1950s. (Teilhard, 1968a) Likewise, with regard to genetic engineering, Teilhard seemed unaware of the potential deleterious consequences of intrusion into the genetic patterning of matter itself. As a corrective to this overly optimistic faith in science and technology to create a better future, many suggest that our current environmental and social challenges call for interdisciplinary engagement of the natural and social sciences as well as the contributions of the humanities regarding cultural values. Similarly, alternative technologies such as solar and wind energy sources not only promote flourishing life on this planet but also provide a basis for precautionary decision-making.

Despite his intense commitment to a communion with the Earth, Teilhard had no developed sense of that ecological insight into what we now call “bioregions,” or local ecosystems and watersheds. Profoundly committed to a vision of cosmic interdependence, he was in some ways unable to fully appreciate the unfolding of that vision in the particularity of biological life and the complex ecosystems of Earth. His Christian sensibilities often led him to collapse the diversity of life into a plurality of matter brought to higher convergence in the Cosmic Christ. For example, his Mass on the World in the *Hymn of the Universe* is a striking

cosmic liturgy that celebrates matter as the vehicle of the holy. It thus can be appreciated for its advancement in Christian thinking. Yet, what language of sacrifice might Teilhard have expressed had he known of the looming assault of current extractive economies on the planet and the scale of global demands for limitless consumer goods? In addition to human achievements through science and technology he might have considered particular ecosystems and life forms as part of the creative diversity of evolution that are valuable in themselves and in their relationships with humans.

Like most people of his time, Teilhard was also limited by his understanding of the world's religions. For example, he discusses Hinduism largely through the lens of Upanishadic/Vedantic monism. This typical colonial emphasis on a seminal trunk of the tree on South Asian religious thought did not adequately consider the other equally significant varieties of regional, philosophical, and devotional Hinduism. In addition, Teilhard had little developed textual or anthropological understanding of Confucianism, Daoism, and Chinese Buddhism even though he spent several decades living in China. Finally, he had a stereotypical Western view of indigenous traditions as "static and exhausted." (Teilhard, 1971a: 25) It is not helpful, admittedly, to replace that stereotypical view with a romanticized one of indigenous traditions as "first ecologists." Still, the diversity of cultural reflection on the human condition and depth of intimacy with local bioregions evident in indigenous environmental knowledge recommends more serious considerations. Teilhard, on the other hand, positioned Christianity as the vehicle for a rich spirituality that would foster and direct the evolutionary process. Thus, he privileged Christianity as a major axis of evolution rather than affirming it as *his* entry into reflection and contemplation of evolution.

Despite these limitations, what emerges in any consideration of the life and thought of Teilhard is an appreciation of his grace under pressure, his steadfast commitment to a vision that challenged many of his deepest values, and his efforts to align a life of science with his religious journey. He has provided us with one of the few intellectual and affective syntheses that draw on science and religion in such profound and novel ways. His vision of universe emergence and of the role of the human in that emergence stands as one of the lasting testimonies of 20th century thought.

Summary

Teilhard's sweeping evolutionary perspective provides a context for understanding the human in a universe far larger and more complex than we had imagined. Teilhard realized that the evolutionary perspective requires a shift in thinking and in moral commitment. Realizing that we are in an unfolding, changing, developing universe, he understood that the human mirrors a dynamic cosmogenesis, not simply a static cosmos. A primary question for Teilhard was how to valorize human action and inspire the zest for life amidst inevitable human suffering and the travail of natural disasters, as set within a picture of evolutionary space and time as indifferent to life.

Teilhard presents a phenomenology of evolution as dynamic process in which the psychic character of physical matter evolves into ever greater complexity and consciousness. He posits an ever-present unifying center drawing forward a creative process that culminates in the divine reality from which it emerged. Teilhard was aware of the mystical character of his vision of reality and he groped for the language that would accord with his deep commitment to Catholicism. Simultaneously, he sought a language that would also speak to nonbelievers. Personhood appealed to him as a metaphor that satisfied his concern lest he be misunderstood as advocating a monistic pantheism or favoring the impersonalizing tendencies of certain political ideologies. In his view, the mystical union was not a collapse of the individual into a cosmic void. Rather, human participation in the evolutionary process was, for Teilhard, a centration of person in the cosmic turn towards increasingly complex organization and conscious in-dwelling. For these profound insights into evolutionary dynamics and our particular role in them we are indebted to Teilhard. His legacy has been taken up from a variety of disciplines that is testimony to his enduring influence half a century after his death.

References

- Berry, Thomas. "Teilhard in the Ecological Age," *Teilhard Studies* #7, Chambersburg, PA: American Teilhard Association, 1982.
- _____. *The Dream of the Earth*. San Francisco: Sierra Club Books, 1988.

_____. "The New Story," In *Teilhard in the 21st Century: The Emerging Spirit of the Era*, Arthur Fabel and Donald St. John, 77-88. Maryknoll, NY: Orbis Books, 2003.

Haight, John. "In Search of a God of Evolution: Paul Tillich and Pierre Teilhard de Chardin," *Teilhard Studies* #45. Chambersburg, PA: American Teilhard Association, 2002

de Lubac, Henri. *Teilhard de Chardin: The Man and His Meaning*. New York: New American Library, 1967.

Lukas, Mary and Ellen. *Teilhard: The Man, The Priest, The Scientist*. Garden City, NY: Doubleday, 1977.

King, Thomas. "Teilhard, Evil and Providence," *Teilhard Studies* #21. Chambersburg, PA: American Teilhard Association, 1989.

Teilhard de Chardin, Pierre. *The Appearance of Man*. New York: Harper and Row, 1965.

_____. *Science and Christ*. New York: Harper and Row, 1968a.

_____. *Writings in Time of Need*. New York: Harper & Row, 1968b.

_____. *Let Me Explain*. New York: Harper and Row, 1970.

_____. *Human Energy*. New York: Harcourt Brace Jovanovich, 1971a.

_____. "How I Believe," In *Christianity and Evolution*. New York: Harcourt Brace Jovanovich, 1971b.

_____. "My Fundamental Vision," In *Toward the Future*. New York: Harcourt Brace Jovanovich, 1975.

_____. *The Human Phenomenon*. Bristol: Sussex Academic Press, 1999. This is a new translation by Sarah Appleton Weber of the original French manuscript.

_____. "The Christic," In *The Heart of Matter*. New York: Harcourt Brace Jovanovich, 1979.

Swimme, Brian. "Interview," *What is Enlightenment?* No. 19 Spring/Summer 2001.

_____ and Thomas Berry. *The Universe Story*. San Francisco: HarperSan Francisco, 1992.

An Invitation

Membership in The American Teilhard Association is open to all who wish to join in our work of shaping a future worthy of the planet Earth, of ourselves and of our children.

A brochure describing our purpose and programs will be sent in response to requests mailed to the Association at Iona Spirituality Institute, Iona College, 715 North Avenue, New Rochelle, NY 10801.

We depend entirely on our membership for support in undertaking this work of “building the earth.” We look forward to increased membership so that our publications may be circulated more widely to those looking for guidance in directing the future course of the human venture.

Membership

Annual contribution (tax deductible):

Regular	\$30.00
Husband and wife	\$40.00
Contributing, beginning at	\$100.00
Sponsoring, beginning at	\$250.00
Student, full time, under 30 years	\$10.00
Life membership	\$400.00

All members will receive annually two issues of *Teilhard Studies*, the Association’s newsletter, *Teilhard Perspectives*, and notice of the Annual Meeting and the Teilhard Lecture Series.

An Invitation to Authors

The editors of the Teilhard Studies invite and welcome papers that explore, develop or put into practice Teilhard’s vision. A preferred length is twenty-five double-spaced pages. Please send manuscripts to Donald St. John, Department of Religion, Moravian College, Bethlehem, PA 18018.

TEILHARD STUDIES

1. Berry, Thomas, *The New Story: Comments on the Origin, Identification and Transmission of Values*. Winter 1978.
2. Gray, Donald, *A New Creation Story: The Creative Spirituality of Teilhard de Chardin*. Spring 1979.
3. Berry, Thomas, *Management: The Managerial Ethos and the Future of Planet Earth*. Spring 1980.
4. Wolsky, Alexander, *Teilhard de Chardin's Biological Ideas*. Spring 1981.
5. Fabel, Arthur, *Cosmic Genesis: Teilhard de Chardin and the Emerging Scientific Paradigm*. Summer 1981.
6. Grim, John, *Reflections on Shamanism: The Tribal Healer and the Technological Trance*. Fall 1981.
7. Berry, Thomas, *Teilhard in the Ecological Age*. Fall 1982.
8. Fabel, Arthur, *The New Book of Nature*. Fall 1982.
9. King, Thomas, S.J., *Teilhard's Unity of Knowledge*. Summer 1983.
10. Swimme, Brian, *The New Natural Selection*. Fall 1983.
11. Grim, John and Mary Evelyn, *Teilhard de Chardin: A Short Biography*. Spring 1984.
12. Dodson, Edward O., *Teilhard and Mendel: Contrasts and Parallels*. Fall 1984.
13. Tucker, Mary Evelyn, *The Ecological Spirituality of Teilhard*. Spring 1985.
14. Berry, Thomas, *Technology and the Healing of the Earth*. Fall 1985.
15. Stikker, Allerd, *Teilhard, Taoism, and Western Thought*. Spring/Summer 1986.
16. Salmon, James, S.J., *Teilhard and Prigogine*. Fall/Winter 1986.
17. Anderson, Irvine H., *History in a Teilhardian Context: The Thought of Teilhard de Chardin as a Guide to Social Science*. Spring/Summer 1987.
18. Nichols, Marilyn, S.S.J., *The Journey Symbol*. Fall/Winter 1987.
19. Kraft, R. Wayne, *Love as Energy*. Spring/Summer 1988.
20. Baltazar, Eulalio, *Liberation Theology and Teilhard de Chardin*. Fall/Winter 1988.
21. King, Thomas M., S.J., *Teilhard, Evil and Providence*. Spring/Summer 1989.
22. Grau, Joseph A., *The Creative Union of Person and Community: A Geo-Humanist Ethic*. Fall/Winter 1989.
23. Rees, William E., *Sustainable Development and the Biosphere*. Spring/Summer 1990.
24. Mooney, Christopher F., S.J., *Cybernation, Responsibility and Providential Design*. Summer 1991.
25. Marie-Daly, Bernice, *Ecofeminism: Sacred Matter/Sacred Mother*. Autumn 1991.
26. Hofstetter, Adrian M., O.P., *The New Biology: Barbara McClintock and an Emerging Holistic Science*. Spring 1992.

27. Grim, John, *Apocalyptic Spirituality in the Old and New Worlds: The Revisioning of History and Matter*. Autumn 1992.
28. Tucker, Mary Evelyn, *Education and Ecology*. Spring 1993.
29. Dodson, Edward O., *The Teilhardian Synthesis, Lamarckism, and Orthogenesis*. Summer 1993.
30. Haught, John F., *Chaos, Complexity, and Theology*. Summer 1994.
31. Norris, Russel B., Jr., *Creation, Cosmology, and the Cosmic Christ*. Spring 1995.
32. King, Ursula, *The Letters of Teilhard de Chardin and Lucile Swan*. Fall 1995
33. McCulloch, Winifred, *Teilhard de Chardin and the Piltdown Hoax*. Spring 1996
34. Ryan, John, *Psychotherapy, Religion and the Teilhardian Vision*. Winter 1997
35. Falla, William, *Synthesis in Science and Religion: A Comparison*. Summer 1997
36. Arthur Fabel, *Teilhard 2000: The Vision of a Cosmic Genesis at the Millennium*. Spring 1998
37. O'Hare, Dennis and Donald P. St. John, *Merton and Ecology: A Double Issue*. Spring 1999
38. Maalouf, Jean, *The Divine Milieu: A Spiritual Classic for Today and Tomorrow*. Autumn 1999.
39. Dupuy, Kenneth E., *The Once and Future Earth*. Spring 2000
40. Rae, Eleanor, *Divine Wisdom: Her Significance for Today*. Summer 2000
41. Greene, Herman F., *Understanding Thomas Berry's Great Work* Autumn 2000
42. McMenamin, Mark, A.S., *Evolution of the Noösphere*. Spring 2001
43. Duffy, Kathleen, SSJ, *The Texture of the Evolutionary Cosmos: Matter and Spirit in Teilhard de Chardin*. Fall 2001
44. Ursula King, *Mysticism, and Contemporary Society*. Spring 2002
45. Haught, John F., *In Search of a God for Evolution: Paul Tillich and Pierre Teilhard de Chardin*. Fall 2002
46. Salmon, James F. and Schmitz-Moormann, S. J. and Nicole, *Evolution as Revelation of a Triune God*. Spring 2003.
47. Maalouf, Jean, *Teilhard and the Feminine*. Fall 2003
48. Berry, Thomas, *Alienation in a Universe of Presence*. Spring 2004
49. Cousins, Ewert H., *Teilhard's Concept of Religion and the Religious Phenomenon of Our Time*. Fall 2004

* * *

McCulloch, Winifred, *A Short History of the American Teilhard Association*. 1979.

These publications may be ordered from the American Teilhard Association, c/o Prof. John Grim, Department of Religion, Bucknell University, Lewisburg, PA 17837.

American Teilhard Association

THE AMERICAN TEILHARD ASSOCIATION is dedicated to these objectives:

1. A future worthy of the planet Earth in the full splendor of its evolutionary emergence.
2. A future worthy of the human community as the high expression and fulfillment of the earth's evolutionary process.
3. A future worthy of the generations that will succeed us.

Guided by the writings of Pierre Teilhard de Chardin, the Association seeks to bring an encompassing perspective to this great task of shaping the well-being of the entire earth community at a time when so many crises threaten it. Teilhard's vision of the sequential evolution of the universe from its origin to the human phenomenon, can provide a firm and inspiring basis upon which to proceed. Now for the first time, humanity is converging to a new unity in diversity that needs to be understood and facilitated. To help in this work, the Association, since its foundation in 1967, has sponsored annual conferences, a monthly lecture series, study groups, and a variety of publications.

•

“Why act—and how to act?... For the human... the *initial* basis of obligation is the fact of being and developing *as a function of a cosmic stream*. We must act, and in a certain way, because our individual destinies are dependent on a universal destiny. Duty, in its origin, is nothing but the reflexion of the universe in the atom.”

—Pierre Teilhard de Chardin, *Human Energy*