

## Franciscan Life in Evolution

Franciscan life arose in a medieval cosmos, in an age where heaven and earth were seen to be in harmony and where theology was considered the “queen of the sciences.” Creation bore the footprints (*vestigia*) of God and understanding the natural world could help deepen one’s faith. The influence of Greek philosophy on Christian theology peaked in the Middle Ages where Aristotelian cosmology was joined to Christian theology in the brilliant synthesis of Thomas Aquinas. Both Thomas and Bonaventure studied logic, natural philosophy, arithmetic, geometry and astronomy prior to studying theology which was known as the queen of sciences. Their cosmos was the Ptolemaic universe with its perfectly ordered and hierarchical arrangement; the planets and sun orbiting the earth, and the heavens surrounding the planets. The immutability of cosmic order identified the Ptolemaic universe where the human person was center of the universe. To know God for the medievalists was know the world created by God.

Christianity adopted Aristotle’s cosmology with its central, immovable position of the earth and integrated it with Christian theology. The first major rift between Science and Religion came when Nicholas of Cusa and later Nicholas Copernicus proposed a theory of heliocentrism which meant the earth revolved around the sun. Up to this time the earth was considered to be the center of a stable cosmic order and the human person, created in the image of God, was at the center of the earth. The Church, however, was not ready for the major upheaval of a moving earth. If the earth moved around the sun then the human person was no longer center of the cosmos but simply part of a spinning planet. How could this finding be reconciled with the Genesis account where the human person was created on the sixth day in God’s image? How would sin and salvation be understood? Galileo argued that the Bible and the natural world both come from God and are meant to be in harmony. Cardinal Baronius remarked that the Bible teaches “how to go to heaven, not how the heavens go.” Once the theory of heliocentrism became the law of the planets, the Church found itself in a vulnerable position with regard to science. The rise of modern science, following the Protestant Reformation and its emphasis on sin and personal salvation, caused an alienation from the earth in both Catholic and Protestant circles. Science became detached from its Christian roots and developed as a self-sufficient discipline to explain natural causes and events.

The resistance of the Church (indeed, all world religions) to modern science and the loss of human centrality in creation spawned a radical empiricism and a milieu for scientific materialism to emerge.

The Jesuit trained philosopher Rene Descartes tried to preserve God from the clutches of a changing world by locating true knowledge not in creation but in the self-thinking subject. While up to and through the Middle Ages, creation was a source of revelation and knowledge of God, Descartes' separation of matter and spirit shifted the locus of knowledge to the individual human being in his or her personal subjectivity. The transcendent One (or principle of unity associated with the name "God") became identified with the immanent subject. Whereas in the Middle Ages the power to unify the many came from the one God who created heaven and earth, in the Enlightenment the power to unify the many was sought in the individual. The changing scientific world view threw the God of Jesus Christ into doubt and disbelief. This transition of knowledge from object to subject imposed a burden on the human person to make sense of the world by rational thought alone. As the new science story emerged between the seventeenth and twentieth century, the human person was not part of the cosmic story. In Newton's world, the sovereign, omnipotent God governed the world from above and the cosmos ran like a machine according to internal laws and mechanisms. Newton rejected mainstream concepts of Christianity but found God manifest in the order and beauty of the universe. He argued that God set the cosmos in motion, and to account for small differences between predicted and observed results, actively intervened from time to time to reset or "restore" the mechanism. The rise of natural theology took the form of deism, a belief in a divine Creator, a "clockmaker," who created and wound the timepiece that is the universe, but had no further role in operating it. Deterministic interpretations of Newtonian physics stripped God of personality and sovereign action, defining God only as the force associated with first movement—the original creator of a mechanistic universe.<sup>1</sup> Newton's mechanistic universe came to define all aspects of cosmic life, including Christian life, as Barbara Taylor Brown describes:

Walk into many churches and you will hear God described as a being who behaves almost as predictably as Newton's universe. Say you believe in God and you will be saved. Sin against God and you will be condemned. Say you are sorry and you will be forgiven. Obey the law and you will be blessed.<sup>2</sup>

In Newton's world, the sovereign, omnipotent God governed the world from above and the cosmos ran like a machine according to internal laws and mechanisms. While the cosmos assumed a new world picture through modern science, religion remained tied to the medieval cosmos. The marriage of Greek metaphysics to Christianity gave rise to a system of God, humanity and creation that was too neat and

orderly to be disrupted. Christian doctrine was inscribed within the framework of a perfect, immutable, hierarchical and anthropocentric order.

In his book [A Window to the Divine](#) Zachary Hayes writes that “a careful reading of the theological tradition prior to the modern era indicates that before the so-called Copernican revolution there existed a religious cosmology that involved not only the insights of faith but the physical understanding of the cosmos as it was known at that time. The breakdown of such a cosmology by the shift from a geocentric model to a heliocentric model led eventually to the isolation of theology from the development of modern science. The most fundamental shift in our understanding of the cosmos is the move from the vision of a universe launched essentially in its present form by the hand of the Creator at the beginning of time to a vision of the cosmos as a dynamic, unfolding chemical process, immensely large in both time and space. From a Christian perspective, the unfolding dynamic universe has caused a division in our consciousness. In our everyday experience we live in a culture deeply conditioned by the insights and theories of modern science. But in the context of the church, its theology and liturgy we live in a premodern world. Christian theology no longer has an effective cosmology that enables believers to relate to the world in its physical character in a way that is consistent with our religious symbols. We need to reshape our religious understanding of the world, he claims, by engaging our faith with the best insights of science concerning the nature of the physical world.

### **A New Cosmos**

The discovery of evolution in the nineteenth century and quantum physics in the twentieth century are the two pillars of modern science that overturned not only Aristotle but Newton’s world as well. Albert Einstein’s discovery of relativity changed our understanding of absolute space and time, uprooting the Newtonian mechanistic universe. The theory of relativity eliminated absolute space and time and ushered in a new dimension of space-time, linked to the gravitational force of the universe. Quantum physics tells us that the world is nothing like it appears; it is interconnected to the core, a world of probabilities rather than certainties. Through the emergence of modern sciences such as genetics, molecular biology, evolutionary biology, biochemistry, neuroscience and others we know that life is much more dynamic than we had ever conceived; it is spontaneous and alive, bursting with newness. Creation continues in a playful manner and God seems to be quite at home in the chaos.

Evolution tells us that life unfolds from simple to complex structures over long periods of time through chance and law. We live in a mid-size galaxy in an evolutionary universe that is about 13.8 billion years old with billions of other galaxies; a universe that is large, dynamic and interconnected. It is not a fixed, static, immutable universe but more like an expanding balloon. In this long unfolding universe story, we humans are the last two words—*homo sapiens*; we know that we know. We are not the end of the story but the narrators of it; we are the evolutionary universe become conscious of itself. Evolution is a movement or process from simple forms to more complex forms. From non-living forms, we move to living forms of great variety. The Jesuit scientist Pierre Teilhard de Chardin described this “biological ascent” as a converging process of complexification or enhanced degrees of relatedness, a movement toward more complexified life forms which, at critical points in the evolutionary process, qualitative differences emerge.

Although some scientists see the process of evolution as a meaningless process suffused with blind chance, the dynamic nature of the universe speaks to us, from a Christian perspective, of the home in which a loving Creator has placed us. Evolution helps us realize that God works through the messiness of creation and is less concerned with imposing design on nature than providing nature with opportunities to participate in its own creation. Creation is not about a static world, but a relationship between the dynamic being of God and a world in process of coming to be. The openness of the cosmos to what is new, its capacity to leap forward, the emergence of intelligent beings all direct the believer to the nature of the divine presence empowering the whole cosmic process. Rather than living with a “cosmic terror” in the face of the immensity of the universe, this evolutionary universe is meaningful and purposeful. From a Christian perspective, we believe that the universe is grounded in Christ, the Word of God.

### **The Primacy of Christ**

Evolution opens up new windows today to the meaning of Jesus Christ. When Teilhard discovered the writings of Duns Scotus on the primacy of Christ he exclaimed, “There is the theology of the future.” Scotus held that the primary reason for the incarnation was not sin but love. God is love and Christ is the first in God’s intention to love and thus to create. Scotus’s doctrine shifted the meaning of Christ from a radical anthropocentrism to a cosmic theological wholeness. The renewal of cosmic Christology today with an emphasis on the primacy of Christ imparts profound meaning to the universe. Karl Rahner indicated that Christ is the goal toward which the whole cosmos is moving and in whom the

cosmos will find its completion. The world is not blindly hurtling itself into an aimless expansion but is moved by Christ to Christ that God may be all in all. Hayes writes, "God created toward an end. That end as embodied in Christ points to a Christified world." The universe is not meaningless or purposeless; rather, it has a divine aim which is realized in the Incarnation of the Word.<sup>3</sup> The intrinsic relationship between Christ and creation means that, "what happened between God and the world in Christ points to the future of the cosmos. It is a future that involves the radical transformation of created reality through the unitive power of God's love. This universe, therefore, has a destiny; the world will not be destroyed. Rather, it will be brought to the conclusion which God intends for it from the beginning, which is anticipated in the mystery of the Incarnate Word and glorified Christ. What may appear as a mechanical process of biological evolution [without meaning or purpose] is, on another level, a limitless mystery of productive love. "God's creative love freely calls from within the world a created love that can freely respond to God's creative call."<sup>4</sup> That created love is embodied in Christ in whom all of creation finds its purpose. That is why, Hayes writes, "a cosmos without Christ is a cosmos without a head...it simply does not hold together." Christ is the purpose of this universe and the model of what is intended for this universe, that is, union and transformation in God.

### **Teilhard's Contribution**

Teilhard de Chardin understood the science of evolution as the explanation for the physical world and viewed Christian life within the context of evolution. Trained as a paleontologist and steeped in the Ignatian spiritual tradition, he sought to show that Christianity is a religion of evolution. Evolution, he claimed, is ultimately a progression towards increased consciousness; that which distinguishes the human from non-human nature is self-awareness. His faith in Christ led him to posit Christ as the future fullness, the 'pleroma' and 'omega point' where the individual and collective adventure of humanity finds its end and fulfillment; where the consummation of the world and consummation of God converge. The whole evolutionary universe is a "Christogenesis," or a "coming-to-be" of Christ.<sup>5</sup> Through his penetrating view of the universe, Teilhard found Christ present in the entire cosmos, from the least particle of matter to the convergent human community. In his *Divine Milieu* he wrote, "there is nothing profane here below for those who know how to see."<sup>6</sup> The world, he claimed, is like a crystal lamp illumined from within by the light of Christ. For those who can see, Christ shines in this diaphanous universe, through the cosmos and in matter.<sup>7</sup>

Teilhard's Christogenic universe invites us to broaden our understanding of Christ; not to abandon what we profess or proclaim in word and practice but to allow these beliefs to open us up to a world of evolution of which we are vital members. He urged Christians to participate in the process of Christogenesis, to risk, get involved, aim towards union with others, for the entire creation is waiting to give birth to God's promise—the fullness of love (Rom 8:19-20). We are not only to recognize evolution but make it continue in ourselves.<sup>8</sup> He emphasized that the role of the Christian is to divinize the world in Jesus Christ, to “christify” the world by our actions, by immersing ourselves in the world, plunging our hands we might say into the soil of the earth and touching the roots of life. He posited a “mysticism of action” in a universe moved and compenetrated by God.<sup>9</sup> For him, union with God was not through withdrawal or separation from the activity of the world but through a dedicated, integrated and sublimated absorption into it.<sup>10</sup> Before, he said, the Christian thought that s/he could attain God only by abandoning everything. One now discovers that one cannot be saved except through the universe and as a continuation of the universe. We must make our way to heaven *through* earth.<sup>11</sup>

Teilhard opposed a type of static Christianity that, in his view, makes its followers inhuman. By “static Christianity” he meant a type of Christianity that isolates its followers instead of merging them with the mass, imposing on them a burden of observances and obligations, causing them to lose interest in the common task. A “static Christianity” leads to a routinized or mechanized Christian life whereby the language, symbols and metaphors of theology and ecclesial life fall trap to a misplaced concreteness that resists growth and change. As a result, Christians lose consciousness of their divine responsibilities and Christianity moves to the margins of sectarianism. In his work Christianity and Evolution Teilhard wrote that “a Christ whose features do not adapt themselves to the requirements of a world that is evolutive in structure will tend more and more to be eliminated out of hand.”<sup>12</sup> Sin, we might say, is the refusal to grow and change. It is the refusal to accept the demands of love and hence participate in Christogenesis.

In his Divine Milieu Teilhard described how Christ's cosmic activity emanates from the Eucharist to touch each of our material activities: from our sacramental lives in union with Christ to the sacrament of the universe. Through the body of Christified persons, Christ reaches humankind and the material universe. He spoke of the Christian phenomenon as a “phylum,” a new Christian phylum that transcends homo sapiens. This “phylum of salvation” according to Teilhard is to spread its inner life and hyper-personalism in a movement of greater consciousness, always ascending until the completion of the Body

of Christ in the parousia." Christ's transforming activity must move from the church's altar to the altar of the material universe. Teilhard described the church as a "phylum of love," positing a new concept of church to include the cosmos. Christian love, he claimed, is the energy of the new evolution because love unites and differentiates. In his Phenomenon of Man he wrote, "If in our love relationship with another we find our truest "person," why should it not be true on a world-wide dimension?"<sup>13</sup> Ewert Cousins describes Teilhard's impact as a shift in consciousness from "first axial period" consciousness marked by autonomy, individualism and freedom to "second axial period" consciousness which is communal, global, ecological and cosmic. Through the progress of technology and mass media, he states, people are becoming more aware of belonging to humanity as a whole and not to a specific group. For the first time since the appearance of human life on our planet, all of the tribes, all of the nations, all of the religions are beginning to share a common history. Beatrice Bruteau describes a shift in consciousness from a domination paradigm to what she calls a "Holy Thursday" paradigm, marked by mutuality, service and Christian love. To be "in Christ," she says, is to enter into Holy Thursday by experiencing some death and resurrection, letting an old modality of consciousness die and seeing a new one rise to life. To be "in Christ" is to abandon thinking of oneself only terms of categories and abstractions and seeing oneself as a transcendent center of energy that lives in God and in one's neighbors—because this is where Christ lives, in God and in us.

### **Co-Creators in Christ**

Teilhard's dynamic thought complements that of the Franciscan theologian Bonaventure who described a congruous relationship between Christ, humanity and creation. The fulfillment of creation in Christ lies in the human person. Bonaventure stated that "matter cries out for perfection" but is unable to attain it on its own.<sup>14</sup> Only one who is a union of matter and spirit, the human person, can help the material world attain its God-intended fulfillment. The created world is ordered to the emergence of the human person in whom material reality and spirituality reality are united. The human is that being in which the drive of the whole of nature is brought to its inner-worldly end.

In view of the centrality of Christ, Bonaventure suggests humanity has a distinct and fundamental role in the salvation of the world.<sup>15</sup> As he points out, the destiny of humanity and the destiny of the cosmos are intertwined in the mystery of Christ. This means that our active participation in the Christ mystery is necessary for the fullness of Christ. What took place in the life of Jesus must take place in our lives as well, if creation is to move toward completion and transformation in God. We are to give ourselves to

Christ, and to his cause and values which means not losing the world but it is finding the world in its truest reality and in its deepest relation to God.<sup>16</sup> Our participation in the mystery of Christ lies at the basis of a healing world, a world aimed toward the fullness of the reign of God. This “putting on Christ” through the living out of an agapistic ethics means living in creation as gift, relating to creation as family, that is, brother and sister, and treating the world of nature with respect and a healthy concern. We are, as theologian Philip Hefner reminds us, “created co-creators,” called to participate in the beauty and goodness of creation destined for transformation in God.<sup>17</sup> Hayes indicates that this evolutionary world can move forward toward its fulfillment through our loving actions. He gives a positive emphasis to the role of humans in the mystery of Christ but also indicates that without our participation, creation will not attain its destiny in God. In Jesus God arrives as the future; we see in the life of Jesus the creative power of love and the promise of new life. The world is an evolving community in which self-identity is found less in oneself than in one’s ongoing relations to others. The ideal of human interpersonal relations is not individual self-fulfillment in distinction from another but mutual transformation through self-gift to the other and reception of the other as gift.

The primacy of love in evolution and the direction of evolution toward more being in love led Teilhard to suggest that, on the level of *homo sapiens*, individualism cannot sustain itself in evolution. We must renounce the idea that each individual person contains the ultimate value of one’s existence and realize that our purpose consists in serving the continuation of the evolution process in the universe.

Christianity is the power of gathering into community what is yet unrelated or unloved. It is a religion of evolution and a religion of the earth where each person or living thing is part of a larger whole. Brian Goodwin writes that an organism “is a functional *and* a structural unity in which the parts exist for *and by means of* one another in the expression of a particular nature. This means that the parts of an organism—leaves, roots, flowers, limbs, eyes, heart, brain—are not made independently and assembled, as in a machine, but arise as a result of interactions with the developing organism. . . Thus organisms are not molecular machines. They are functional and structural unities resulting from a self-organizing, self-generating dynamic.”<sup>18</sup> Similarly, Teilhard wrote: “We must advance *all together* in a direction in which *all together* we can join and find completion in a spiritual renovation of the earth.”<sup>19</sup> That is, we must work together to harness the energies of love for the forward movement of evolution.

## **Cosmic Personalization**



Christianity *is* a religion of cosmic Personalization because it is a religion of love which is centered not on the individual but on the collective whole—the community. Christ is the cosmic person—the communal whole—coming to birth in evolution. Teilhard posited a dynamic view of God and the world in the process of becoming *something more* than what it is because the universe is grounded in the Personal *center of Christ*. The Incarnation speaks to us of a world that is now being personalized in and through the human person, who is no longer center but the *arrow* of the evolutionary process. The destiny of humanity and the aim of the cosmos are intertwined in the mystery of Christ. What took place in the life of Jesus must take place in our lives as well, if creation is to move forward toward its completion and transformation in God. God evolves the universe and brings it to its completion through the cooperation of human beings. Thus, it matters what a human person does and how we live in relation to God, for only through our actions can we encounter God.

We are created to evolve into a new future; the choices we make in love and for love co-create our future. When we see ourselves as part of a larger whole, we act of behalf of the whole of which we are part. Christian evolution is thinking and seeing in a new way. John Seed points out: “I no longer see myself as ‘protecting the rainforest’ but rather that ‘I am part of the rainforest protecting myself. I am that part of the rainforest emerged into thinking.”<sup>20</sup> Ken Wilbur refers to the emergence of this type of consciousness as the experience of the “econoetic self”; we do not recognize ourselves as merely ‘strands in the web’ but we try to perceive reality from the perspective of the web as a whole: “You are doing something no mere strand ever does—you are escaping your ‘strandedness’ transcending it, and becoming one with the entire display; to be aware of the whole system shows precisely that you are not merely a strand.”<sup>21</sup> Finding ourselves in deep communion with the whole earth community is integral to Christogenic life and a new basic for ethics. A thing is right when it tends to preserve the integrity, stability and beauty of the whole biotic community. It is wrong when it tends to do otherwise.<sup>22</sup> We need a new way of acting and being in the world that broadens diversity, deepens interiority and strengthens the bonds of relationality.

The evolutionary Christian is one who is connected through the heart to the whole of life, attuned to the deeper intelligence of nature, and called forth irresistibly by the Spirit to creatively express his or her gifts in the evolution of self and the world. Jesus is brought into being through community and participates in the co-creation of it. Hence what is truly Christological, revealing of divine incarnation and salvific power, must reside in connectedness and not in single individuals. We are called to live on the cusp of this evolutionary breakthrough and this requires our conscious participation as co-creative

agents of love—to be Christ anew; to penetrate the truth of the Christ mystery within ourselves, in other persons and non-human creatures as well. To live the mystery of Christ is to live in the freedom of the Spirit (2 Cor 3:17). Living in freedom requires that we recognize the connectedness that is a basic reality of our existence. We are wholes within wholes; all we do affects all the other wholes of which we are a part. We are always becoming part of a greater whole, trusting that the Creator is continuing to create in and through us. Living in freedom means being content to be incomplete and unfinished, not judging ourselves and others, for everything is incomplete (cf. Matt 7:12). Francis of Assisi exemplified this new level of consciousness. His attentiveness to the human person as divine icon; his solidarity with nature, and his christic vision of the cosmos Christian life marked him out as the growing tip of a new consciousness of Christian life, one that attends to the intricate connectedness of all that exists. Francis, we might say, was an evolutionary Christian.

### **Hope and Future Life**

Evolution works on different principles than a mechanistic structure. Life functions as a process not a machine; it is unfinished and in the process of being completed by participation. Thus we need to create new structures to fit the moment; when the needs change, so too do the structures. It is time to "de-engineer" our thinking, which means examining how mechanistically we have become—even in our treatment of one another. The principle of evolving life is the *future*, that is, the openness of life to more life and the infinite possibilities of life for life. A world opened to the future makes the present rich in possibilities to create something new.

In the past, Christianity meant a flight from the world but in an evolutionary universe, it is a flight from separateness. Even Albert Einstein, who did not believe in a personal God, saw the intricate relatedness of that exists:

A human being is part of the whole, called by us 'Universe'; a part limited in time and space. One experiences oneself. . .as something separated from the rest—a kind of optical delusion of one's consciousness. . . .Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty.<sup>23</sup>

We are no longer in Plato's cave but we have yet to get out of Newton's cave, seeing ourselves as separate little atoms, needing to preserve our autonomy. Christian life is not about laws and authority and power; these are the very things Jesus overturned. It is about love; the law is to empower the spirit

of love so that love may abound (cf. 2 Cor 3:6). The more divine love can shine through the core of our lives, the freer we are to overcome the impasses we find ourselves in, the feeling of abandonment or of being crushed by powerful forces beyond our control. God is a beggar waiting at the soul's door, to be love at the heart of this evolutionary creation; but God cannot enter into our world without us. God needs selfless vessels into which God can pour God's selfless love. Our challenge today is to stay the course of love in a world that resists love, fears love and resents the cost of love. God continues to push through the canal of evolutionary life, to emerge in a new, more illuminative way as God, but the forces of resistance are great. The challenge, therefore, is not to argue or defend the evolution of love but to drench ourselves in it; to go inward and meet, in silence and solitude, a power no human power can vanquish. This is divine Love, always dynamic and ever new, love that empowers us to go beyond ourselves, by imagining and creating a world worthy of love.

We must suffer through to something higher, something more unified, more conscious, more being in love. The costliness of life is the greater wholeness of love. This is Christogenesis, the birthing process of a new reality. Birthing love into greater unity is Christian life; it is our contribution to a universe in evolution. We point the way to something more than ourselves, something up ahead that we are now participating in, where heaven and earth will be renewed (Rev. 21). Teilhard saw that evolution is larger than the scope of the human person alone. Beyond the level of collective consciousness, he posited a mega-synthesis, a convergence of interplanetary or even intergalactical consciousness.<sup>24</sup> We must widen our vision to a christification of the galaxies, a new unity of all cosmic life. To do so we must fix our eyes on the future, on forging new relationships of love that include the earth, all people, other religions, all planets and galaxies. We need to reinvent ourselves in love, realizing that on the evolutionary time line, Christianity was born this morning and is just waking up to the newness of life. In Jesus divine love bursts forth with hopes and dreams for a new world. This new world is within our reach if we awaken to the power of love within us, the power to create anew.

## Notes

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<sup>1</sup> K. Lee Lerner, "A Mechanistic Universe," <http://www.omnilogos.com/2011/07/28/a-mechanistic-universe>.

<sup>2</sup> Barbara Taylor Brown, *The Luminous Web: Essays on Science and Religion* (Cambridge, MA: Cowley Publications, 2000), 54

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<sup>3</sup> Zachary Hayes, “Christ, Word of God and Exemplar of Humanity,” *The Cord* 46.1 (1996): 8.

<sup>4</sup> Zachary Hayes, *A Window to the Divine: a study of Christian creation theology* (Quincy, IL: Franciscan Press, 1997), 91.

<sup>5</sup> Pierre Teilhard de Chardin, *The Phenomenon of Man*, trans. Bernard Wall (New York: Harper and Row, 1959), 297-98.

<sup>6</sup> Pierre Teilhard de Chardin, *The Divine Milieu: An Essay on the Interior Life*, trans. William Collins (New York: Harper & Row, 1960), 66.

<sup>7</sup> This is the thesis of Teilhard’s classic *The Divine Milieu*. See also his “My Universe” in *Process Theology*, ed. Ewert H. Cousins (New York: Newman Press, 1971), 249-55.

<sup>8</sup> Ursula King, *Christ in All Things*, (New York: Orbis Books, 1997), 80.

<sup>9</sup> King, *Christ in All Things*, 93.

<sup>10</sup> King, *Christ in All Things*, 93.

<sup>11</sup> Pierre Teilhard de Chardin, *Christianity and Evolution*, trans. René Hague (New York: Harcourt, 1971), 93.

<sup>12</sup> Teilhard de Chardin, *Christianity and Evolution*, 78.

<sup>13</sup> Teilhard de Chardin, *The Phenomenon of Man*, 265.

<sup>14</sup> Bonaventure, II *Sent.* d. 12, a. 1, q. 3 concl. (II, 98). For a discussion of the spiritual potency of the material world see Kent Emery, ‘Reading the World Rightly and Squarely: Bonaventure’s Doctrine of the Cardinal Virtues,’ *Traditio* 39 (1983), pp. 188 – 99.

<sup>15</sup> Zachary Hayes, “Christology-Cosmology,” in *Spirit and Life: a Journal of Contemporary Franciscanism*, vol. 7, *Franciscan Leadership in Ministry*, ed. Anthony Carrozzo, Vincent Cushing and Kenneth Himes (New York: Franciscan Institute, 1997), 51.

<sup>16</sup> Hayes, “Christ, Word of God and Exemplar of Humanity,” 12.

<sup>17</sup> The term “co-creator” is a term put forth by Philip Hefner to describe his theology of the created co-creator. See *The Human Factor: Evolution, Culture and Religion* (Minn.: Fortress Press, 1993), 23 - 51. Hefner writes: “Human beings are God’s created co-creators whose purpose is to be the agency, acting in freedom, to birth the future that is most wholesome for the nature that has birthed us—the nature that is not only our own genetic heritage, but also the entire human community and the evolutionary and ecological reality in which and to which we belong. Exercising this agency is said to be God’s will for humans” (p. 27).

<sup>18</sup> Brian Goodwin, *How the Leopard Changed its Spots: the Evolution of Complexity* (New York: Simon and Schuster, 1994), 197.

<sup>19</sup> Teilhard de Chardin, *Phenomenon of Man*, 244 - 45.

<sup>20</sup> John Seed, Joanne Macy and Pat Fleming, *Thinking Like a Mountain: Towards a Council of All Beings* (Philadelphia: New Catalyst Books, 2007), 36.

<sup>21</sup> Ken Wilbur, *A Brief History of Everything* (Boston: Shambala, 1996), 205.

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<sup>22</sup> Mark Hathaway and Leonardo Boff, *The Tao of Liberation: Exploring the Ecology of Transformation* (Maryknoll, NY: Orbis Books, 2009), 295 – 97.

<sup>23</sup> Quoted in Nick Herbert, *Quantum Reality: Beyond the New Physics* (New York: Anchor 1987), 250.

<sup>24</sup> In *The Future of Man* Teilhard speaks of the possibility of life being extinguished earth but continuing elsewhere in the universe. The idea of planetary reflection or socialization, the passage of life to another sphere of the universe, Teilhard writes, is “not an ending of the ultra-human but its accession to some sort of Trans-Human at the ultimate heart of things” (p. 311).