

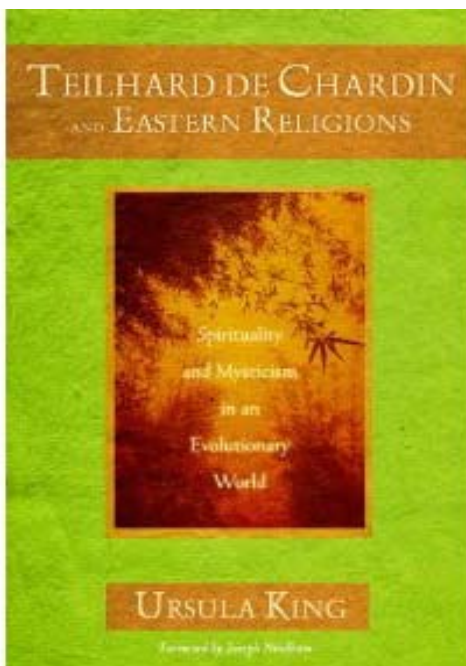
TEILHARD PERSPECTIVE

Volume 44, Number 2

Fall 2011

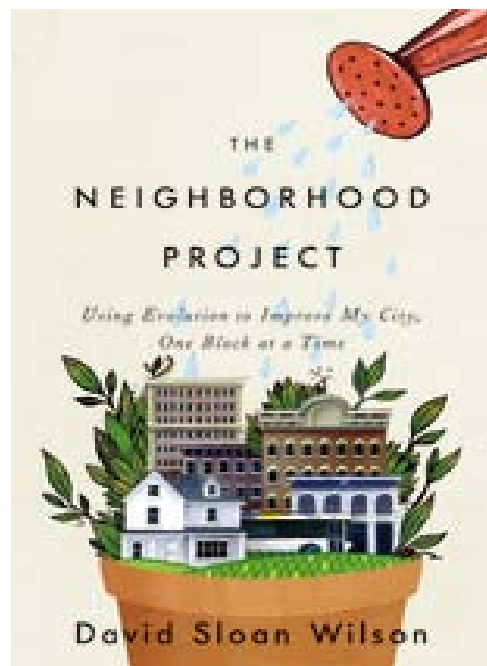
Pierre Teilhard de Chardin in the 20th and 21st Century

These significant new volumes highlight the vitality of an emerging Earth community based on a cosmic genesis perspective. Ursula King emphasizes a bicameral, complementary noosphere while David Sloan Wilson advises and avails the primacy of salutary cooperation in evolution.



King, Ursula. *Teilhard de Chardin and Eastern Religions: Spirituality and Mysticism in an Evolutionary World*. Mahwah: Paulist Press, 2011.

“Reading this revised edition of Ursula King’s comparative study of Teilhard’s mysticism, I have found it as fresh and inspiring as ever. With its newly annotated bibliography and study guide, it will remain for many years one of the very best introductions to and interpretations of Teilhard’s increasingly relevant vision.” **John Haught**



Wilson, David Sloan. *The Neighborhood Project: Using Evolution to Improve My City, One Block at a Time*. New York: Little, Brown, 2011.

“As I compare *The Phenomenon of Man* with current scientific knowledge, I am struck by how often Teilhard gets it right and in some respects is still ahead of his time.” (119)

Teilhard de Chardin and Eastern Religions

Ursula King

This latest book by the University of Bristol, UK, emeritus theologian, prolific author, and Teilhard scholar, is a thorough revision and update of her 1980 classic *Towards a New Mysticism: Teilhard de Chardin & Eastern Religions* (Seabury). An original Foreword by Joseph Needham is reprinted. In so doing, it illustrates from the second decade of the 21st century how revolutionary, insightful, and prophetic is Teilhard's corpus, much ahead of its time, so vital for our global and local critical condition.

Ursula King began such studies in the early 1960s in France, rooted in research upon original materials at Teilhard archives, institutes, universities, and interviews, nonstop ever since. My (Arthur Fabel) first perusal of *The Phenomenon of Man* was circa 1961, bemused as many with a vibrant evolutionary cosmos to Christ trajectory, passing through phenomenal people, unlike anything seen before. A half-century on a clear relief and resolution is possible to perceive the whole achievement, whose welling fulfillment could not be more timely.

Pierre Teilhard was uniquely suited by his globe-trotting lifelong experience to delve into and appreciate both Western and Eastern archetypes. His adult years were divided between Europe and America, and across Asia, along with field work in Africa. His China phases spanned 1923 to 1931 based in Tientsin, and 1932 to 1946 mostly in Beijing. The earlier period involved much paleontological digs, whence he played a major role in the discovery and identification of *Sinanthropus*, known as Peking man.

From this vantage, as the subject book lucidly relates, can be gained a significant synthesis of these reciprocal positions. In Teilhard's view, Eastern proclivities tend toward an undifferentiated totality or Oneness, which absorbs and subsumes persons. The classic Western mode is a Multiple of disparate individuals, bereft a palliative unity, the very idea eludes us. (Within the Natural Genesis website, A Complementary of Civilizations section contains many references for recent quantifications of these realms, often as interdependent or independent.)

But Teilhard went further. These One and Many options are to be joined via a "complementarity and universality." East and West are bilateral poles of a third solution, conveyed by his phrase "Creative Union," noted also in the Wilson piece. Rather than cooperation vs. competition, liberty or commune, factions that defined the Cold War and lately me vs. we politics, a mutuality of entity and empathy,

distinguish cells, organisms, troops and flocks which serves both self and survival. (Such is also the gist of the companion *Neighborhood Project* review.)

As Ursula King carefully sorts out, and the crux of her volume, these versions or paths can take on religious attributes. Certain dichotomies became God or the world, a transcendent monotheism or pantheist immanence, as aligned with West or East. Teilhard's reconception of Christianity into a temporal, universe to human, emergence is often relegated as a "pantheistic," slighting a Creator deity. But as explained, e.g. in "A New Mysticism as a Third Way," (215) a cosmogenesis resolves an either/or polarity of communion with a transcendental God versus reverence for Earth. For Teilhard this creative convergence augurs a divine destiny in the Cosmic Christ.

In theological writings, a new codification and understanding has lately come forth as "pan-en-theism." (Readers may refer to a fine survey *Panentheism* by John Cooper in the Fall 2009 TP, online at the ATA site.) Its value is an inclusion of both a supernatural Creator and a numinous, fertile Creation. As Teilhard writes in *Christianity and Evolution*: "With cosmogenesis being transformed, as we said into Christogenesis, it is the stuff, the main stream, the very being of the world which is now being personalized. Someone, and no longer something, is in gestation in the universe." (184)

What then may a person take to heart from such vistas. "A New Mysticism of Evolution and Action" (228) suggests that we might orient our days in the service of life and love so that our earthly abode may flourish.

And if such scholarship were not enough, a remarkable 2011 addition is a 50 page Annotated Study Guide to the entire Teilhardian literature. A rich array of entry, familiar, and academic references across international sources cover topics of Life and Thought; China Years, Paleontology, and Peking Man; Science, Evolution, Biosphere, Noosphere, Ecosphere; Religious Pluralism and Interreligious Dialogue; Spirituality and Mysticism, and Teilhard's Legacy. We excerpt the Table of Contents to convey the depth and breadth of the project.

"These two attitudes – communion with earth, and communion with God – are regarded as incomplete; only the synthesis of both is acceptable. This synthesis of "communion with god through earth" is not simply a combination of two different attractions, but something of a new order altogether. The initial experience of "cosmic consciousness," the love of the

earth and all its realities, is prolonged and transformed through the experience of God as both an immanent and transcendent presence.” (117)

Part I: Unity of Life and Thought

1. A Great Vision of Faith. Seeing the World Anew. Major Elements of Teilhard's Vision. The Discovery of Evolution. The Great War: A Crucible of Fire. The Maturing of Teilhard's Vision in Asia. The Key for Understanding Teilhard's Vision.

2. Early Contacts with the East. Early Family Influences. The Formative Experience of Egypt. More Eastern Connections and More Reading. A Mystical Seer Turns Writer. Reflections on Mysticism.

3. East and West: The Spirit of One Earth. First Impressions of China. Reflections by a Pilgrim of the Future. Complementary Riches of East and West. The Decisive Encounter with Peking Man. The Yellow Expedition across Central Asia. Travels to India, Indonesia, Burma, and Japan. Experiences in Peking and Shanghai.

4. The Ongoing Quest. Teilhard's Last Years in the West. Further Growth and Disappointments. Commitment to the World Congress of Faiths. More Reading about the East. An Open Religious Quest.

Part II. Eastern and Western Religions in a Converging World.

5. The Search for Unity: From Monistic Pantheism to Mysticism. Teilhard's Method. Monistic Pantheism in His Early Writings. Pantheism Prolonged and Transcended. The Spiritual Power of Matter. The True Meaning of Pantheism.

6. Two Roads to Unity: "Road of the East" and "Road of the West." Two Fundamental Orientations in Mysticism. The Ancient "Road of the East." The New "Road of the West." Early Criticisms of Teilhard's Comparisons. Relating the Two "Roads" to Past and Present.

7. The Convergence of Roads. Teilhard's Assessment of Eastern Religions. Religions in a State of Crisis. Different Types of Eastern Spiritualities. Contributions from East and West. The Role of Christianity. The Meaning of the "Convergence of Roads."

8. Religion and Evolution. Historical Evolution of Religions in the Past. Evolutionary Role of Religion in the Present and Future. Further Evolution of

Religion. Different Understandings of Evolution in Hinduism. A New Dynamic: The Evolution of Mysticism.

9. Toward a New Mysticism. The Newness of Teilhard's Mysticism. Two Basic Types of Mysticism. The New Mysticism as a Third Way. Love as Unifying Energy. A New Mysticism of Evolution and Action.

The Neighborhood Project.

David Sloan Wilson

In the 1950s and 1960s, leading evolutionary scientists such as Julian Huxley, and especially Theodosius Dobzhansky, (“Nothing in biology makes sense except in the light of evolution.”) strongly endorsed Pierre Teilhard’s sense of life’s oriented path from a fertile cosmos to cells, organisms, groupings, and onto the human phenomenon as an ascent of complexity and consciousness. A procession from matter to mind and morality was indeed the standard model going back to William James, Henry Drummond, many others, on to Gregor Mendel, Charles Darwin, and earlier to Romantic and Greek persuasions.

But in the decades since an opposite scheme has taken over, entrenched in textbooks. Due much to Stephen Jay Gould and Richard Dawkins, and outspoken deniers, any teleological force, arrow, or goal akin to a “universal gestation” that Darwin actually held to, is categorically rejected. As a result, a dichotomy arose between chance and necessity, namely, evolution as random processes without any ultimate direction, and evolution as a continuous, oriented emergence. This dichotomy accentuated the split between “atheistic” and religious interpretations. According to Gould, Teilhard was simply a mystical holdover of a teleological worldview

David Sloan Wilson is Distinguished Professor of Biology and Anthropology at the State University of New York at Binghamton. He is the author of *Evolution for Everyone*, *Darwin’s Cathedral: Evolution, Religion, and the Nature of Society*, and with Elliott Sober *Unto Others: The Evolution and Psychology of Unselfish Behavior*, indeed a welcome spokesperson for a kinder, truer appreciation. The son of Sloan Wilson of *The Man in the Gray Flannel Suit* renown, he writes with an engaging clarity to tell this brave story of trying to organically reinvent and reinvigorate his home city by way of local, convivial, community projects.

Our interest is especially caught by Chapter 7 “We Are Now Entering the Noosphere,” wherein a significant approval and reinstatement of Teilhard’s prescience is advanced. Wilson says that he read *The Phenomenon of Man* in depth when he was invited to speak at the 2009 Vatican conference on Biological Evolution, see Gennaro Auletta in the Books section. The chapter also records his attendance that year at a Templeton conference in South Africa on spirituality and human evolution, his talk and these proceedings are also cited.

To set a scene, we introduce Wilson’s contributions to a 21st century evolutionary synthesis. (Many of his books and papers, often with colleagues and students, can be found on the Natural Genesis site.) As a recent synopsis, he wrote “Evolution of Selfless Behavior” for the August 6, 2011 issue of the British weekly *New Scientist*. Along with biologists John Maynard Smith, Eors Szathmary, Eva Jablonka, Marion Lamb, and a growing number, the temporal course of earth life is now seen to unfold over a sequential, multi-level scale from microbes to cells, modular components and processes, organisms, communities, and loquacious people. A view known as “major evolutionary transitions,” it portends something going on beyond chance mutations. Teilhard’s law of recurrence of nested spheres is thus verified whence at each stage autonomous “individuals” symbiotically aid each other to foster both personal and communal survival and welfare.

Another tenet of an inadequate neoDarwinism is its emphasis on competitive behavior, in order to spread one’s own genes. But in actuality, a predilection for and prevalence of cooperation abides, which is now being confirmed, (see Cooperative Societies in the above website.) We have often reported this historic turn in the TP, Charlene Spretnak herein, Franz de Waal, Jeremy Rifkin, and others in prior issues. As the Abstract to DSW’s chapter makes clear, mutual support and sharing serves the formation and viability of every stripe of animal community. This late realization is indeed the crux of Teilhard’s a dynamic evolution suffused by a “radial” energy at each advancing stage that draws and concentrates elements and entities into more personal, aware unities.

Wilson’s special project has been to articulate, defend, and promote a social phase known as “group selection,” as told in the *New Scientist* piece. Long in dispute and denial, this theory contends that as social assemblies across Metazoa from invertebrates to fish, birds, mammals, primates, and human beings evolve they proceed to form at each stage the typical characteristics of an organism. At certain

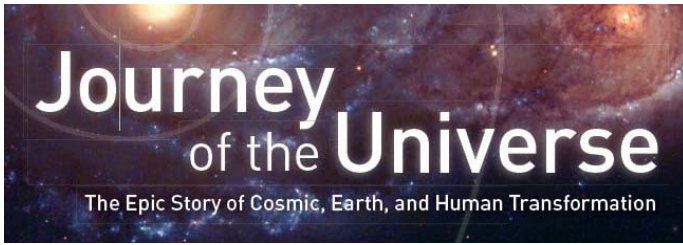
complexities, a modicum of physiology, anatomy, and even cognitive intelligence arises.

Teilhard is in fact noted for his paleontological work in Ethiopia in the 1930s with social mole rats, a species is named after him. But the huge leap he took was to imagine that recurrent patterns and processes of divergence, convergence, and emergence from cells to civilizations sprung from a deeper, independent, generative source. This dimension daunts a Western mechanistic materialism, as it struggles to explain a bodily phenotype without any instructive genotype.

Meerkat Manors and successful clans are thus graced with a diverse balance of individual wants and community contributions. As newly accepted, “altruistic” behavior is of advantage to both self and group, and prevails over internal conflict. In strife between bands, the better organized usually triumph. Decades ago Teilhard expressed this essence by his “creative union” principle. Indeed, the gist of Wilson’s work, this subject volume, and the streets of Binghamton, could paraphrase Dobzhansky: “Nothing in Culture makes sense except in the light of evolution.”

Another of his projects is to seek an evolutionary view of religions, such as denominations and sects, of which *Darwin’s Cathedral* (2002) is a pioneering volume. In such regard, the Noosphere chapter could define the gulf between a materialist version in denial and spiritual faith in an essential creation. Here is a deep dichotomy of our day between a Newtonian “singleness,” or as Taosphere meets Noosphere, an informational, read genetic, “doubleness.”

The journal *Nature* for June 9, 2011 has a news article “Darwin’s City” by Emma Harris on Wilson’s project, and in its September 8 issue, a fine book review by British biologist Kevin Laland. Now in his early sixties, Professor David walks the talk by advising grammar schools, community garden folks, public events, park improvements, tree plantings, and so on, of the merits of inclusive cohesion, often to integrate a less or more well off populace. Children simply learn better within a supportive, communal atmosphere than left on their own, of course aided by crucial mentoring or parental investment. Not an easy road, but a rare, breakthrough venture to respectfully avail and apply nature’s cooperative knowledge and self-organizing wisdom.



Journey of the Universe will Premiere on PBS TV in December 2011

We are pleased to announce that the Journey of the Universe film has been selected to engage viewers for the PBS Public Broadcasting Service annual year end pledge drive, a major endorsement. Showings will begin on December 3, 2011, check local listings. Here are excerpts from the Press Release, available in full at www.journeyoftheuniverse.org.

Journey of the Universe is a sweeping and expansive film that re-imagines the universe story and translates the human connection to the cosmos. Written by Brian Thomas Swimme and Mary Evelyn Tucker, it was created with a team of talented scientists, scholars, and filmmakers. The film was directed by Patsy Northcutt and David Kennard. The story is also told with breathtaking clarity in the book *Journey of the Universe*. (Yale University Press)

Journey of the Universe invites us to become fellow travelers on a journey no previous generation could have fully imagined. Through the astonishing achievements of science, we now know more about the history of the universe and the unfolding of life on earth than ever before. We have a detailed account of how galaxies and stars, planets and living organisms, human beings and human consciousness came to be. But what role do humans play in this 14-billion year history of the universe? And how do we connect with the intricate web of life?

On air host Brian Thomas Swimme guides us through Journey of the Universe exploring these questions and providing an elegant, science-based narrative to tell this epic story, from the origins of life on Earth leading up to the challenges of the present. Beautifully filmed on location on the Greek island of Samos, the birthplace of Pythagoras, Journey of the Universe explores the origins of humans on Earth, how we developed symbolic consciousness, and how our ability to communicate using symbols makes humans a “planetary presence.” As the dominant species, humans have become increasingly adept at adapting to, and now commodifying Earth. Suddenly,

we are faced with a new dynamic – one where the arrival of the species and entire ecosystems depend primarily on human activity, and the choices humans make.

Weaving together the findings of modern science with enduring wisdom found in the humanist traditions of the West, China, Africa, India, and indigenous peoples, the film explores cosmic evolution as a profoundly wondrous process based on creativity, connection, and interdependence, offering unprecedented opportunity for the world’s people to address the daunting ecological and social challenges of our times. Drawing on the latest scientific knowledge, Journey of the Universe tells the story of cosmic and Earth unfolding in a way that makes it both profoundly relevant and deeply moving. What emerges is an intensely poetic story, which evokes emotions of awe, excitement, fear, joy and belonging.

Journey of the Universe is the result of the collective inspiration of a 30-year friendship between three visionaries in the fields of science, evolutionary philosophy and world religions: Brian Thomas Swimme, Thomas Berry, and Mary Evelyn Tucker. Inspired by Berry’s article titled “the New Story,” which observed how humans are in between stories – creation stories of the world’s religions and the scientific story of the emergence of the universe – Swimme and Tucker joined forces to create the **Journey of the Universe** project.

And it is worth noting that a November PBS science series, *The Fabric of the Cosmos* by Brian Greene, sets up a counterpoint between two diametric universes, as if a cosmic Copernican revolution. In his 2011 book *The Hidden Reality*, Greene finds the human lot to be a “lonely vantage point in the inky black stillness of a cold and forbidding cosmos” (8), the standard Ptolemaic physics. In its more true to life genesis vision, **Journey of the Universe** by contrast conveys a creative alternative of a dynamic unfolding evolutionary process in which humans now have a critical role to play for its continuity.

From the Journey website home page, click on Screenings to reach an incredible array of Past and Upcoming Events. These showings occur at science centers, planetariums, colleges and universities, public libraries, churches, conferences, with an ever expanding in interest and audience. After this “New Universe Story” image “The Faces of Gaia” by artist Mary Coelho, viewable of the Journey site, click Galleries, we highlight the grand 2011 Bioneers conference on ecological values and lifestyle where the Journey was featured.



2011 Bioneers Conference

Visit the Bioneers website www.bioneers.org to learn about this “non-profit educational organization that highlights breakthrough solutions for restoring people and planet.” This year’s annual meeting in San Rafael, California comes with a 40 page program, easily viewed on the site. Speakers across the spectrum from indigenous and woman’s wisdom to Google Earth for environment monitoring, and every concern in between, were present.

Of especial note is the contribution of Mary Evelyn Tucker and Brian Swimme, which provided the vital “Cultural and Cosmological” vision and guidance indispensable such an endeavor. Here are the Abstracts for their Sunday Plenary presentations.

Mary Evelyn Tucker - The Power of Story

Our lives are guided by stories from childhood to ever-growing maturity. Mary Evelyn Tucker, Yale professor and founder of the Forum on Religion and Ecology, weaves our personal and diverse cultural and cosmological narratives together for the sake of creating a just and sustainable future for all life. She explores cosmic evolution as a profoundly wondrous process based on creativity, connection and interdependence. Her new book and film with cosmologist Brian Swimme, *Journey of the Universe*, tell the epic story of the universe from an inspired new perspective, weaving the findings of modern science with enduring wisdom in the traditions of the West, China, India and indigenous peoples.

Journey of the Universe: Cosmology, Spirituality and Ecology

A new story of the cosmos is emerging that can lead to a new, far more expansive and conscious understanding of our role on Earth and in the universe. **Mary Evelyn Tucker** and **Brian Swimme**, professor of cosmology at the California Institute for Integral Studies and author (with Thomas Berry) of the highly influential *The Universe Story*, engage with **Carl Anthony**, co-founder, Breakthrough Communities, to look at how peoples from different cultures, belief systems, ethnicities and faiths can find a unifying story of co-existence. Includes a screening of *Journey of the Universe*, the new 50-minute film Mary Evelyn and Brian made.

Darwin, Teilhard, and the Drama of Life

John F. Haught

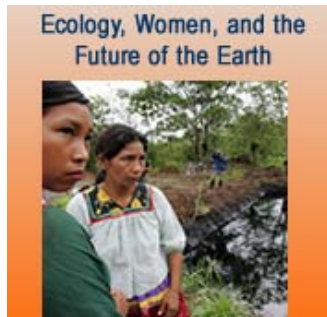
This latest **Teilhard Study**, Number 63 – Fall 2011, is the text of the luminous address that John Haught gave May 14, 2011 at the ATA Annual Meeting at Union Theological Seminary in New York City. For many years a Georgetown University professor of theology, he is presently Senior Fellow in Science and Religion, Woodstock Theological Center. A prolific author and speaker, we seem to have a new book or article from him for each Perspective, and this issue is no exception.

For an entry, the Study situates Teilhard’s vision of an unfolding numinous creation seen by virtue of where and Whom it is all going forward, with regard to: A. The Archetypal Vision (Classical Theological Metaphysics of the Eternal Present), B. The Archaeological Vision (Metaphysics of the Past as typified by Evolutionary Naturalism), and C. The Anticipatory Vision (Metaphysics of the Future).

“Teilhard often said that things hang together “from above,” thus contrasting his position with the reductionist assumption that true understanding of complex entities comes only “from below,” that is, by breaking them “down” into their constitutive parts. But he really intends to say also that things hang together from “up ahead.” Breaking things down analytically, after all, is equivalent to going back in time to when the cosmos consisted of a multiplicity of dispersed, atomized monads—to stages of relative incoherence, in other words. Consequently, it is only by looking in the direction of the future “up ahead” (relative to any point in the cosmic process) that we notice increasing complexity and coherence. The

further back we go in cosmic time, on the other hand, the more things tend to fall apart. Hope, therefore, in Teilhard's worldview, is not an illusory escape from "reality," but the way in which human consciousness reaches out for fuller coherence and intelligibility. This is why hope, rather than tragic resignation, is the most realistic posture we can take with respect to the drama of life." (9)

"Teilhard's way of looking at nature, therefore, has its deepest roots in the Abrahamic religious tradition with its understanding of God as coming toward the world from out of the future. A deep affinity exists between Teilhard's thought and the biblical themes of promise and hope. Even before twentieth century biblical scholars had rediscovered Jesus's passionately earth-rooted longing for the transformative coming of God, and before the recent restoration of a theology of hope, Teilhard had already effectively rediscovered the continent of the future—a future *for* this world, not an escape from it into a Platonic heaven." (13-14)



Catherine of Siena Virtual College

Apropos for this issue, we are pleased to report this new online educational opportunity. The college formally began in September, 2007, and can be reached at www.catherinecollege.net. Its mission to educate and empower women worldwide is now successfully underway and has served students from more than twenty-five countries. But we wish to note that its new President is Ursula King, who brings a lifetime of experience to this vital regard. We excerpt from the website, and typical course content.

Catherine of Siena Virtual College is an international educational enterprise working to empower women for life and leadership through high quality women's and gender studies education. Our inter-disciplinary courses promote gender equity along with inter-cultural and inter-religious understanding and respect. We offer a secure online learning environment where you will feel the freedom,

safety and support to explore a variety of women's and gender issues in an international community.

Our College was named after Catherine of Siena, a fourteenth-century woman who would eventually be declared a Saint and Doctor of the Church. Her vision and her ability to assert that vision with authorities inside and outside the Church, make her a model for leadership and women's empowerment today.

Our new President, Professor **Ursula King**, saw first-hand in India, when studying in Delhi in 1969, how the education of women can transform their prospects in cultures dominated by men. She witnessed the same in universities across the globe. Since then she has become one of the most prominent feminist scholars in the world.

H33 Ecology, Women, and the Future of the Earth

This course examines how the current social, economic, and religious systems that promote the subordination of women also favor the domination and destruction of the environment. These systems are progressively depleting non-renewable resources, destroying the ozone layer, favoring global warming and the irreversible disruption of the planet's long-term capacity to nurture its abundant life forms. Returning to the example of indigenous peoples and a women's approach toward nurturing planetary life, this course explores alternate forms of environmental belonging that foster a reexamining of the myths that we live by and promote a renewed "religious" wonder, acceptance, and alignment with our Mother Earth.

Pierre Dansereau 1911 – 2011

American Teilhard Association Past President

Often recognized as a "Co-founder of Modern Ecology," the Canadian environmentalist and humanitarian played a central role in the 1960s in the founding of the American Teilhard Association. He passed away in Montreal on September 28, a week before his 100th birthday. Montreal mayor Gerald Tremblay summed up his ecological mission as someone who "devoted his entire life to the link between humanity and nature." In this remembrance, we wish to highlight his enabling work in New York City for the ATA, along with prescient concerns for biosphere and noosphere. A Google search of The Montreal Gazette and his name will access a biographic announcement.

As related in "A Short History of the American Teilhard Association" by Winifred McCulloch, Pierre Teilhard's cosmic evolutionary and spiritual vision burst on the scene in the 1950s and 1960s, unlike

anything seen before. An extraordinary personage then gathered to endorse and advance his contribution. An initial committee to oversee the publication of his works included George Barbour, Nobel physics laureate Louis de Broglie, Julian Huxley, Andre Malraux, Leopold Senghor, President of Senegal, and Arnold Toynbee, and indicates the respect for and valuation of his achievement.

Plans for an American Association began in 1962 led by Robert Francoeur, a Fordham University doctoral candidate in biology. He was joined by Theodosius Dobzhansky, Loren Eiseley, Alexander Wolsky, and Dansereau, then director of the New York Botanical Gardens. Dansereau attended the 1964 founding Teilhard Conference at Fordham, along with, among others, Thomas Berry and Ewert Cousins. Notably, this meeting was funded by Henry Luce, founder of Time magazine.

In 1967 Pierre Dansereau became vice-president, and then president of the new ATA, now home to scientists and scholars such as Bernard Towers, Beatrice Bruteau, Ambassador Thomas Melady, R. Wayne Kraft, Van Rensselaer Potter, and many others. Late in 1968, he accepted an appointment as professor of ecological studies at the University of Montreal, and returned to his native Canada. At that time, the presidency passed until 1970 to Dobzhansky, widely considered the leading evolutionary biologist of his era.

I was fortunate to hear Dansereau deliver the Annual Meeting address in NYC in 1970. In the years since, Teilhard's holistic sense of a living biosphere to be carefully tended by its nascent human noosphere guided his thought and endeavors. A salient book in kind by him might be *Inscape and Landscape: The Human Perception of Environment* (Columbia University Press, 1975)

Cohabitat Quebec

And Teilhard's vision is alive and well in Canada to this day. My daughter-in-law Mary Kraus is an architect advisor for the design, building and construction of co-housing ecovillages. (Visit her Kraus Fitch Architects website for more information.) You will learn there about Pioneer Valley Co-Housing in Amherst, MA where Mary, husband John, and daughter Piper reside. These intentional communities cluster private dwellings with a common house for a minimum ecological footprint. With some 100 members of all walks, they exemplify a "creative union" of benefit to both individual and group. At present, Mary, who is fluent in French, is working with a group in Quebec City, whose Cohabitat Quebec

settlement should be complete by next summer. Visit their website at www.cohabitat.ca (Google name for translation) for an introduction.

As it turns out one of the founding members is a couple who run a vegetarian establishment in Quebec named **Restaurant Noosphere**, indeed after Teilhard, which "gives priority to the philosophy of Juvenal, "a healthy mind in a sound body." A five star, ecologically aware destination, it is located at 203 Rue Saint-Jean, G1R 1N8, Quebec City, Quebec, Canada.

Cosmos and Creation 2012 Conference

This is an early announcement of next year's gathering at Loyola University in Baltimore, June 8-10, 2012. The main speaker will be Celia Deane-Drummond, who holds a chair in theology and the biological sciences at the University of Chester. A noted Teilhard scholar, her working titles are: "Christ and Evolution as Theodrama" and "Christ and Ecology as Deep Incarnation." Loyola physicist Gregory Derry will give the Saturday luncheon talk "Complementarity and Complexity." A website posting will appear, (Google keywords) with more details as the day approaches.

Cosmic Story Timeline Mat and Teaching Cards

We are pleased to note this addition to Jennifer Morgan's unique publishing series to elucidate and convey the Universe Story for children. An ATA member for many years, she is the author of the illustrated volumes **Born With a Bang, From Lava to Life, and Animals Who Morph**, namely The Universe Tells Our Cosmic, Earth, and Evolution Story. Here is Jennifer's email, and how to order.

Dear Friends and Colleagues:

I'm very excited to report that **Wasecabiomes** has just released a Cosmic Story Mat and Teaching Card Set for the classroom based on my book *Born With a Bang*. A translation into German is underway. At the 2010 American Montessori Conference in Boston, teacher after teacher told me that they were purchasing copies of my books to cut up so they could place the beautiful illustrations by Dana Lynne Andersen along a timeline. "Couldn't you please make cards so I don't have to cut up books." So here is an expanded set that includes a spiral timeline mat.

With deep gratitude to teachers everywhere who teach the Great Story of the Universe.

Jennifer Morgan

“An addition of classroom materials are now available at the www.Wasecabiomes.org website: select The Big Picture and then cosmic Story Mat. Each set includes: 1. Teacher "Chart" Set for telling the story to a class or group. 2. Sequence Cards for students. 3. Cosmic Spiral Timeline. Mat 4. Thumbnail cards for placing on Mat.”

New Books and Articles

We highlight here recent publications across a worldwide Teilhardian literature, and some that might not be immediately noted or accessible. From the frontiers of science, we cite video presentations by Leroy Cronin and Geoffrey West, along with books by George McPhee and Raymond Neubauer. This issue also contains works that explore a promising revisioning of Christianity within a 21st century emergent creation.

Teilhard de Chardin, Pierre. *The Radiation of a Friendship: Correspondence with the Begouen Family (1922-1955)*. Bruxelles: Lessius, 2011.

As described in the following email by Marie-Anne Roger, General Secretary, French Teilhard Association, this is still another volume of Teilhard's voluminous lifelong letters. The publisher's page is reachable by Googling the French title **Pierre Teilhard de Chardin: La rayonnement d'une amitié**, then click Translate this Page, where its Introduction and excerpts in English can be found.

Dear friends of Worldwide Teilhard,

I wish to inform you of the publication of the letters exchanged between Father Teilhard de Chardin and the couple of Max and Simone Begouën by Lessius, with the title "Le rayonnement d'une amitié". These numerous letters (about 100) cover the period 1922 - 1955 and they are remarkable because the Begouën couple is among the close friends of Teilhard's. In his postface, Fr. François Euvé, Centre Sèvres (Paris), reminds one that "the correspondence of Pierre Teilhard de Chardin is an essential supplement to his published work. His thinking ... is in perpetual motion, a motion that is revealed by the correspondence".

This publication is made richer thanks to an introduction by Fathers Michel Hermans and Peter Sauvage, the Jesuits Managers of the series *Au Singulier* at Lessius, a presentation of the Begouën family by Marie Bayon de la Tour, a grand-niece of Father Teilhard, and to 4 postfaces by Jean-Pierre Demoulin, President of the Teilhard de Chardin

Belgian Center, François Euvé, Fr. Henry Madelin of the European Jesuit Center of Bruxelles-Strasbourg, and by Fr. Gustave Martelet, our Teilhard specialist.

Marie-Anne Roger, General Secretary, French Teilhard Association.

Auletta, Gennaro and William Stoeger, SJ. **Highlights of the Pontifical Gregorian University's International Conference on Biological Evolution.** *Theology and Science*, 8/1, 2010.

The article is a synopsis of this historic Vatican sponsored event in March 2009, whose 2011 book of proceedings is noted below. Auletta is a philosopher physicist at Pontifical Gregorian University, and Stoeger an astronomer at the Vatican Observatory at the University of Arizona.

The Conference was reviewed in the Spring 2009 Perspective, a Google search of the above title words, with some negotiation, will reach its website with extensive program and speaker abstracts. The event received much positive press, and with a premier array of scientists and scholars came across as a necessary space that allowed a 21st century Vatican turn and warming to a deeply temporal creation.

A special aspect observed in this article, as D. S. Wilson records in his book, was a constant referral to and regard for Teilhard's unique vision of an oriented evolutionary spirituality. By these lights, it seemed to dawn upon the Vatican that one of their very lifelong own has gifted them with a luminous modern Christianity, just when it is surely needed.

The conference volume is *Biological Evolution: Facts and Theories* from Gregorian and Biblical Press in Rome, edited by Auletta, Marc Leclerc, and Rafael Martinez. It is listed on the publisher's site, and Amazon Italy, findable with some effort. A check of the WorldCat library site lists a few libraries in the US where it can be found.

“In some of the presentations and discussions, particularly those celebrating the visionary work of Pierre Teilhard de Chardin, there was some ambiguity regarding the natural sciences' ability to discern an overall purposiveness or finality in nature and the universe.” (10) “Teilhard's well-known and extraordinary vision integrates what we know from the natural sciences with what we know from Christian theology, and to some extent from wide-ranging philosophical, poetic and artistic reflections on both. While compelling, and certainly worth respecting and even emulating as a well-founded intuition, it is not by any means the result of careful scientific research alone.” (11)

Cole-Turner, Ronald, ed. *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement*. Washington, DC: Georgetown University Press, 2011.

The editor is professor of theology and ethics at the Pittsburgh Theological Seminary. On first look, the volume might seem as another paean to a technological future. Yet, as the contents and much text viewable on Amazon attest, it is a thoughtful attempt to engage and give meaningful depth and context to this future bursting upon us.

Of especial note in this regard are lead chapters: "Contextualizing a Christian Perspective on Transcendence and Human Enhancement: Francis Bacon, N. F. Fedorov, and Pierre Teilhard de Chardin" by Michael S. Burdett, and "Transformation and the End of Enhancement: Insights from Pierre Teilhard de Chardin" by David Grumett. A further contribution is Celia Deane-Drummond's "Taking Leave of the Animal? The Theological and Ethical Implications of Transhuman Projects."

Another chapter by evangelical theologian Brent Waters "Whose Salvation? Which Eschatology? Transhumanism and Christianity as Contending Salvific Religions" also explores options touched on in the Mahoney review and elsewhere.

Cronin, Leroy. **The Stuff of Life: Making Matter Come Alive**. (Google TED, author's name, and title keywords to access)

A July 2011 TED video by the youthful University of Glasgow Gardiner Professor of Chemistry on well received findings by his laboratory that physical material may actually be suffused with innate potentials to complexify, enliven and evolve. Indeed, the dichotomy of an ascent from minimal cells to us observers out of a supposedly barren universe begs to be breached, for there ought to be a seamless cosmic continuity. "Inorganic," non-carbon matter can in fact be found by cexperimentsation to form an array of rudimentary vesicles, whose shapes "compete" for preferred survival, as if a "molecular Darwinism."

With life characterized by metabolism, bounded units, information, energy flow, and reaction networks, a rise from physics and chemistry to biology and development seems inevitable. As a consequence, a "general theory of universal evolution" accrues. In closing: "I purpose to you that matter that can evolve is alive...."

Dalton, Anne Marie and Henry Simmons. *Ecotheology and the Practice of Hope*. Albany: State University of New York Press, 2011.

A July title in the SUNY Series on Religion and the Environment. Anne Marie Dalton is professor of Religious Studies at St. Mary's University in Nova Scotia. She has a doctorate in religion and culture from Catholic University of America with a dissertation on Thomas Berry and Bernard Lonergan, published by Ottawa University Press as *A Theology for the Earth* (1999). A long time friend of Thomas and the ATA, she was once a co-editor for this Perspective. Henry Simmons is Professor Emeritus of Christian Education at Union Presbyterian Seminary. This new volume can be viewed at some length on Amazon.com.

"Is there any hope for a more sustainable world? Can we reimagine a way of living in which the nonhuman world matters? Anne Marie Dalton and Henry C. Simmons claim that the ecotheology that arose during the mid-twentieth century gives us reason for hope. While ecotheologians acknowledge that Christianity played a significant role in creating societies in which the nonhuman world counted for very little, these thinkers have refocused religion to include the natural world. To borrow philosopher Charles Taylor's concept, they have created a new "social imaginary," reimagining a better world and a different sense of what is and what should be. A new mindset is emerging, inspired by ecotheological texts and evident in the many diverse movements and activities that operate as if the hope imparted by ecotheology has already been realized." (Publisher)

Euve, Francois. **A Spirituality for Scientists: Historical Overview**. *The Way*. January 2011.

Thanks to Rosemary Cattell, editor of The Teilhard Newsletter of the British Teilhard Association, for advising of this article. It is published in full in their October 2011, No. 32, issue available on line at www.teilhard.org.uk, click on Publications. *The Way* is "an international journal of contemporary Christian spirituality, published by British Jesuits."

Francois Euve holds the Teilhard de Chardin chair at the Jesuit Theology School in Paris (Centre Sevres). He also is a physicist and author, search Google and WorldCat, and friend of ATA members. In his paper, Euve chooses four iconic thinkers to survey: Isaac Newton: Divine Sovereignty, Charles Darwin with regard to William Paley, Albert Einstein: A Cosmic Religion, and Pierre Teilhard de Chardin's numinous

universe, phenomenal persons, and divine destiny. Here is the concluding section which surmises three points from these scholars.

“The first point concerns the contribution of anthropology: is ‘the human’ simply one element in the complexity of nature, or does it by its freedom, constitute a ‘spiritual centre’ that serves to unlock the meaning of nature? Modern science swings between these two poles, tending towards a cosmic spirituality that plays down the importance of the human a position that Christianity has to reject.

The second invites us to discover anew the cosmic dimension of the Christian faith. Its starting position may well be that of Einstein – a sense of wonder before the cosmos. It becomes aware of the Holy Spirit discreetly at work in the world.

A third point serves to qualify the second by accepting an aspect of Darwin’s vision, with its greater sensitivity to the real suffering of so many living things; it has no desire to evade reality by focusing exclusively on the regularity of celestial laws. One might cite here the enigmatic ‘groaning in travail’ (Romans 8:22) that Paul finds in the whole creation. If Christ is the crown of creation, it is on the cross that he displays his definitive victory over the forces of death.” (104)

Grassie, William. *The New Sciences of Religion: Exploring Spirituality from the Outside In and Bottom Up*. New York: Palgrave Macmillan, 2010.

A friend of many ATA members, the author has a 1994 doctorate in religion from Temple University, and has taught at several colleges and universities. Prior to graduate studies, he worked in international relations and conflict resolution with postings in Washington, Israel and Berlin. In 1998 he founded the Metanexus Institute, with a copious website www.metanexus.net, to “promote scientifically rigorous and philosophically open-ended explorations of foundational questions.” Among its many projects are annual international conferences with stellar speakers, our Kathleen Duffy, PhD, SSJ, was President for some time.

This subject book is a good summary of Grassie’s integrative thought, with two main Parts. Religion from the Outside In considers in six chapters the Comparison, Old Sciences, Economics, Evolution, Neurosciences and Medicine of Religion. Religion from the Bottom Up then explores Narratives of Religion, The New Religion of Science, God-by-Whatever-Name, and Summary Reflections.

But a Ptolemaic physics cites a mechanical nature bereft of drive, direction or destiny. So a vital contrast of old and new, waning and waxing scientific models, is next laid out. If a creative quality of an Informational kind, akin to Teilhard’s “within of things” and which John Haught has advocated, may be admitted a genesis-like progressive cosmos appears.

Haught, John. **Science, God and Cosmic Purpose**. Harrison, Peter, ed. *The Cambridge Companion to Science and Religion*. Cambridge: Cambridge University Press, 2010.

A salient chapter that as usual deeply engages the necessary reaches of a daunting multiverse and wasteful evolutionary contingencies. But these are leavened in this 21st century by further appreciations of Teilhard’s procreative gestation.

The volume can be surveyed on Amazon. Among essays in its three parts of Historical Interactions, Religion and Contemporary Science, and Philosophical Perspectives, of further interest would be paleontologist Simon Conway Morris’ “Evolution and the Inevitability of Intelligent Life.”

“In order to address this increasingly common, but so far unconfirmed (multiverse) conjecture, I propose that readers take a new look at the evolutionary ideas of Pierre Teilhard de Chardin (1881-1955). More earnestly than almost any other important thinker in the late modern world, this famous Jesuit geologist argued that the cosmos and consciousness are inseparable from each other. The universe is fundamentally conscious – even though scientific method conventionally avoids any formal acknowledgement of subjectivity and conscious experience. The emergence and intensification of consciousness, Teilhard proposes, is not a local terrestrial accident, even if our planet is the only place where life and mind have actually blossomed. Even if the emergence of consciousness is only local it requires a root system that is cosmic in scope.” (Haught, 271)

Hauser, Richard, SJ. **The New Spiritual Exercises: In the Spirit of Teilhard de Chardin**. *America*. June 6, 2011.

An insightful, appreciative review of Louis Savary’s new Paulist Press book that was noted in the Spring 2011 Perspective. Fr. Hauser is director of the master program in Christian spirituality at Creighton University. Along with Gennaro Auletta, David Sloan Wilson, and others herein, he contributes to the

growing realization that Teilhard's 20th century vision of "the evolutionary and cosmic presence" of a Cosmic Christ is a gift and a beacon going forward.

Howard, Damian. *Being Human in Islam: The Impact of the Evolutionary Worldview*. London: Palgrave Macmillan, 2011.

After the author notes he is neither scientist nor Muslim, but a Jesuit theologian at Heythrop College, London, the work proceeds with a respectful and thorough treatment of this historic struggle between eternal heaven and temporal earth. In the case of Godly belief, worldly standing, life's developmental path, and our place in things, a humanum or "anthropological imaginary," is proposed. In such regard, a central chapter explores the strong influence of Henri Bergson, (1859-1941), via the writings of Muhammed Iqbal (1877-1938), who is seen to represent a Romantic, *Naturphilosophie* school of "vitalist cosmic progressivism," in contrast to Western mechanical materialism. And Teilhard, much akin to the French Bergson, along with Karl Rahner, are rightly noted as latter exemplars of this life-affirmative option.

But factions remain between those committed to a transcendent God in a perennialist school and those enamored of divine immanence. Themes such as heaven and Earth, sacred and secular, vertical and horizontal are described in scholarly depth. Islamic scholars over the past decades have continued to grapple with these dialectics turns

Mahoney, Jack. *Christianity in Evolution: An Exploration*. Washington, DC: Georgetown University Press, 2011.

An emeritus professor of moral and social theology at the University of London contributes to the necessary project that Teilhard initiated for the transfiguration of Christian, and religious belief all told, to a 21st century milieu of life, person, planet, and cosmos as a divinely developmental creation. This is John Haught's mission, and a growing number such as Ilia Delio's *The Emergent Christ*, noted in the prior TP. Celia Deane-Drummond, Haught, Karl Rahner, and Teilhard, along with many voices are well engaged.

"Evolution has provided a new understanding of reality, with revolutionary consequences for Christianity. In an evolutionary perspective the incarnation involved God entering the evolving human species to help it imitate the trinitarian altruism

in whose image it was created and counter its tendency to self-absorption. Primarily, however, the evolutionary achievement of Jesus was to confront and overcome death in an act of cosmic significance, ushering humanity into the culminating stage of its evolutionary destiny, the full sharing of God's inner life. Previously such doctrines as original sin, the fall, sacrifice, and atonement stemmed from viewing death as the penalty for sin and are shown not only to have serious difficulties in themselves, but also to emerge from a Jewish culture preoccupied with sin and sacrifice that could not otherwise account for death. The death of Jesus on the cross is now seen as saving humanity, not from sin, but from individual extinction and meaninglessness." (Publisher)

McGhee, George. *Convergent Evolution: Limited Forms Most Beautiful*. Cambridge: MIT Press, 2011.

The author is Professor of Paleobiology in the Department of Earth and Planetary Sciences at Rutgers University. Evolutionary theory is today beset and impeded by deep quandaries due to a tacit natural selection paradigm that denies or cannot contain any intrinsic, independent development. While evidence from molecules to minds, and every creaturely species in between, confirms that organisms converge upon a similar pattern and process over and over, as this book avers, the fact remains at conceptual odds with this vested Modern Synthesis of the 1950s. Following colleague Simon Conway Morris, the McGhee provides the most thorough, organized documentation across genes, proteins, metabolism, animals, plants, ecosystems, and behavior, of this reality so far. All of which begs an impression of something going on by itself, as if a developmental gestation due to its own innate propensities.

"Charles Darwin famously concluded *On the Origin of Species* with a vision of "endless forms most beautiful" continually evolving. More than 150 years later many evolutionary biologists see not endless forms but the same, or very similar, forms evolving repeatedly in many independent species lineages. A porpoise's fishlike fins, for example, are not inherited from fish ancestors but are independently derived convergent traits. In this book, George McGhee describes the ubiquity of the phenomenon of convergent evolution and connects it directly to the concept of evolutionary constraint--the idea that the number of evolutionary pathways available to life are not endless, but quite limited.

Convergent evolution occurs on all levels, from tiny organic molecules to entire ecosystems of species.

McGhee demonstrates its ubiquity in animals, both herbivore and carnivore; in plants; in ecosystems; in molecules, including DNA, proteins, and enzymes; and even in minds, describing problem-solving behavior and group behavior as the products of convergence. McGhee analyzes the role of functional and developmental constraints in producing convergent evolution, and considers the scientific and philosophical implications of convergent evolution for the predictability of the evolutionary process.”

Neubauer, Raymond. *Evolution and the Emergent Self: The Rise of Complexity and Behavioral Versatility in Nature*. New York: Columbia University Press, 2011.

Imagine a cosmic genesis perspective some seven or eight decades after Teilhard. A University of Texas at Austin zoologist can now describe a universe filled with habitable earths, life’s advance well tracked by energy, information, and organization, and in this view especially seen as a “personalization” process. Indeed in a final coda, this dawning discovery is seen to uniquely align with and fulfill Pierre Teilhard’s evolutionary and spiritual prescience.

“The universe uncovered by the latest science may be a garden rather than an existential desert. Life may be springing up in solar systems scattered all over the cosmos. Intelligence may be a major theme of evolution wherever it has had time enough to play out its possibilities. As I will describe in the following chapters, a high-information pathway is one of the basic strategies of life, and it leads repeatedly to an emergent self: a consciousness that seeks to express itself in complex communication and social relations. This may be a universe *for* life, where the lights that dot the night sky are like a field strewn with wildflowers. The evolutionary processes we find here on Earth may be common all over the cosmos, and for those so inclined, this makes a religious view of evolution also possible. (4)

Rosser, J. Barkley. *Complex Evolutionary Dynamics in Urban-Regional and Ecologic-Economic Systems*. Berlin: Springer, 2011.

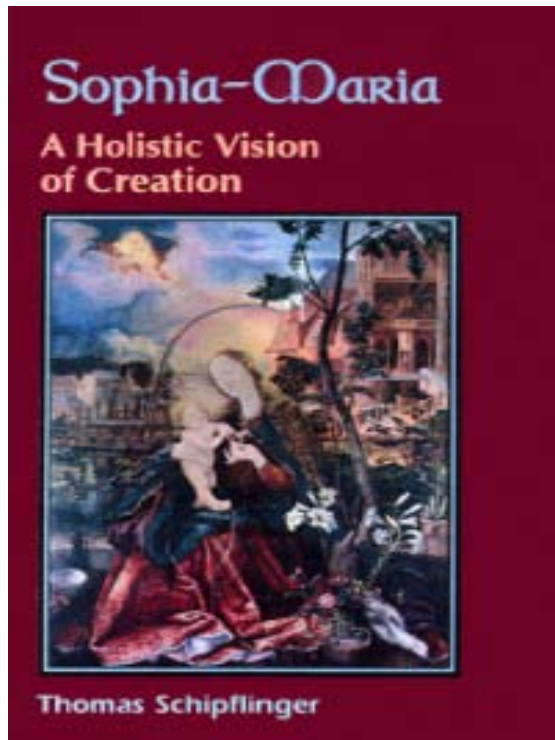
The James Madison University mathematical economist has pioneered the reconception of cities and commerce from older equilibrium models to an open, nonlinear sense of their organic development and prosperity. In so doing, Rosser achieves a significant revision of biosphere and econosphere in terms of living systems science. But our interest is a paragraph

from an evolutionary complexity section that advances the “natural selection and self-organization” synthesis, of Pierre Teilhard is seen as an exemplar.

“We thus return to perhaps a deeper aspect of this debate between the neo-Darwinian synthesis and the advocates of complex self-organization. This is indeed the matter of teleology versus a sort of wandering randomness. There have been only a few evolutionary theorists who have advocated a full-blown teleological perspective, notably the Catholic theologian and evolutionist Teilhard de Chardin with his idea of evolution being a divinely driven process proceeding toward the noospheric Omega Point, although (Paul) Davies and (Harold) Morowitz provide somewhat lower-key examples as well. Most self-organization advocates such as (Stuart) Kauffman tend to eschew such exogenously driven processes, but nevertheless see some tendency for some sort of greater complexity to gradually emerge over time through evolution, even as it is not necessarily an inexorable or monotonic process, especially in the face of dramatic mass extinctions that have occurred from time to time. But, left on its own, the biosphere self-organizes to higher orders of greater complexity, however defined. The ultimate argument for this is to point to the grand movement from the nonorganic through unicellular organisms through the hypercyclic morphogenesis of the multicellular and finally to organisms with larger and larger brains, finally achieving the self-consciousness of humanity.” (134)

Schipflinger, Thomas. *Sophia-Maria: A Holistic Vision of Creation*. York Beach, ME: Weiser Books, 1998.

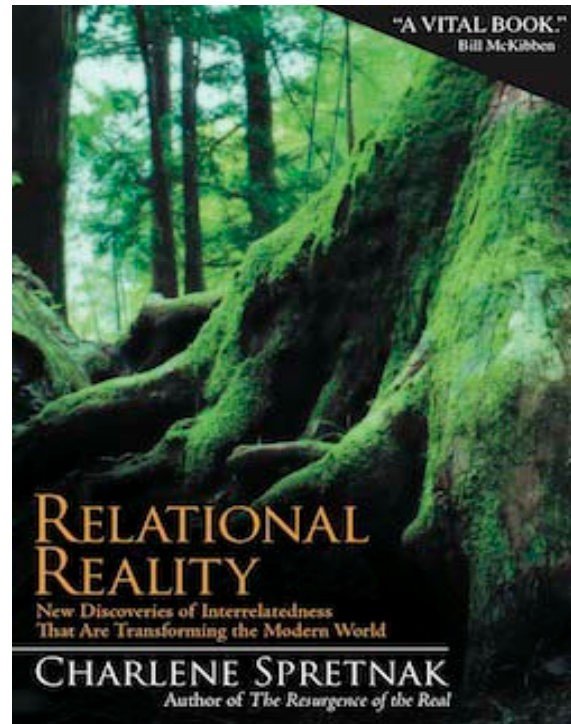
The author, a Russian priest, achieves a grand synthesis in this English language volume of the myriad presences and expressions of Divine Feminine Wisdom throughout history. The cover image is the Stuppach Madonna of Matthias Gruenewald and was chosen for its ethereal conveyance of Mother Mary as a worldly embodiment of the Anima principle. Sophia-Maria is then witnessed across ecumenical ages from scripture, church “fathers,” Augustine, unto Hildegard of Bingen, medieval mystics Jacob Boehme and Anne Emmerich, Kabbalist engagements and especially 19th and 20th century Russian iconographies, along with theologians Vladimir Soloviev and Sergei Bulgakov. Later chapters note scientific views of a holistic evolution, the historical search for a World Soul, and Eastern images of Sophia in Hindu and Buddhist traditions.



But our special interest is the chapter “Sophia According to Teilhard de Chardin” whose thought is seen as a modern testament of an eternal feminine principle in a divine universe. One may indeed see this unique volume as an effort to return in full creative quality Sophia-Maria unto a profane, patriarchal world in need of compassionate feminine energies.

Spretnak, Charlene. *Relational Reality: New Discoveries of Interrelatedness That Are Transforming the Modern World*. Topsham, ME: Green Horizon Books, 2011.

Charlene Spretnak is a professor of philosophy and religion at the California Institute of Integral Studies. Some of her other books include *Missing Mary: The Queen of Heaven and Her ReEmergence in the Modern Church* (2004) and *States of Grace: The Recovery of Meaning in the Postmodern Age* (1991). This latest work elaborates the rising turn to a society counter to competition and consumption. Chapters cover Relational Revelations, The Relational Shift in Education and Parenting, Health and Healthcare, Community Design and Architecture, and The Relational Shift in the Economy. The book’s synopsis is excerpted here:



Relational Reality reveals the coherence among numerous surprising discoveries of the interrelated nature of reality. These discoveries are part of a new perspective that has been emerging gradually for the past several decades but has gained momentum and is now transforming every mainstream field of human endeavor. All our basic assumptions (built on the old idea that everything in the physical world is essentially separate and functions mechanistically) are being reconsidered. No longer a marginal perspective, the Relational Shift is based on the realization that all entities in this world, including humans, are thoroughly relational beings of great complexity who are both composed of and nested within networks of creative, dynamic interrelationships. As we try to grasp the interrelated nature of reality, emergent relational approaches are already transforming the way we educate our children, attend to our health, green our communities, and rethink economic activity.

West, Geoffrey. **The Surprising Math of Cities and Corporations**. (Google TED, authors name, and title keywords to access)

The physicist and philosopher, past president of Santa Fe Institute, extols in this July 2011, Edinburgh, video presentation, the remarkable findings of research teams he has mentored and contributed to over the past 15 years. In the 1990s West joined with ecologists James Brown and Brian Enquist in an

endeavor to quantify within creaturely anatomy and physiology from mice to elephants, and biota from leaves to a forest, a pervasive recurrence of the same pattern and process. One study example was metabolic rate. This project met with much success (search names on Natural Genesis) so that West extended the effort in the 2000s with Luis Bettencourt, Deborah Strumsky, Jose Lobo, and other colleagues to human settlements and commercial institutions. The talk is mainly on this aspect, but covers the whole expanse over many orders of magnitude from microbes to a metropolis.

A significant difference then arises. While flora and fauna are seen as “sublinear,” i.e., metabolisms slow down from voles to whales, for villages to megacities, energy usages, and all such activities, become “superlinear” as they increase with urban size and density. But notably, as we know, business companies hold to the sublinear range. The bigger they get, the more moribund bureaucracy sets in.

As a result of this scenario, “generic universal principles” of nested network geometries that repeat with fractal-like self-similarity become robustly evident. What accrues is an historic discovery of a constant, iterative recurrence, as if from a mathematical source, across nature and culture. Galileo and Teilhard would say tell me about it. Geoffrey West, of British birth, brings to mind William Blake: “To see a *world* in a grain of sand, And a heaven in a *wild flower*, Hold infinity in the palm of your hand, And eternity in an hour.”

“The same principles, the same dynamics, the same organization is at work in all of these, including us, and it can scale over a range of 100 million in size. And that is one of the main reasons life is so resilient and robust -- scalability.”

Wilson, David Sloan. **The Human Major Transition in Relation to Symbolic Behaviour, including Language, Imagination, and Spirituality.** Henshilwood, Christopher and Francesco d’Errico, eds. *Homo Symbolicus: The Dawn of Language, Imagination and Spirituality.* Amsterdam: Johns Benjamins, 2011.

Due by year’s end are these Proceedings from a 2009 Templeton Foundation conference, fittingly held in Cape Town, which included a visit to the Blombos Cave excavation. Invited scholars were Justin Barrett, Alison Brooks, Benoît Dubreuil, Francesco d’Errico, William McGrew, Paul Mellars, Paul Pettitt, Sue Savage-Rumbaugh, F. LeRon Shults, Lynette Wadley, and David Sloan Wilson. (A Google search of title

and editor words will retrieve both the original Templeton site, and the publisher’s posting with table of contents and chapter abstracts.)

Our focus is Chapter 7 by Wilson “The Human Major Transition in Relation to Symbolic Behaviour, including Language, Imagination, and Spirituality.” Here is the paper’s extensive Abstract, which stands as a helpful survey of cooperative evolution.

“Human evolution can be described in terms of three C’s: Cognition, Culture, and Cooperation. Cognition includes the capacity for symbolic thought that lies at the heart of both language and spirituality. Culture includes the capacity to transmit information, both horizontally and vertically, leading to cumulative behavioural change and rapid adaptation to local environments. Cooperation includes the capacity to engage in prosocial behaviours far beyond one’s circle of genealogical relatives and narrow reciprocators. The three C’s all have precursors in nonhuman species, but they are vastly elaborated in our species. In what sequence did the 3 C’s of human evolution arise and how are they related to each other? A commonly invoked scenario is that the first step was the evolution of advanced cognition, often called “theory of mind,” which enabled widespread cooperation and culture.

More recently, a consensus is forming around a second scenario. The first step in human evolution was a major evolutionary transition, which enabled within group cooperation to take place much more strongly than before. The major transition took place without a prior advance in cognitive ability and was a pre-requisite for the advanced forms of human cognition that we associate with language, symbolic thought, and spirituality. The entire package of traits that make humans so distinctive are forms of teamwork that require interactions among trustworthy social partners. The first C to evolve was cooperation and the other two C’s are forms of cooperation.”

American Teilhard Association, Thomas Berry, and Journey of the Universe Websites

At the new ATA site www.teilharddechardin.org can be found a Biography, List of Writings, Pictures and Quotes, Life Timeline, ATA Events, Teilhard Studies with first page, recent full Teilhard Perspectives, Membership info, Links, and a Brian Swimme interview on Teilhard.

The Thomas Berry site www.thomasberry.org offers a Biography by Mary Evelyn Tucker, a John Grim essay: "Time, History, Historians in Thomas Berry's Vision," Writings by Thomas Berry, comments on his *The Great Work*, Films about or inspired by, and a List of Books.

A new site www.journeyoftheuniverse.org introduces this title film, book and educational series by Brian Swimme, Mary Evelyn Tucker, John Grim, and an advisory board to carry forward in multimedia fashion the inspiration of Pierre Teilhard and Thomas Berry.

Teilhard Perspective

TEILHARD PERSPECTIVE is published by the American Teilhard Association, a non-profit organization whose goals are to explore philosophical, scientific, religious, social and environmental concerns in light of Teilhard's vision and to clarify the role of the human phenomenon in this emerging understanding of the cosmos.

We welcome suggestions of relevant ideas, books, news, events and contributions of articles for this newsletter. The editor is Arthur Fabel, email artfabel@crocker.com. The *Teilhard Perspective* newsletter along with the biannual *Teilhard Studies* pamphlet and Annual Meeting notices are available through membership. Please contact us at: American Teilhard Association, c/o John Grim, 29 Spoke Drive, Woodbridge, CT 06525. Annual membership is \$35.

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