

TEILHARD PERSPECTIVE

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Unique Conferences Inspired by Teilhard's Vision



Science & Religion 2005

Teilhard, Evolution & Global Spirituality
Palacky University, Olomouc, Czech Republic
October 14 – 15, 2005

A good example of a growing worldwide interest in a genesis cosmos of which human persons are emergent, co-creator participants could be this remarkable gathering. Held in a historic city some 200 miles east of Prague, home of cathedrals, parks and Mozart, it exemplified in a new century and millennium a rapport and juncture of past and future.

The conference was organized by the Center for Dialogue between Science & Religion (Centrum VAN) of Cyril-Methodius Theological Faculty of Palacky University, (Univertiza Palackého) within the framework of a research project: Global Perspectives on Science & Spirituality, a program directed from the Université Interdisciplinaire de Paris and Elon University, NC, USA. Funding was provided by the Templeton Foundation. Its tireless organizer was Frantisek (Frank) Mikes, the Director of this Center, a chemist and theologian who was ordained as a priest in 1968 in the Catholic underground during Soviet occupation.

A synopsis of the main presentations is included next. Although listed in English, most were in Czech language. A running translation extended the time of those made in English.



Teilhard's Legacy: Rediscovering Fire

A Conference to Celebrate 50 Years of
Teilhard Scholarship
Chestnut Hill College, Philadelphia, PA
November 17-19, 2005

A similarly grand convocation celebrated the 50th anniversary of the publication of *Le Phenomene Humain* in French by Pierre Teilhard de Chardin, SJ some months after his death in April 1955. This work, coupled with many essays, sets forth Teilhard's synthesis of the Christian God with the theory of evolution. The conference sought to explore and expand upon Teilhard's many facets and contributions, to learn from his approach, and to allow his enthusiasm for synthesis to spark renewed interest and energy for the developing science and religion dialogue.

The whole event occurred due to the vision and equally tireless dedication of Kathleen Duffy, Ph.D., SSJ, professor of physics at Chestnut Hill College. Its sponsors were the American Teilhard Association, Chestnut Hill College, the Metanexus Institute for Religion and Science, and the John Templeton Foundation. This report will review the extensive program, along with abstracts for the keynote presentations. It is planned to reprint abstracts for the many other papers cited here in a subsequent issue of the Perspective.

Annual Meeting Announcement - April, 1, 2006

The 2006 American Teilhard Association Annual Meeting will be held in the Recital Hall of the CUNY Graduate Center, 5th Avenue and 34th Street. The distinguished speaker will be Carl Anthony, a well-known African-American architect, social and environmental activist, who will talk on "Cosmology and Race: A Personal Story." He is presently Deputy Director of Community and Resource Development at the Ford Foundation. His extensive credentials are noted on page 5.

Science and Religion 2005 – Palacky University

CONFERENCE PROGRAM Friday, October 14, 2005

09.00-09.05: Greetings from Prof. **Petr Chalupa**, Th.D., Dean of Cyril-Methodius Theological Faculty, Palacky University.

09.15-10.00: Brief **Introduction to Teilhard's Life and Thought** by Arthur Fabel, former vice-president of the American Teilhard Association, and current editor of the *Teilhard Perspective* newsletter.

10.00-12.30: Ing. **Arthur Fabel**, Hadley, MA, USA, co-editor of *Teilhard in the 21st Century*, editor of *Natural Genesis* website: **Cosmic Genesis in the 21st Century**.

12.30-13.30: Prof. **Lodovico Galleni**, Ph.D., Dept. of Zoology, Università di Pisa, and Science and Theology, Istituto Superiore di Scienze religiose "N. Stenone", Italy: **Pierre Teilhard de Chardin and the Ethics of the Biosphere**.

14.30-17.30: Prof. **Lothar Schafer**, Ph.D., Dept. of Chemistry and Biochemistry, University of Arkansas, Fayetteville, AR, USA: **The Emergence of Consciousness in Quantum Reality and in the Progress of Biological Evolution**.

17.30-18.15: Prof. **François Euvé S.J.**, dean of Centre Sèvres - Facultés jésuites de Paris, 35 bis rue de Sèvres - 75006 Paris: **A Teilhardian Vision of the Human Person: Responsive to an Open Universe**.

18.30-19.30: Stud. **Eva Tálská**, Medical Faculty, Palacky University, Olomouc, and Ing. **Frantisek Mikes**, Ph.D., **Choreographed Tribute to Teilhard with word, music, dance and film**. Art Center of Palacky University.

CONFERENCE PROGRAM Saturday, October 15, 2005

09.00-09.30: Prof. PhDr. **Zlatica Plasienkova**, Ph.D., Department of Philosophy and History of Philosophy, Philosophical Faculty, Comenius University, Bratislava, Slovakia: **A Dynamic Moral as a Source of Teilhardian Spirituality**.

09.30-10.00: Prof. RNDr. **Jan Sokol**, CSc., Fakulta humanitních studií, Univerzita Karlova, Praha: **Teilhard in the Czech Republic, Yesterday and Today**.

10.00-10.30: RNDr. **Magda Konzalova**, CSc., Laboratory of Paleobiology & Paleocology, Institute of Geology, Czech Academy of Science, Prague: **A Contribution to Create an Image of the Oldest Organisms in the History of the Earth**.

10.30-11.00: Prof. PhDr. **Vladimir Smekal**, CSc., Department of Psychology, Faculty of Social Studies, Masaryk University, Brno: **Human Personality: Psychological and Theological Considerations**.

11.15-11.45: P. **Ludmila Javorova**, Gajdos School, Brno-Zidenice & Primary School, Brno - Vinohrady (Former secretary of clandestine Theological Faculty founded by Felix Maria Davidek in years 1964-88): **A Vector of Complex Spirituality**.

11.45-12.15: **Marek Vacha**, Ph.D., Institute of Medical Ethics, Medical Faculty of Masaryk University: **Evolution Thought and its Influence on Christian Spirituality**.

12.15-12.45: Ing. **Eduard Krumpolc**, CSc., Th.D., Department of Systematic Theology, Cyril-Methodius Theological Faculty, Palacky University, Olomouc: **Cosmic Christ in Teilhard's Concept**.

12.45-13.15: Prof. **Ctirad Pospisil**, O.F.M., Th.D., Department of Systematic Theology, Cyril-Methodius Theological Faculty, Palacky University, Olomouc: **Theology of Human Creation and Paleoanthropology**.

14.15-14.45: Prof. **Josef Svoboda**, Ph.D., Plant Ecologist University of Toronto, Mississauga, Canada: **Teilhard de Chardin and Biocosmos**. (read in Czech)

14.45-15.15: Ing. **Frantisek Mikes**, Ph.D., Centrum for Dialog of Science and Religion, Cyril-Methodius Theological Faculty, Palacky University, Olomouc: **Teilhard, Evolution, and Questions of Suffering and Evil**.

A brief introduction to Teilhard was presented within the context set by Frantisek Mikes of a second scripture of the book of nature. As a priest and paleontologist, Teilhard was said to uniquely join in his life and vision a sense of both Creator and creation.

My Cosmic Genesis slide talk discussed how science today appears in between two conceptions of the universe. An older, 20th century materialist version wherein life and people are of no account is being replaced by a conducive organic cosmos from which arises the creative human phenomenon. It was expanded from my Marist College talk in May and is posted on the Natural Genesis website: www.naturalgenesis.net.

Ludovico Galleni, who spoke at the Teilhard 2005 event in New York City, observed that in Teilhard's vision, humankind is central to the economy, activity, and purpose of the universe. An "orthogenetical" view of evolution, similar to Teilhard's, is possible by adding the theories of parallelism and canalization. (A recent paper of his is noted on the Natural Genesis site) Ludovico is also in the process of preparing a *Teilhard Study* on sustainable development, globalization, and peace.

Lothar Shafer, who also spoke at Chestnut Hill, observed that if quantum physics is properly appreciated, rather than just insensate matter, the non-separable, holistic cosmos has mind as its foundation. Random mutations are replaced by a "quantum selection" of wave functions and states. As Teilhard foresaw, consciousness ascends from this transcendent source, along with complexity in evolution, to its human recognition.

As a reflection, I noticed that the "parent and child" image was picked up both at Marist College and Palacky University. The evolving, emerging spirituality that Teilhard evokes does not mean our past heritage of a Divine Creator is to be set aside. But real change seems in the air as the intended phenomenon of human persons may now become co-creators in an unfinished genesis. Much work remains, as my talk tried to broach, to sort out the science of an old and new universe and evolution. The current state of science/religion (Intelligent Design also) dialogue seems more preoccupied with proving a prior God, with little thought to the discovery of a sacred identity and value for this earthly life.

Teilhard's Legacy – Chestnut Hill College

THURSDAY, NOVEMBER 17

Welcome by **Carol Jean Vale, SSJ**, President, Chestnut Hill College

Ursula King - *Spirit of Fire: The Contemporary Significance of Teilhard de Chardin's Life and Vision.*

Abstract: Celebrating fifty years of Teilhard scholarship provides an opportune moment to reassess the significance of Pierre Teilhard de Chardin's life and work as "scientist and seer" (Charles Raven), Christian priest, poet and mystic, and great human being whose legacy may truly be called inspirational. I will highlight the key experiences of his life and some of the seminal ideas of his thought whose importance we are still discovering only gradually. His was a life of passionate engagement with the world, God, and humankind, a life of prayer, passion, action, and service. His thoughts are concerned with complexity-consciousness, creative union, the noosphere, the divine milieu, the convergence of humanity, and the spiritual energy resources available to feed the zest for life. Greatest among these is the power of love whose full development he compared to the "rediscovery of fire."

Ursula King is Professor Emerita in Theology and Religious Studies, University of Bristol, England, and Professorial Research Associate at the Centre for Gender and Religions Research, School of Oriental and African Studies, University of London. She has published many books and articles on religion, gender, spirituality, and on Teilhard de Chardin.

FRIDAY, NOVEMBER 18

Thomas King SJ - Teilhard, Beauty and the Arts

Abstract: Though Teilhard worked and wrote as a scientist and philosopher, he thought the arts might be better able to express what he had to say. His understanding of Beauty was associated with his basic claim that there is a union which differentiates; when this union is present in nature it is seen as beauty, but human work can intensify this beauty. Teilhard has claimed that the arts have a significant role to play in evolution and even saw the arts able to manifest the goal of

American Teilhard Association Website

Thanks to John Grim, we now have a new address for the ATA website: www.teilharddechardin.org. A new format is also under construction where event calendars, Association publications such as this Perspective newsletter and the Teilhard Studies series can be accessed. The site will offer an introduction to Teilhard, along with information on membership.

evolution in a more complete way than science. The talk will bring out a neglected aspect of the thought of Teilhard.

Thomas M. King SJ is Professor of Theology at Georgetown University where he has been teaching courses on Teilhard since 1968. His latest book is *Teilhard's Mass*, published by Paulist Press, 2005.

James Salmon SJ - *Teilhard's Scientific Legacy*

Abstract: Teilhard de Chardin has been called a philosopher, a theologian, and a mystic. On the other hand, he spoke of himself first as a scientist. Ten volumes of his research in scientific journals verify the quality and productivity of his life as a scientist. On the other hand, some serious criticisms of the value of his scientific legacy by other well-known scientists will be reviewed. Probably no concept of Teilhard was subject to greater criticism and derision than his organization of energy during cosmic and biological evolution. Subsequent developments in science seem now to point to the validity, although ambiguous, of his prescient description of energy.

James Salmon SJ is distinguished by a long career in science, engineering and as a professor, along with studies and degrees in philosophy and theology. He was awarded a doctorate in physical chemistry from the University of Pennsylvania and has taught at Loyola College, Johns Hopkins University, and Wheeling Jesuit University, where he was Rector of the Jesuit Community.

John Haught - *Teilhard, Theology and the Suffering of Sentient Life*

Abstract: Darwinian biology has amplified not only our understanding of life's creativity, but also our sense of the enormous amount of pain that has accompanied the life-story on earth. Evolutionary biology itself can make good sense of the selective advantages of sentient life's capacity for suffering. So is there any room left for theological understanding of life's suffering after Darwin? Insights of Teilhard de Chardin may help theology address the fundamental question of why divine creativity would choose an evolutionary route toward bringing about life in the first place, especially in view of the suffering this trajectory entails. Teilhard's thought also spurs theology to deepen its understanding of divine power and love, the relationship of suffering to guilt and expiation, and the meaning and scope of redemption.

John F. Haught is Distinguished Research Professor of Theology at Georgetown University. His most recent book is *Deeper Than Darwin: Evolution and the Question of God*, published by Westview, 2003.

List of Paper Contributors in Alphabetical Order

An example of the great interest in the conference was the large number of presenters, which were grouped in these sessions: Teilhard and Technology, Inspired by Teilhard, Teilhard and Philosophy, Teilhard and Psychology, Teilhard's Thought, Teilhard and Physics, Teilhard and Spirituality, The Poetry of Teilhard, Teilhard and Evolution, Teilhard and Theology, Teilhard and Environmental Consciousness, and Teilhard as Compared to Others.

Stacey E. Ake Dept. of English & Philosophy, Drexel University *The Times of the Signs: Mega-Synergism and the Egocentric Prejudice*

Joseph Bracken, SJ Professor of Philosophy, Xavier University *Teilhard De Chardin, A. N. Whitehead and a Metaphysics of Intersubjectivity*

Jerry Chandler Research Professor, Krasnow Institute for Advanced Study, George Mason University *A Commutative Philosophy for the Natural Sciences.*

Marie A. Conn Professor of Religious Studies, Chestnut Hill College *War as a Locus of Thought: The Influence of World War I on the Later Writings of Pierre Teilhard de Chardin and C. S. Lewis*

William Cranston Emeritus Professor in Civil Engineering, University of Paisley *Teilhard's vision – as seen by others*

Daryl P. Domning Professor of Anatomy, Howard University *Teilhard and Natural Selection: A Missed Opportunity?*

Kathleen Duffy, SSJ Professor of Physics, Chestnut Hill College *Teilhard's Physics Imagery*

Donald Dulchinos Senior Vice President, Advanced Platforms and Services, Cable Television Laboratories *Teilhard and Technology*

Lawrence Fagg Professor of Physics, Catholic University of America *The Role of Nature's Forces in Teilhard's Cosmology*

Rev. Dr. William Falla
Redeemed by Beauty: Teilhard as Poet

Michelle Francl-Donnay Professor of Chemistry, Bryn Mawr College *From Augustine to de Chardin: A Universe That Is Inescapably Sacramental*

Paula Gonzalez, SC
Joining the Evolving Solar Age

Peter Hess St. Mary's College
A Catholic Punctuated Equilibrium: Stages in the Roman Catholic Assimilation of Evolution before Teilhard.

Christina G. Jonker
Teilhard de Chardin

Jerry Josties

A Theological Metaphysics for the Teilhardian Vision - Re-interpreting Physics in Terms of Consciousness

Barbara C. Lonnquist Associate Professor of English, Chestnut Hill College *Flashes of Fire: The "Poetry" of Pierre Teilhard de Chardin, SJ*

Wade Luquet Associate Professor of Sociology, Gwynedd-Mercy College *Union Differentiates: Pierre Teilhard De Chardin's Philosophy Applied to Couples' Relationships*

Farzad Mahootian Director of Sponsored Research, Shepherd University *Wool Spinners, Platonic Anticipations of Teilhard's Textural Cosmos*

Angela Manno *Conscious Evolution: The World At One, Images of Oneness for Prayer and Contemplation*

Bernice Marie-Daly Fairfield University
Worthy of Reverence

Hugh McElwain Professor of Theology, Dominican University *Religion & Science, 50 years later: Comparing The Phenomenon of Man with a Contemporary Work: John Stewart's Evolution's Arrow.*

Jennifer Morgan
Telling the Universe Story

Michael A. Norko Associate Clinical Professor of Psychology, Yale University School of Medicine
M. Div. Candidate, Yale Divinity School
Teilhard's Evolutionary Hope for Humanity

Dave Pruett Dept. of Mathematics & Statistics, James Madison University *At the Dawn of the Third "Copernican" Revolution: Perspectives from Teilhard*

Marion Ragsdale Montessori: Development & Training, Inc.
Teilhard and Maria Montessori

John L. Randall Professor of Therapeutics, St. Matthew's University *Time Consciousness in the Cosmology of Teilhard*

Dominic Roberti
Entropy, Evolution, and Teilhard's Omega Point

John Ryan State University of New York, Stony Brook
Teilhard's Truth

Louis M. Savary
From Alpha to Omega: Teilhard's View of Human Destiny and Its Implications for Contemporary Spirituality

Gloria L. Schaab, SSJ
Assistant Professor of Theology, Barry University
Illuminating Key Concepts in the Evolutionary Theology of Arthur Peacocke through Teilhardian Insights

Lothar Schäfer E. Wertheim distinguished Professor of Chemistry, University of Arkansas
Quantum Reality as a Basis of the Vision of Teilhard de Chardin and of a New View of Biological Evolution.

Thomas P. Sheahan
Simple Analogies of Increasing Complexity that Illustrate the Pathway of Teilhard de Chardin

Antal E. Solyom Professor of Medical Education, Center for Biomedical Ethics, University of Virginia
Bioethics and Teilhard

Eric Steinhart Professor of Philosophy, William Paterson University *Cosmology and the Evolution of Computation*

Ernie Tamminga Stillpoint: The Center for Christian Spirituality *Playing with Fire: The Noosphere, the "Privileged Axis" and the Cult of the End-Times*

Donald Wayne Viney Professor of Philosophy, Pittsburg State University *Le Philosophe malgré l'Église: Teilhard, Science, and Religion*

Charles L. Zeiders Clinical Director, Christian Counseling and Therapy Associates of the Main Line Post Doctoral Fellow, University of Pennsylvania *Tenets of Christian Holism for Psychotherapeutic Treatment*

Georg Ziselsberger SVD DeLaSalle University *Towards an Ecumenical and Inter-religious Spirituality for a Humane Globalization*

The Spiritual Ecology of Teilhard de Chardin (1881-1955) at the Half-Centenary of His Death

At the large annual meeting of the American Academy of Religion, just after the Chestnut Hill conference in Philadelphia, a panel presentation with the above title, sponsored by the AAR Christian Spirituality Group, was held. The abstract is reprinted next.

This panel explores the spiritual ecology of Pierre Teilhard de Chardin (1881-1955), a French Jesuit and paleontologist, who was one of the leading thinkers of the 20th century. Fifty years after his death in New York his spiritual perspective remains relevant. An opening presentation will give a broad overview of his life and thought. The panel will further examine how Teilhard integrated his scientific understanding of evolution with his religious understanding of the 'Spirit of the Earth.' Papers will explore his vision of the human as part of a dynamic unfolding universe as expressed in his classic text, 'The Human Phenomenon.' As an accomplished scientist and as a person of deep religious conviction, Teilhard was himself a pioneer in bridging science and religion in a spiritual ecology. He was a visionary capable of imagining a viable, vibrant, and sustainable future for humans and the planet. The panel had four presenters: John Grim, John Haught, Ursula King, and Mary Evelyn Tucker. John Cobb responded to the papers presented. Over 100 attended in the audience, which was said to be a fine session with good questions from the audience.

International Whitehead Conference

This conference has been brought to my attention by Herman Greene, executive director of the International Process Network (www.processstudies.org), to be held on July 3-6 at Salzburg University. The conference website is: www.uni-salzburg.at/whiteheadconference. What is of especial note is a session on Teilhard and Whitehead, go to Sections – Religions – page 2. Pierre and Alfred North were unique visionary philosophers of the earlier 20th century who conceived in their own way a dynamic cosmic genesis.

Carl Anthony: Annual Meeting Speaker

Carl Anthony is the Deputy Director of the Community and Resource Development Unit at the Ford Foundation. At the same time, he continues to direct the Foundation's Sustainable Metropolitan Communities Initiative and the Regional Equity Demonstration Initiative. Prior to joining the Foundation he was a Convenor and Co-Chair of the San Francisco Bay Area Alliance for Sustainable Development, a multi stake holder collaborative bringing together business leadership, environmental groups, social advocacy groups, labor, faith based organizations, elected and other public officials. He was Founder and was for 12 years, Executive Director of the Urban Habitat Program, which promotes multicultural environmental leadership for socially just communities in the Bay Area. With a colleague, Luke Cole at the California Rural Legal Assistance Foundation, he published and edited the *Race, Poverty and Environment Journal*, the only environmental justice periodical in the country.

From 1991 through 1997, Anthony served as President of Earth Island Institute, an international environmental organization to protect and conserve the global biosphere. Congressman Ron Dellums appointed Carl Anthony Chair and Principal Administrative Officer of the East Bay Conversion and Reinvestment Commission in 1993. The Commission was charged with overseeing a National Pilot Project to guide the closure of 500 military bases in the US, to re-envision the role of the National Laboratories, and to implement the conversion of 5 military bases in Alameda County. He has taught at the Columbia University Graduate School of Architecture and Planning, the University of California Colleges of Environmental Design and Natural Resources. Anthony has a professional degree in architecture from Columbia University.

The Annual Meeting announcement to members will contain this description of Carl Anthony's presentation.

The inner-city, urban landscape provides the context for reflections by this major American intellectual on the nearness of cosmology. Carl Anthony's reading of Thomas Berry's Dream of the Earth expanded his orientation toward his own story. He will share the experience of this reading and discuss the implications for environmental justice and urban development.

Teilhard and Sustainable Development

Bertrand Collomb, the chair of the World Business Council on Sustainable Development, spoke at Teilhard 2005 conference at the United Nations on April 8, 2005 on the need for business to find practices that are ecological and equitable. Here is an edited transcript of his talk.

I am no philosopher, theologian or anthropologist, and I really am not a specialist of Teilhard de Chardin. I am simply a businessman. Yet I find myself here at the United Nations, surprised but very happy and most honored, on this occasion of the fiftieth anniversary of his death, to talk about my views on the importance of the ideas of Teilhard for our world today, on the way in which he prefigured the form of development that we must follow, a form that the business world has been

called on to take part in and which is now known as “sustainable development”.

I discovered Teilhard through reading his books when I was a student reading science. The concepts of thermodynamics, quantum mechanics, theoretical physics, atomic chemistry and modern biology all interested me, as much for their philosophical implications as their scientific content, which was already well beyond anything a young engineer would actually have a chance to put to use. As a Christian, I couldn't accept that there was a gulf, not to say total incoherence, between science and religion. This was why I found Teilhard's ideas absolutely fascinating!

I was attracted by the luminous intuition of Teilhard on the role mankind has played in evolution, which gave a philosophical and religious meaning to what modern science was allowing me to glimpse.

Creating a theory of the growth of complexity and an ascent towards the improbable, reiterating the duty of all men to push back the frontiers of the creative powers of knowledge and action, all of this within the movement which transforms the matter itself into spirit and leads to the unity of the Noosphere: what a heady alternative this was to what was on offer elsewhere... whether it was the materialist hazard of “being and nothingness” or the ultra-cautious “science without a conscience is nothing but ruin of the soul”, a philosophy essay topic for advanced science students favored by French humanities teachers.

I am no longer that student of the nineteen sixties. My career path, which has been largely focused on the problems of companies and management, has not often brought me back into contact with Teilhard's writings. Nonetheless, forty years on, the visionary power of his ideas strikes me afresh. Not only because of everything that he predicted involving the importance of the atom, automatic calculation, communications networks or the possibilities of biological action. But because we see unfolding under our very eyes the reality of the Noosphere, this power of the mind.

We are living this evolution, with all its opportunities as well as all its difficulties and challenges, as I have myself done through my professional experience, at the head of a company that has undergone globalization, expanding into seventy-five countries and so taking part in the construction of networks that bring people together and contribute to the creation of a collective consciousness.

We do not call this reality the development of the Noosphere, or the ascension towards the Omega Point, but we do call it the quest for a world that is more and more cohesive, and which is called upon to save both the planet and the human species at the same time. This is what is known as “sustainable development”, a phrase that is so much in fashion that it sometimes loses its bite, but which delineates clearly the responsible behavior of mankind fulfilling its destiny.

Rather than pronounce a long discourse, I would like to illustrate my ideas by a few examples drawn from the solid experience of my company, on the emergence of commonality in the global world and the problems of stewardship that it requires us to confront. For over twenty-five years I have taken part in the global development of a building materials company. Nothing could be less exotic or less high-tech (even though technological progress in the field is far from

negligible!) than this sector that is so close to basic human needs – a roof, safe, nice-looking – a business that is strongly rooted in local reality and uses natural resources in the form of rock, energy and ores.

But even in these very local businesses, globalization has made an impact. With it, opportunities and problems have changed, not only in terms of size, but also in their very nature. Thirty years ago in our sector, a local business was successful when a motivated and competent team using familiar technology was capable of adapting well to the realities of products, customers and local markets. Back then, training people properly as managers and then giving them the maximum possible initiative was the formula for success.

But the model has greatly changed; we now have a much more collective, more integrated model. Nowadays, the key to success is being able to get different managers to network together so that they can at any moment compare their performance, talk about their problems, transfer their best practices and create new ones. A sort of collective consciousness is now at work. It would be impossible for it to exist without resources for exchange, transport and communication. The use of the Internet or a company intranet has become a basic corporate asset. But technical resources are not enough; we now also require network nodes, facilitators and community rituals.

Based on this approach, the main challenge has become how to get this community to function the most efficiently. Rather than the traditional technical or managerial problems, cultural problems are now vital. Accepting and recognizing diversity, drawing on its wealth of creativity and initiative at the same time as getting the network to function and keeping the community going is now a basic objective. This is indeed a weaving of the quasi-biological links that Teilhard foresaw.

In another field I have been directly confronted with the problem of the human impact on the world and with the necessity of a form of world organization, something that made Teilhard an enthusiastic supporter of the United Nations Organization, our host today. The field in question is the environment, which demonstrates the extent to which perception and organization of the world has changed.

For example, our company has for many years been faced with local environmental problems: the presence of quarries in certain areas, industrial pollution and nuisances, waste recycling, the impact of construction and town planning. But it is only in the last thirty years that it has also had to worry about global environmental problems, involving natural resources, energy, CO₂ emissions, and so on.

The importance for us of the carbon dioxide issue led me to take part in the Rio de Janeiro conference of 1992. The debate in Rio was really that of the advent of human control of the evolution of the planet. The various reactions to it were extremely diverse and highly interesting. In the NGO village, the “fringe” conference, there were those who called for adoration of the goddess Earth, against any interference with the balance of nature. Others, in a form of convergence that was startling, were highly alarmed by a Promethean temptation, in which saw the human role as the great engineer of the universe, rather than in the hands of the Creator. They had the backing of the “realists”, who, citing scientific uncertainty, refused to take action which is tough, with goals

and issues that are hard to define, and above all which upsets their short-term interests.

Nonetheless, on the question of the greenhouse effect and a few other topics of global importance, common positions gradually appeared, which later led to the Kyoto treaty which has been recently ratified. Of course, ten years later, we have to admit that the good intentions have not always been followed by actions, and that the difficulty of carrying out anything on an international scale remains considerable.

But what a huge change in thinking! Nobody, well, almost nobody, would any longer question the existence of the problem of global warming, nor the part that humans have played in it, nor the necessity for collective action. Some countries and regions such as Europe have decided to enact tangible, stringent measures, which are accepted politically.

Other countries, such as the United States, still refuse to do this, claiming that they will treat the problem through technological innovation rather than by changing consumer behavior. But the United States administration has nonetheless decided to spend many funds researching the subject. And I believe that it is almost certain that in 10 to 15 years, the United States will form part of broader-based international action in this area.

The urgency of the problem and the time needed for us to get going and organize the necessary global action tends to discourage us. But seen from a Teilhardian standpoint, what does a mere twenty-five years represent in the entire history of humanity? Beyond the problem of global warming, humankind is forced to acknowledge that our activity creates new risks for the planet, such as the risk of nuclear destruction, loss of biodiversity and the disappearance of natural resources that are vital to humankind's existence.

For the first time in history of the world, we must therefore become a conscious player in its collective destiny on a planetary scale. The topic of sustainable development which has emerged since Rio and continues to take on increasing importance, is a manifestation of this growth of consciousness. But we are not only seeing, or rather taking part in, the protection of the environment and the planet, we are also taking part in a rapprochement of people, while at the same time having to meet the challenges that are born of it.

The experience of companies shows us the intensity of relationships that emerge and the links that they create. For example, my own company Lafarge, does not limit itself to producing and selling building materials worldwide. It also brings together men and women from very diverse countries, cultures and religions, by creating contact with its own values and culture and also by integrating into this culture elements from other countries. This broadening of horizons, sharing of experience and greater closeness imply to me that a rapprochement is taking place eventually leading to the global humanity, to the "ultra-human" that Teilhard talked about.

At the same time, never have differences of circumstances or future outlook been felt so deeply. The market economy model is now the dominant one, mainly because it appears to be the one which has been the least dysfunctional. Over the last few decades, it appears to have made progress possible for a fairly large slice of mankind. But it is strongly attacked, particularly because not everyone has benefited from it

equally and some social categories, indeed some countries, have been completely passed by.

Presumably, such criticisms are themselves the recognition of a far greater commonality and a better mutual knowledge of each other. Perhaps expectations of progress and rapprochement have been much greater than those actually allowed for in reality, and it is in comparison to this inferred model of supportive globalization that the current organization of the world is actually being criticized. Nonetheless, I personally have the feeling that rapprochement is continuing, fed specifically by the development of information.

Some sociologists strongly disagree with this optimistic vision. They have observed that the development of communication or of contact between different groups of people does not necessarily produce rapprochement and may actually exacerbate cultural conflict. But the existence of these cleavages does not mean that no collective consciousness is emerging. We see it in our professional and economic universe. It is present in the areas of sport and in the music culture of young people. When billions of people all witness global events at the same time on CNN or Al Jazeera and emotional crowd reactions control the actions of politicians, the importance of the change taking place cannot be underestimated.

The mechanisms that will allow this community of humankind to organize the control it has acquired over its destiny are clearly only embryonic and faltering at this stage. Their very nature is the subject of debate. Some place their trust, above all, in market forces and therefore expect an evolution that will have no pre-determined direction, and will be chaotic and unpredictable, whereas others are looking for a new determinism, pursuing clearly defined and collectively acceptable goals. Discussion between these two different points of view has barely begun, and reconciliation seems difficult. But is not this contradiction itself extremely Teilhardian in nature?

I must now conclude and I should like to turn back to the somewhat naive enthusiasm that I had as a young student for the ideas, the intuitions, the epic yet mystical panorama that I found in the work of Teilhard. The strength of these ideas moved me and brought together contradictory aspirations and experiences. Forty years on, leading a major company through the adventure of international development, means I am perhaps a little less naïve; I still don't understand the complexity of Teilhardian thought in all its details, but I have seen that his vision helps me more than ever to deal optimistically with a world that is so complex and so difficult.

All of this forms part of the Teilhardian vision of humanity on the move. But Teilhard adds to it the cohesiveness of the material and spiritual, of matter and mind. Going beyond the separation of genres in "Render unto Caesar the things that are Caesar's" or the uninspiring description of *devoir d'état* (respect the state) that forms part of traditional Roman Catholic doctrine, Teilhard offers the far more exalted and motivating prospect of being a co-creator of the world, in a unique mixture of Promethean ambition and total Christian humility. And I believe that it is this vision that makes Teilhard de Chardin a guide and source of inspiration for our twenty-first century.

Ecotheology: The Journal of Religion, Nature and the Environment

This journal from England is edited by the theologian and Teilhard scholar Celia Deane-Drummond. The first two issues of Volume 10 are dedicated to Teilhard on the occasion of the 50th anniversary of his passing on Easter Sunday 1955. The editor's email is: C.Deane-Drummond@chester.ac.uk. We reprint from its website (via Google) the abstracts of the papers in each issue. The Yale Divinity School library carries this journal.

Ecotheology: the Journal of Religion, Nature and the Environment focuses on the nexus of interrelationships between religion and nature, particularly in the light of environmental and ecological concerns. It welcomes articles that are either from a theological perspective, including those from within a particular religious tradition, or from a religious studies perspective. The journal seeks to locate such discussion in the context of a multidisciplinary approach, including, for example, historical, philosophical, ecofeminist, sociological or anthropological analysis where relevant. It also seeks to include articles that stimulate discussion across different fields, such as that between science and religion, or ethics and policy making. In addition, the journal welcomes pieces that are of a more practical nature for the unrefereed Lifestyle section, or Conference Proceedings section, that serve to raise important issues for subsequent theoretical debate. The journal publishes reviews.

Volume 10, No. 1. April 2005

Exploring Teilhard's 'New Mysticism': 'Building the Cosmos.' *James W. Skehan, SJ*

This paper is an approach to Teilhard de Chardin's thought that links the spiritual with the material in a mysticism of 'communion with God through Earth'. Teilhard de Chardin (1881–1955) was a French Jesuit priest, paleontologist-geologist and mystic. Major influences that shaped his personal, religious and academic life, his thought and spirituality include: Teilhard's interactions with extended family and friends, his Jesuit colleagues, World War II soldiers and fellow scholars. His personal influence and writings played a significant role in discussions of science and religion in the twentieth century. The growing attractiveness and availability of his written works and commentaries suggest that his influence may become much greater in the twenty-first century as the lived implications for personal spirituality become better known and understood. Aspects of Teilhard's thought have been reflected in documents of Vatican Council II and in favorable commentary on his thought by distinguished theologian, Henri Cardinal de Lubac. I believe that his lifelong practice of the Spiritual Exercises of Ignatius Loyola, Founder of the Jesuits, himself a mystic, exerted a most powerful influence on Teilhard's spirituality and thought.

Newman and Teilhard: The Challenge of the Christian Eastern Fathers. *Siôn Cowell*

Teilhard greatly admired Newman for whom the Eastern Fathers had been his first masters. Teilhard himself was nourished on the ideas of the Fathers, especially the Greek-speaking Fathers, many of whom are present throughout his writings like Irenæus of Lyon, Origen of Alexandria, this man with an 'extraordinary cosmic consciousness,' or the Cappadocian Fathers, Gregory of Nyssa and Gregory of Nazianzus. Faithful to the vision of the Cosmic Christ in St Paul and St John, Teilhard was inspired by the evolutionary perspective of the Eastern Fathers. He was always aware of continuing their ideas within the framework of a universe in movement towards its final consummation in the Universal Christ. In this respect we think it important to stress that Teilhard's reflection on the divinisation of the cosmos, the doctrine of original sin or apophatic theology, a theology that is practically unknown to the majority of western Christians today, comes very close in its broad approach to that of many contemporary Orthodox theologians. Teilhard was equally aware of the need to summon a 'New Nicæa,' a new ecumenical council to define 'the cosmic face of the Incarnation.' He feared that we were about to see a renewal of 'the great conflicts of arianism' in an evolutionary cosmos. Finally, Teilhard invites us to return to the roots of our faith—going through Newman and the Eastern Fathers—to allow us to advance together towards the reconciliation of the eastern and western churches so that the 'one holy catholic and apostolic Church' might 'breathe again with its two lungs,' according to Pope John Paul II's much-loved metaphor. We have much to do...

One Planet, One Spirit: Searching for an Ecologically Balanced Spirituality. *Ursula King*

This special issue of *Ecotheology* on Pierre Teilhard de Chardin provides a suitable setting for discussing the contemporary search for an ecologically balanced spirituality. From early on in his scientific career, Teilhard was conscious of the emergence of human evolution within the larger setting of cosmic and planetary evolution, and the closely interwoven relationships of the entire web of life were an integral part of his scientific, religious and mystical insights. The emerging spirituality of an unfolding noosphere is intimately connected with the co-evolution and convergence of our biological, mental and social environments. I will examine the important theme of a newly evolving ecological spirituality from four different perspectives: (1) our new consciousness of one planet; (2) the connections between ecology, spirituality, and the world as a whole; (3) the ecological re-visioning of spirituality through recognizing the mutual embeddedness of the biosphere and noosphere; (4) the resources of our global spiritual heritage for an ecologically balanced spirituality.

Teilhard and the Environment. *Thomas M. King, SJ*

Many people concerned with the environment have taken an interest in the writings of Pierre Teilhard de Chardin (1881–1955): Al Gore has quoted him in this context and short passages of Teilhard's writings have served as mottos for conferences on the ecology. At the same time, other environmentally concerned people have expressed strong

reservations. Teilhard worked as both a priest and geologist doing extensive research on the geology of Asia; he was much involved with the fossils known as Peking Man. His scientific writings are collected in ten volumes and his religious-philosophic writings are collected in thirteen; ten volumes of his letters have been published. This essay will try to explain Teilhard's basic concern with the earth and the two processes he found in it: evolution and entropy. He favored the first over the second.

Teilhard: A Mystical Survivor! *Diarmuid O'Murchù*

Teilhard de Chardin was a seminal figure of twentieth century spirituality. His Christ-centred evolutionary vision inspired new strands like that of Creation-Spirituality and the New Cosmology. While cherished by scholars for his scientific-theological synthesis, his enduring impact belongs to a wider spiritual landscape. He has helped to inspire a new wave of mysticism, celebrating the integration of creation and spirituality, a synthesis that resonates strongly with spiritual seekers of our time.

Volume 10, No. 2. August 2005

An Overview of Teilhard's Commitment to 'Seeing' as Expressed in his Phenomenology, Metaphysics, and Mysticism. *John A. Grim and Mary Evelyn Tucker*

Using Teilhard's emphasis on 'seeing' this article explores Teilhard de Chardin's articulation of a vision of evolution as a dynamic process in which the psychic character of physical matter evolves into ever-greater complexity and consciousness. Teilhard proposed that evolutionary complexity-consciousness is especially evident in the appearance of humans. This work considers the significance of complexity-consciousness for Teilhard as an emergent property of a matter-spirit dialectic. This article investigates Teilhard's commitment to seeing drawing on his phenomenology of an involution of matter, a metaphysics of union with spirit, and a mysticism of centration of person. Finally, there are brief considerations of the contributions and limits of Teilhard's thought in light of contemporary issues.

Cosmic Communion: A Contemporary Reflection on the Eucharistic Vision of Teilhard de Chardin. *Mary Grey*

One of the most poetic expressions of Teilhard de Chardin's Christic mysticism is found in his Mass on the World, and other eucharistic texts. But of what value could they be today, given their over-optimistic tone, in a world where the very future of the earth is at stake? In a context where his work is frequently set aside, by emphasizing the role of the Holy Spirit, this article tries to reclaim Père Teilhard's eucharistic vision as part of a contemporary movement of reconversion to the earth and the dedication to ecological justice of the Christian community.

The Exploitation of Nature and Teilhard's Ecotheology of Love. *Robert Faricy*

Although Pierre Teilhard de Chardin, the Jesuit priest and paleontologist, died in 1955, long before the word 'ecotheology' existed, he has in his writings an ecotheology in

substance if not in name. He overcomes the humanity versus nature dichotomy present in contemporary culture. In his theology he closes the gap between nature and humanity that permits and encourages us to exploit nature, the gap that nurtures the ecological problem of our exploitation of the earth to our own and the earth's detriment. Teilhard develops a theory of convergent evolution. Evolution now takes place mainly in humankind and it takes the form of socialization, of growth in human organization and in human consciousness. Within the framework of his theory of evolution, Teilhard de Chardin works out a theology of Jesus Christ, a Christology, that has at its heart an ecotheology of love.

Teilhard de Chardin's Engagement with the Relationship between Science and Theology in Light of Discussions about Environmental Ethics.

Ludovico Galleni and Francesco Scalfari

Pierre Teilhard de Chardin was among the most outstanding palaeontologists of the twentieth century. He was also a Jesuit whose task was to bring to the Church the novelty of the modern world. This novelty was evolution, the irreversible change in time characterized by a movement toward complexity and consciousness. Teilhard de Chardin proposed a research programme that would provide evidence for this increasing complexity in the animal evolution of canalizations and parallelisms. The most important of these was the move toward cerebralisation observed in various phyla. In order to investigate the mechanisms, he proposed biology as the science of the complexity of life, and geobiology as the science of the evolving biosphere. Teilhard de Chardin developed a synthesis with theology where humankind carried forward evolution with convergence towards the Omega point, the moment of the parousia of Christ. This eschatological perspective was strictly related to the survival of Earth, which itself allowed the emergence of humanity. At this point the preservation of the biosphere acquires all of its ethical value as it is the means to reach the eschatological task of the parousia of Christ. Finally, the relationship between the biosphere and the noosphere is suggested by the concept of symbiosis. In this way, the model of Teilhard de Chardin is a model of continuing exchange between science and theology with a reciprocal enrichment providing, among the many aspects, a new vision of the relationships between humankind and the biosphere.

Sophia, Mary and the Eternal Feminine in Pierre Teilhard de Chardin and Sergei Bulgakov. *Celia Deane-Drummond*

This paper explores the relationship between Mary, Sophia and the Eternal Feminine in the writings of Pierre Teilhard de Chardin and Sergei Bulgakov. It argues that Teilhard's poem to the Eternal Feminine is a meditation on the Virgin Mary and reflected his own dedication to her. While Teilhard's attention to wisdom is veiled and somewhat restricted, it flowers in the theology of Bulgakov, who finds in Mary the expression of perfected creaturely Sophia. Both authors have a high place for Mary and her cosmic significance, though this is muted somewhat in Teilhard's account by his strong attention to cosmic Christology. While Mary and nature have long been associated in the Christian tradition, a Sophianic interpretation of her importance allows for an ecological

reading of Mary's significance that goes beyond the interpretation of both Teilhard and Bulgakov.

Our Environmental Responsibilities in Light of Contemporary Cosmology: A Teilhardian Retrospect

Richard W. Kropf

The grand, sweeping picture of the evolutionary process envisioned by the Jesuit paleontologist Pierre Teilhard de Chardin and his belief in the emergence of an 'ultra-humanity', that both summarizes as well as transcends the limitations of the strictly biological realm, has profound implications for humanity's relationship to its environment. This article will proceed by means of two major stages. First, there will be a review of the advancement of cosmological and planetary science as it contextually impacts Teilhard's views regarding the future of human evolution. This will be followed by, second, an extrapolation, from Teilhard's analysis of the developmental choices that face the human race in its social, political, and economic development, what these choices might mean for our environmental responsibilities and humanity's hopes for its future.

The Treasure Within

Mary Southard, CSJ

"What gives you hope?" people frequently ask today. Some years ago at a lecture Thomas Berry was asked what gives him hope; what one thing could change the world? His reply was, "Women." Period. Moments of stunned silence...

Let's rev up our imaginations a bit. Picture what the world would be like today if women had been equal partners with men for the last 5000 years, or even 2000 years...continuing in the spirit of Jesus. What would be different today? Would there have been wars? Crusades? Witch burnings? How would medicine be practiced? How would science have developed? And technology? And the social organization of Church and secular worlds? How would we pray?

The masculine and feminine energies are the "image of God," two creative forces present in the universe from the beginning which, when working together create wholeness.

The feminine energy is inclusive, contemplative, caring, compassionate, attuned to relationships, to the inner dimensions of life, to the interconnections of the Whole. The feminine is attuned even, and especially, to the smallest and weakest among us. The feminine is a wisdom and spirit that is present in all of us, but which has been suppressed in women and almost totally crushed in men.

Masculine energy on the other hand is more external, action orientated, has the ability to separate, isolate, define, categorize, and analyze. We can see how this enabled the development of western science and technology, but without the balancing influence of the feminine for the last 100 centuries, it has brought about a terrible condition of domination.

It was comforting to read in my rather antique edition of Webster that Patriarchy is "a stage of social development characterized by the supremacy of the father of the clan." Whew! This is a "stage" we have been going through, likened by thinkers today to "male adolescence." Under patriarchy,

humans "at the top" have seized power over Earth and other humans. How God must be holding God's breath! It seems such a simple realization, that under Patriarchy, we have been working with less than half our "wits," having suppressed the other (feminine) half.

Human actions and choices now are a deciding factor in the spiritual and ecological future of our entire planet. "All creation groans and is in travail..." In the evolutionary story of Earth, this is our moment as a human species. Other species had their moments of crisis; this is ours! And we have within us what is required to bring about life instead of death.

We know that there were times of masculine/feminine partnership earlier in our human story. During the Neolithic period the interaction of masculine and feminine shaped rich cultures of great creativity that lived in harmony among themselves and with the natural world.

These lasted until recent times, when they were colonized and unraveled by "civilization." Jesus lived the feminine values amidst the patriarchy of his day, and in early Christian communities, the equal participation of women continued for the first couple of centuries – until the marriage of Christianity and the Empire. Even then culture and spirituality flourished in the remote lands of early Celtic Christianity, and again in Christian Europe after the "Dark Ages" (c1000-1300), enabled by the greater influence and presence of women.

This is not about who gets the power now, or what's "wrong" with men or Patriarchy, or even about centuries of tremendous violence inflicted on women, children, and Earth – that continues to this day. It is about the fate of our Planet, and the fullness and magnificence of life to which we are called as humans – the release of human wisdom and capacities which have been held hostage by a patriarchal world.

This treasure, the full and conscious resurgence of the divine feminine energy in our time, is already with us, both men and women! Let the divine feminine energy be "unburied," unwrapped, set free, worn openly as a garment; painted, sung and danced, delighted in, cherished, and practiced in all our relationships, so that our human psyche and our Earth can be restored to wholeness.

This article is reprinted with permission from the newsletter Spiritearth: Contemplation, Reflection, and Justice for the Ecozoic Era. Spiritearth is a center and network founded by Mary Southard and John Surette, SJ. Their website is: www.spiritearthnet.org. Mary Southard is an inspired artist whose work appears on the Ministry of the Arts website.

Dictionary of Teilhard de Chardin's Works

We are pleased to make a preview announcement of this compendium prepared by Fabio Mantovani, former president of the Italian Teilhard Association. It should appear in Italian in early 2006. Over 400 pages, it seeks to collect and annotate in one place all of Teilhard's copious works. His email is: noosfera27@alice.it. To quote from an email from Fabio:

200 of Teilhard's writings are presented in chronological order. Each of them is exhaustively summarized in clear language, chapter by chapter, paragraph by paragraph, as a capsule of the original text. I made cross references and short comments, when necessary. A "General Thematic Index"

makes possible the immediate retrieval of all essays related to a specific item (for example, Original Sin) according to the dates he wrote them.

Modern scientific and philosophical debate on the origin of the universe turns around Chance / Design. Those who believe in a divine Design "need" Teilhard's vision. I hope that he will be re-discovered under the pressure of finding out a coherent and large scenery for the world in which we live.

A Complementarity of Cultures Teilhard, Senghor and Africa

Arthur Fabel

At a Teilhard 2005 convocation at the United Nations in April, Jeffery Sachs, director of the Earth Institute at Columbia University, spoke on Millennium Development Goals for eliminating world poverty, especially as they apply to the continent of Africa. So much could be done such as inexpensive mosquito nets to prevent disease in rural villages, if nations, including the laggard United States, would step up. These UN sessions were notable because their tacit basis was a felt need for a globally unified humankind, a spiritually based sustainability, if we are to move forward. Wangari Maathai, the Kenyan environmentalist and 2004 Nobel Peace Prize recipient, later spoke of how the survival of the Earth and of all her peoples was in the balance.

But the long litany of Third World necessities is not likely to be met. Billions in aid continue to go to waste. One reason might be the absence of a distinct, salutary African philosophy and cosmology. This brief review will revisit the writings from the 1960's of the Senegalese statesman, scholar and poet Leopold Senghor, which might serve a 21st century synthesis for this purpose. Senghor was educated both in Dakar and at French universities, where he read, among others, Hegel and Marx. His project was to meld their dialectic views with precolonial native tradition. But of especial interest is that to him the only European thinker with an African mind and vision was Teilhard de Chardin.

For some observers, academic African philosophy seems divided between articulating its own distinct indigenous worldview or to assimilate Western schools. (The references cite authors and collections in this regard.) Although considered a leading forerunner, Senghor's synthesis is seen as problematic for he tried to evoke a mythic, communal, animate milieu, which he averred was feminine in kind. Some critics feel this approach is inferior to modern analytical logic, a step backward. Others argue he engaged too much of this arid rationality. So a viable vision is not forthcoming and discord goes on. A promising new volume which speaks highly of Senghor is *Africa's Quest for a Philosophy of Decolonization*¹ by the Ethiopian/American scholar Messay Kebede, who writes: *Decolonization is primarily a philosophical problem, given that the emancipation of the African mind from the debilitating ascendancy of the Western episteme is its inaugural moment.* (xii)

Leopold Senghor clearly knew his task and set up a contrast between European thought and an African essence from Sudanese to Bantu cultures. A materialism reigns in the "developed" countries whose moribund cosmos excludes

creative life forces. Individualist capitalism or totalitarian communism prevailed as polar opposites. Senghor rejected these options, while recognizing the benefits of modern technology. Traditional Africa can be distinguished by an essential, indigenous wisdom, which surely predates, that is fecund, relational, and dynamically alive with numinous energies. But his unique contribution was to propose a *complementarity* between South and North.

Another recent work in this regard is *Philosophy for Africa*² by the University of Cape Town professor Augustine Shutte, who sees Senghor as its best representative: *Like all African philosophers he recognizes certain ideas as fundamental to traditional African wisdom: that reality is force and the world a process of interplay between forces, that humanity is part of this universal field of force, that at bottom all force is alive, spiritual rather than material, that the individual's life and fulfillment are only to be found in community with others, that morality is the development of natural tendencies to fuller being and more abundant life, and finally that all human life and world process is directed and empowered by a transcendent origin of life and force.* (26) *Of all European thinkers who use this (dialectic) method Teilhard de Chardin, Senghor feels, comes closest to establishing a philosophical system that incorporates African insights.* (26)

Senghor's own voice is available in English in the book *African Socialism*³ which contains an extensive discussion of Teilhard, and in various articles. *But it is Teilhard who proposes the most coherent theory concerning the nature and role of love in socialization, founded, as always, on the facts of experience. Starting from the law of complexification-consciousness, he shows us that progress in life is linked to "centricity:" to the union, center to center, of corpuscles and beings. For centers contain the maximum of psyche or spiritual energy...What would be the use of human activity – political, economic, social, cultural revolutions – what would be the use of well-being if it did not lead to that maximum-being that we feel in Love-Union.* (AS 146) An article in the South African journal *Optima*,⁴ continues: *It was on the basis of these discoveries, through a combination of logical coherence and amazing intuition, of scientific experiment and inner experiment, that Pierre Teilhard de Chardin was able to transcend the traditional dichotomies with a new dialectic, to reveal to us the living, throbbing unity of the universe.* (3)

Senghor goes on to make a crucial synthesis that has not been properly appreciated. South and North, Africa and Europe, are not in opposition, rather they are reciprocal halves of a complete "civilization of the universal." "Socialism" is meant as a middle course between particulate person and collective group, a balance of reductive parsing and holistic integration. Kebede lately reaches the same conclusion, whereby only a "complementarity of myth and rationality" can provide a palliative African cosmos which affirms their own vital heritage, while open to discursive reason.

A strong case has indeed been made for an original African matriarchal culture, later overrun and destroyed by an imperialist patriarchy. Such a contrast is stated by the West African philosopher Cheikh Anta Diop,⁵ and recently by Ifi Amadiume,⁶ now chair of African Studies at Dartmouth. Gender complements, not in polar conflict but in a Yin/Yang balance, might then further serve to distinguish a primordial

Southern wisdom and solidarity. A patriarchal rule presently dominates rural areas, as evident in domestic violence and child marriages. Until women are empowered once again to an equal place and voice, Africa will remain beset by calamity.

At this point some Teilhardians propose some 40 years on that a glimpse of a cosmological basis for such a natural mutuality and community could be at hand. The idea that civilizations can complement each other, rather than inevitably clash, would be of much value today. The 20th century (Northern) pointless, mechanical universe, indifferent to life and human, is being superseded by a cosmic biological genesis. Of interest is a novel understanding of its spontaneous vitality, an incarnate “within of things.” Matter, seen as no longer inert or inanimate, possesses a deep propensity to self-organize into an emergent nest of microbes, cells, organisms, cooperative societies, and a living biosphere. And this organic development is found to be achieved by a reciprocity of free entities and relational interaction, agency and communion, read masculine and feminine principle, at each stage and instance. The Natural Genesis website, www.naturalgenesis.net, contains much documentation in support of this perspective. A newly published book, *The Complementary Nature*, also makes this case and point.⁷

These constant roles are found to occur even on an international scale, as the website section Complementarity of Civilizations reports. If seen as a worldwide cognitive noosphere, racial south and north, with Teilhard, along with political and religious east and west, can appear as bicameral hemispheres. And Islam lies at their intersect in both cases, a corpus callosum-like link whose beliefs are in fact seen as a composite of each mode.

Senghor and other writers such as Diop and Molefi Kete Asante go on to cite the historic significance of Africa as the original Kemetic (Egyptian) source from which arose Greek and Continental cultures. If we might extend the brain analogy, during human cerebral maturation the spatial right side, seat of emotions, develops first, followed by the fine focus, analytical, left brain. The elusive goal in adulthood is an accord of both anima and animus modes. This same sequence might then be noticed, as a recurrence of complexity and consciousness, on a planetary basis. Instead of an earlier “primitive” African worldview to be set aside, a psychologically sane earth, which we surely do not have, requires just such a synthesis of both archetypal realms.

We finally return to an initial concern for a revived Africana by way of a sustainable, just, humane society. This was Senghor’s ultimate aim. For two decades as the president of Senegal he sought to restore a communal structure in disarray after the colonial period. To again draw on 21st century science, a real benefit can accrue from an evolutionary genesis which repeats the same modular symbiosis of component entity and unitary whole, individual and group, at each nested stage. A prime example is how nucleated cells arose from diverse, semi-autonomous bacteria. Rather than global vs. local, an intentional webwork of egalitarian, sustainable communities is prescribed, a subsequent manifestation of the principle of “creative union.” For many centuries, writes Senghor, African social fabric was composed of “persons in community,” an extended family whose integral accord ensured personal welfare. “It takes a village” is an African

phrase. From a nascent rediscovery of a universal while complementary pattern and process, one and two, a practical, living philosophy might be gained. (Please also see the Sustainable Ecovillages section)

Of course this writer is aware there are awful realities on the ground, such as rogue militia in Darfur, internecine religious strife, despotism, and so on. A colonial detritus of warlords, corruption, weapons proliferation, brutal oppression of women, coupled with stressed environments, wastes aid monies and good intentions. This exercise has tried to gather some strands and resources in search of a pathway to heal and reinhabit, as Thomas Berry would say, not only Africa but a critically poised, whole earth in much need of a complementary harmony.

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A previous article on Teilhard and Senghor was written by Thomas and Margaret Melady and published in The Catholic World journal, circa 1969. Independently, Ludovico Galleni, biologist and Teilhard scholar, University of Pisa, mentioned to me that he thought Senghor's philosophy to be of much value but at present of unappreciated importance. A website of interest is Shift in Action, sponsored by the Institute of Noetic Sciences, www.shiftnaction.com, where you can click on Belvie Rooks to access conversations on the Frontiers of Race, Cosmology and Consciousness with Barbara Holmes and Brian Swimme.

Book Reviews

THE KNOWLEDGE GRID.

Zhughe, Hai. Singapore: World Scientific, 2004.

Reviewed by Arthur Fabel.

Hai Zhuge is the chief scientist of the China National Basic Research Program's Semantic Grid Project, and the professor and founder of the China Knowledge Grid Research Group in the Chinese Academy of Sciences. An extensive website can be found, via Google. I am most interested to review this book because the formation of worldwide intelligent, interconnected, useable computer networks, of which Zhuge is a leading innovator, seems to take on the semblance of a global cerebral faculty, a Noosphere. In so doing, it reflects the Jesuit scientist Pierre Teilhard de Chardin's vision of this next stage of a nested evolutionary emergence of complexity and sentience. A 1995 article in the magazine *Wired*, (online, search their site) "A Globe, Clothing Itself with a Brain" by Jennifer Cobb, makes a case for Teilhard as the philosophical father of such a "planetary, Net-based consciousness." Just the fact that two people on opposite sides of the globe can instantly communicate and exchange documents is significant in this regard.

To properly situate and express the work, we begin with a synopsis from the publisher's website:

The Knowledge Grid is an intelligent and sustainable interconnection environment that enables people and machines to effectively capture, publish, share and manage knowledge resources. It also provides appropriate on-demand services to support scientific research, technological innovation, cooperative teamwork, problem solving, and decision making. It incorporates epistemology and ontology to reflect human cognitive characteristics; exploits social, ecological and economic principles; and adopts techniques and standards developed during work toward the future web.

This book presents its methodology, theory, models and applications systematically for the first time.

Six chapters accomplish this task: The Knowledge Grid Methodology, Semantic Link Network, A Resource Space Model, The Single Semantic Image, Knowledge Flow, and Exploring Scale-Free Network.

I will emphasize here the wider social import of this book. What it describes is a typical sequence in technology and systems development. After an initial, unplanned, provisional coming into existence, a more intentional, next-generational phase takes over. For example, Microsoft is in the midst of doing over its Windows version software. Similarly, the limited Internet platforms of the 1990's such as HyperText Markup Language HTML are being superseded by much more capable, dynamic formats. Original network geometries and search engines are in revision to better, faster methods, e.g. Google replaced Alta Vista.

The first chapter presents a conceptual summary of this transition and upgrade. Three main efforts are cited: a better "semantics" to improve web intelligence and service, interlinked grid application matrices and peer-to-peer computing to enable resource sharing in egalitarian, evolving networks. A philosophical survey of epistemology (nature, scope and source of learning), ontology (classify, clarify, identify), some thermodynamics and system methodologies follows. From these insights accrue seven guiding principles for a Knowledge Grid: integrity and uniformity, nested hierarchy, openness, viable systems, innate self-organization, a balance of competition and cooperation, and a tendency to optimize. The seventh principle is sustainable development which *...requires individuals and communities, the interconnection environment and its human-machine interfaces, the human-machine society, and even the natural environment to harmoniously coexist and coevolve.* (21)

A few pages on, these laudable goals are stated:

Intelligence, Grid, peer-to-peer and environment represent humanity's four aspirations for the future working and living environment. The intelligence reflects humanity's pursuit of recognizing themselves and the society. The Grid reflects humanity's pursuit of optimization and system. The peer-to-peer reflects humanity's pursuit of freedom and equality. The environment reflects humanity's pursuit of understanding of nature and its harmony. (27)

By these features, a future world wide knowledge web will provide people everywhere with user-friendly access to the complete repository of human knowledge, to a vast digital library of information and empowerment. The Knowledge Grid so conceived will organically and cognitively grow and adapt to keep up with this continuously expanding resource.

The next four chapters go into technical details of how this is to be carried out. The second and third chapters state the novel ideas, mechanisms and theories of how to locate among semantically interconnected resources by way of the map metaphor and how to organize and operate distributed resources with the *normal forms*. The fourth chapter combines the two approaches to achieve better effect within the *single semantic image*. The fifth chapter describes a knowledge sharing approach via effective flow and spiral. The final chapter, Exploring Scale-Free Network, surveys the newly found tendencies of natural, cognitive and social

systems to form an invariant, viable geometry (see Part IV of my Natural Genesis website, especially the work of Albert-Laszlo Barabasi) and to then show how they are deeply evident in the global computer webwork. Rather than a point-to-point telephone hookup, the Internet is composed of weighted layers of nodes, hubs and synapse-like connections, whereof the same structures repeat at each plane and locale.

We can now return to Teilhard's prescience of the phenomenon of human persons, under compression by spherical Earth, just now converging into a planetary super-organic phase. (As a caveat, by way of nature's recurrent employ of creative union, this emergence is said to liberate and enhance individual freedom and welfare.) For example, in his latest paper Hai Zhuge and his group are able to model the serious 2003 SARS outbreak in Asia.¹ By these capabilities, future epidemics can be predicted, contained and managed, of great value to public health. Another of his papers views the revised, living Web from an ecological perspective – an Eco-Grid based on healthy natural ecosystems.² A third article speaks of its "organic architecture."³

If these attributes are taken altogether, one gets a sense of a local and global physiology, immune system, anatomy, and most of all of the neural networks of a developing, learning brain. The latter attribute has been suggested by many observers such as Tim Berners-Lee, a founder of the World Wide Web. But I have not seen it taken to its full appreciation, which could provide a good working metaphor and model. Natural Genesis, Part VI, especially The Complementary of Civilizations, goes on to broach the presence of East and West, South and North, bicameral hemispheres on this scale.

The basis of this sourcebook website is to then imagine that a composite knowledge might be arising on its own from this worldwide cerebral faculty. As an integral, personal humankind may become a reality, it could provide a salutary common wisdom of which our fragmented, fraught age is in much need. This implication of an encompassing "Knowledge Grid" also seems not yet followed upon and appreciated.

Part II, A Learning Planet, in its Mindkind section, offers many more references for this ramifying Noosphere, of which *The Knowledge Grid* provides an exemplary introduction. Teilhard, and venerable Confucius one might add, would be pleased.

1. Zhuge, Hai. **Exploring an Epidemic in an E-Science Environment.** *Communications of the ACM.* 48/9, 2005.
2. Zhuge, Hai and Xiaoqing Shi. **Toward the Eco-Grid: A Harmoniously Evolved Interconnection Environment.** *Communications of the ACM.* 47/9, 2004.
3. Zhuge, Hai. **The Future Interconnection Environment.** *Computer,* April 2005.

Teilhard and The Future of Humanity

A volume with this title, edited by Thierry Meynard S.J., is to be published in Fall 2006 by Fordham University Press. It will contain papers presented at The Philosophy of Teilhard in the Building of the Future of Humanity conference held at Fordham on April 7, 2005, along with other papers from the

United Nations, as part of the Teilhard 2005 commemorations in New York City. Its tentative contents will be:

Teilhard and Human Spirit

1. Ursula King: *Feeding the Zest for Life: Spiritual Energies Resources for the Future of Humanity*
2. Thomas M. King S.J.: *God and the Human Future*
3. Henri Madelin S.J.: *The Personalization of the Universe*

Teilhard and Ecology

4. Mary-Evelyn Tucker: *Zest for Life: Teilhard's Cosmological Vision*
5. Steven C. Rockefeller: *Teilhard's Vision and the Earth Charter*

Teilhard and Economic Globalization

6. Michel Camdessus: *Globalization and Future of Mankind*
7. Jean Boissonnat: *Teilhard and Globalization*

Teilhard and Science

8. Lothar Schafer: *The Emergence of Consciousness in Biological Evolution and Quantum Reality*
9. Thierry Meynard S.J.: *The Role of Science in Contemporary China and According to Teilhard*

New Books and Articles

Bolen, Jean Shinoda. *Urgent Message from Mother: Gather the Women, Save the World.* Boston: Conari Press, 2005. Not a minute too soon, the beloved Jungian psychologist and author summons the long suppressed feminine wisdom and action. We quote from the publisher's website.

The message to all the women of the world is "Wake Up! Arise! Do not ask for permission to gather the women. What cannot be done by men, or by individual women, can be done by women together. Earth is Home."

Bolen's poetic polemic explores the psychological, spiritual, and scientific aspects of women as collaborators for change. She begins with a Jungian examination of the idea of the Holy Grail archetype as "every woman's secret" and the transformative power of the sacred feminine—the Goddess, Gaia, Earth Mother. She explains that "we learned that women gathering together in groups and telling the truth of their lives can actually change the world."

Chaisson, Eric. *Epic of Evolution.* New York: Columbia University Press, 2006. Chaisson, Eric. Astrophysicist and author Chaisson updates his grand scenario of cosmic development from a singular beginning through particle, galactic, stellar, planetary, chemical, biological, and cultural epochs to our penultimate moment of its self-recognition. If humankind can intentionally achieve a sustainable peace and planet, a radical new Life Era can begin. But as tacitly within the old mechanical model, an imagination of a greater, inherent genesis does not appear. Yet a notable contribution as emergent life, mind and sentient personhood might collectively realize what this creation is about and who we are.

Dalai Lama. *The Universe in a Single Atom.* New York: Morgan Road Books, 2005. A work of such lucidity and focus upon the salutary unity of religion and science, meditation and experiment, along with deep insights into the human condition.

Buddhism is not held to a literal text, so can revise its cosmology based upon scientific findings. Its heart of wisdom is a perception of “Indra’s jeweled net” whence each interconnected atom, person, or galaxy epitomizes, reflects and contains every other. But the modern materialist paradigm does not include its foundational essence of ascendant mind. Since Buddhism also does not have a concept of a “soul” or “original sin,” human beings can be joined with all other entities in a continuum of rising spiritual consciousness. World society today is spherically one but rent by archaic factions and violence. If we would calm the mind to be able to think about what we are doing, a new enlightenment and compassionate peace might dawn.

De Waal, Frans. *Our Inner Ape*. New York: Riverhead Books, 2005. The Emory University primatologist and author explains through example and reflection how much of human behavior is traceable to our simian forebears. In these primate studies, a survival benefit for cooperation is as strong as for competition. A “bipolar” dichotomy is then set up between the peaceful, hedonistic Bonobos, whose extensive female networking keeps males in check, and the truculent Chimpanzees whose societies are beset by male violence within clans, including infanticide, and with other out-group chimps. De Waal draws obvious connections with human mores and proposes a balance between capitalist self-interest and social welfare.

Our societies probably work best if they mimic as closely the small-scale communities of our ancestors. (233)

Euve, Francois, SJ. **Reflexions sur l’anthropologie de Teilhard Chardin**. *Etudes*. May 2005. An article in French by the dean of theology, Centre Sevres, Paris. This is the same venerable “revue of contemporary culture” that published some of Teilhard’s philosophical papers.

Fabel, Arthur. **Teilhard 2005: Retrospects and Prospects**. *European Journal of Science and Theology*. 1/4, 2005. Its abstract can provide an overview.

In this 50th anniversary year of Pierre Teilhard de Chardin’s passing, we first review his life and then his unique synthesis of Christian doctrine with an evolutionary cosmos. In so doing, a 20th century scientific materialism which leads to a pointless universe and evolution is contrasted with new understandings of a cosmic genesis that innately grows in animate complexity, consciousness and spirit, as Teilhard foresaw. Teilhard 2005 conferences at the United Nations are next noted, along with a history of the American Teilhard Association. We conclude with some thoughts on science and religion, and a glimpse of a 21st century Teilhardian vision.

Garreau, Joel. **Radical Evolution**. New York: Doubleday, 2005. A tour of the human future as it may be impacted by revolutionary technologies – genetic, robotic, information, and nanoscale. A range of scenarios are discussed depending on whether such abilities can be employed in the service of a humanely transformed world – Heaven, or if a rampant technology takes over life - Hell. Garreau prefers a third option, based on many interviews, named Prevail where an increasing sanity comes into play. The book is noted because the only visionary thinker who foresaw such a cognitive and spiritual noosphere is said to be Teilhard.

Hazen, Robert. **Genesis: The Scientific Quest for Life’s Origin**. Washington, DC: Joseph Henry Press, 2005. A research astrobiologist at the Carnegie Institute describes how self-organizing chemical matter is being found to spontaneously become biological and cellular. Three scenarios result: life began with metabolism, and genetic molecules were incorporated later; self-replicating molecules came first, and metabolism after; or life began as a cooperative chemical phenomenon arising between metabolism and genetics. The implicit universe which appears throughout the book then takes on the likeness of an intrinsic genesis. Hazen criticizes the Intelligent Design scheme which argues Divine intervention is necessary along the way. Rather life’s oriented emergence suggests a cosmos made from the beginning to evolve into humankind.

Not surprisingly, most origin-of-life investigators favor the view that life is a cosmic imperative and that it is only a matter of time before we figure out how it happened. In this scenario, genesis occurs throughout the universe all the time. (xiv) In the beginning, God set the entire magnificent fabric of the universe into motion. Atoms and stars and cells and consciousness emerged inexorably, as did the intellect to discover laws of nature through a natural process of self-awareness and discovery. In such a universe, scientific study provides a glimpse of creator as well as creation. (80)

Kim, Bok Young. **Teilhard de Chardin and Holistic Education**. Miller, John, et al, eds. *Holistic Learning and Spirituality in Education*. Albany: State University of New York Press, 2005. Teilhard’s spiritually oriented cosmic genesis is seen as similar to Buddhist dependent co-arising and an inspiration for an ecological consciousness.

Kirschner, Mark and John Gerhart. **The Plausibility of Life**. New Haven: Yale University Press, 2005. These senior biologists – Kirschner is chair of Systems Biology at Harvard, Gerhart a professor at the University of California, Berkeley – argue that the standard Darwinian theory is correct but “incomplete.” Blind mutation and selection is not enough to explain how organisms originate and become more complex. Life is “plausible” because of a build-up of “evolvability” via “conserved core processes” that favor viable genotypes increasingly biased by the active behavior of phenotypes (creatures). An inherent propensity for modular body plans and “compartmentalization,” along with topological constraints, adds a further impetus.

When this work is taken together with a growing literature which makes a similar case, such as *Endless Forms Most Beautiful* (Sean Carroll), *Evolution in Four Dimensions* (Eva Jablonka and Marion Lamb), *Developmental Plasticity and Evolution* (Mary Jane West Eberhard), *Evolution and Learning* (Bruce Weber and David Depew, eds.) and others, a major revision and advance in evolutionary theory seems in the air to a new version which begins to look much like an oriented development, an embryogenesis.

Morowitz, Harold, Nicole Schmitz-Moormann and James Salmon, SJ. **Looking Again at Teilhard, Tillich, and Haught**. *Zygon*. 40/3, 2005. We reprint its abstract.

Resolution of the entropy-evolution problem was a significant issue for Pierre Teilhard de Chardin throughout

his scientific career. Although never truly satisfied with his solution, he proposed that all energy must be psychic and contain two components. Tangential energy is related to physical energy. Radial energy in some way accounts for increasing complexity and consciousness in evolution. Analysis of developments in thermodynamics, statistical mechanics, and information theory show that Gibbs free energy contains both calorimetric and noetic components, thus validating Teilhard's intuition.

Shiva, Vandana. **Earth Democracy: Justice, Sustainability, and Peace.** Cambridge, MA: South End Press, 2005. The latest statement by the inveterate physicist, ecologist, activist, editor, and author. For some context, the same week this volume came into the University of Massachusetts library, *The*

contributors are men, who focus on growth, firms, production, and so on. Vandana Shiva offers an alternative, empathic, feminine vision whereof the welfare and enhancement of people, communities and biosphere nature is of paramount value, rather than market forces and profit motives. Dr. Shiva goes on to propose these ten principles for a true Earth Democracy.

1. All species, peoples, and cultures have intrinsic worth.
2. The earth community is a democracy of all life.
3. Diversity in nature and culture must be defended.
4. All beings have a natural right to sustenance.
5. Earth Democracy is based on living economies and economic democracy.
6. Living economies are built on local economies.
7. Earth Democracy is a living democracy.
8. Earth Democracy is based on living cultures.
9. Living cultures are life nourishing.
10. Earth Democracy globalizes peace, care, and compassion.

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's address is (Arthur Fabel) 11 Meadowbrook Dr., Hadley, MA 01035; email: artfabel@crocker.com. The *Teilhard Perspective* newsletter along with the biannual *Teilhard Studies* pamphlet and meeting notices are available through membership. Please contact us at: American Teilhard Association, The Spirituality Institute, Iona College, 715 North Ave., New Rochelle NY 10801. Annual membership is \$35. Our new website address is: **www.teilharddechardin.org**.

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