

The Legacy of ZCRS: Biology and Culture

The last issue of ZCRS Reports featured a sketch of the historical roots and purposes of ZCRS. The intellectual legacy of ZCRS is also rich and, within a main trajectory, varied. In the following article, I deal with some of the most significant scientific concerns that are fundamental to the aims and history of the Center and its antecedent activities, in both the Burhoe and the LSTC traditions that were outlined in the previous issue. The next issue of this newsletter will recount the religious/theological legacy of the Center.

by Philip Hefner

The sciences that pertain to what we now call biocultural evolution have been central to the broad stream of inquiry from which the Zygon Center for Religion and Science emerged. Since certain other groups are also part of this stream (The Institute on Religion in an Age of Science [IRAS] and the Center for the Advanced Study of Religion and Science [CASIRAS]), a concern for these sciences relates the Center to them, as well.

The origins of this focus on biocultural evolution lie in the group of scholars in the American Academy of Arts and Sciences in the 1950s and 1960s who stand at the beginning of the stream of inquiry that I am describing. This group includes Hudson Hoaglund, George Wald, Theodosius Dobzhansky, Alfred Emerson, Erwin Goodenough, Ward Goodenough, John Platt, Anthony F. C. Wallace, Donald T. Campbell, and Ralph Wendell Burhoe. These scholars, and others as well, articulated the significance of these scientific researches in the early issues of *Zygon: Journal of Religion and Science* during the years 1966 and 1967. Between 1967 and 1979, Burhoe wrote six major articles in the journal which constitute a basic program. Since he is one of the two founders of ZCRS, his views are of particular importance for defining this stream of thought. He summarizes it as “one of constructive understandings of religion and advancement of its salvatory functions in the light of the sciences” (*Zygon*, September 1976, p. 265).



Larry L. Greenfield (center), president of the ATS/Midwest, at the group's spring meeting with (left to right) Carol Rausch Albright, Jerome A. Stone, Philip Hefner, and David L. Weddle. See page 9.

Two fundamental challenges arise for this program: to frame scientifically intelligible and credible theses that explain the origin of religion on the one hand, and its function on the other. These challenges point directly to the importance of the sciences that pertain to biocultural evolution. As for the first challenge, it was argued that religion has emerged within the processes of biological evolution, and that it has been selected for by the mechanisms of natural selection. The very processes of evolution that are recognized by the sciences as the matrix of all human existence on planet earth are thus shown to be the matrix of religion, as well.

In order to speak of religion in these terms, culture must be understood, since religion occurs as a phenomenon within human culture. This inquiry, in

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turn, brings us to the evolutionary emergence of the human brain, since culture would be impossible without the brain and its possibilities. Even in the 1960s, in other words, before terms like “sociobiology” and “evolutionary psychology” were formulated, this group of scholars was clear that the sciences of biology, genetics, neurobiology, anthropology, and evolutionary theory were all necessary in order to understand culture and religion. Such thinking was avant garde for the 1960s, both for scientists and for religious studies scholars.

The second challenge, interpreting the function of religion, was more difficult, and was conceptualized with less clarity. Ideas that relate religion to the intense social nature of humans were emphasized, as well as ideas that emphasize the central role of love and moral earnestness in religion. Since love and moral order are essential for human life in complex societies, they were central to the effort to establish a scientifically credible explanation of religion’s function in human culture.

This may explain the strong focus on the biocultural sciences that marks the legacy in which ZCRS exists. It also explains why the Center has “religion” in its name, rather than “theology.” Science, as such, can get a clearer idea of religion than of theology. Further, “theology” is a specifically Christian term, and it is not recognized by all religions as a facet of their existence.

As we now reflect upon the fact of this legacy, I offer some further interpretative comments on how ZCRS continues in its original stream:

- (1) Although the main lines of the early biocultural theorizing continue to be important and viable, they are subject to continual re-thinking in the light of current scientific knowledge. Today, the cognitive sciences, neurosciences, evolutionary psychology, anthropology, and the social sciences provide a richer base of inquiry into the programmatic directions of the founders.
- (2) The scientifically credible discussions of religion are essential, but they must be correlated with the theological understandings of religion that drive the interior life of the religious communities themselves. This represents a cutting-edge for our thinking today. “Insider” and “Outsider” interpretations of religion often stand as antitheses to each other. Religious communities, theologians, and philosophers are also part of the ZCRS legacy, and they face the challenge of moving beyond these antitheses. Our work at the Center will want to move toward a correlation of these two perspectives.

- (3) The conversation between religion and science includes more sciences than those that pertain to biocultural evolution. There is an urgency about these sciences, since they deal directly with human beings, but planet earth is only one segment of the universe and therefore it must be interpreted within the sciences of cosmology, physics, and chemistry. Neither the biocultural realm nor its explanations of religion are credible if they stand in isolation from the other sciences. The original group of scholars that established the ZCRS trajectory included cosmologists and physical scientists like Harlow Shapley, Sanborn Brown, Henry Margenau, and Kirtley Mather. Today, these sciences have spawned

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Moebius

The twisted strip curves out
It curls and curves about
Cut in half and it's a trip
Indivisible moebius strip

=A Moebius mind

Bears feelings

On a slender strip.

It twists and coils

In winds of fear

And bends and turns

On breezes of dismay

One-sided, razor thin

Our topology teeters,

Recoils and shrinks

From the dimensions

Of our lives.

The dimensions of life

Recoil and shrink,

Topology teeters,

One-sided, razor thin,

On breezes of dismay.

It bends and turns

On winds of fear.

It twists and coils

On a slender strip

That bears feelings:

A Moebius mind=

Charles F. Smith



Friday Evening Talks on Religion and Science

The second series of Friday Evening Talks on Religion and Science came to a close on May 5 when David Breed lectured on the topic, "Religions and Science: Is it Time for Repentance?" Breed, a trustee of the Council for a Parliament of the World's Religions, first presented this paper in Cape Town at the World Parliament this past December. Breed is author of *Yoking Science and Religion: The Life and Thought of Ralph Wendell Burhoe*.

The first talk in the series this winter/spring was given in March by Niels Henrik Gregersen (see side-bar). Gregersen, a leading figure in the religion-and-science dialogue, is a theologian at Aarhus University in Denmark.



Peter E. Hodgson

Peter E. Hodgson of Oxford University, England, was the guest speaker in April. A physicist, Hodgson heads the Nuclear Physics Theoretical Group of the Nuclear Particle Physics Laboratory at Oxford. He has written ten books on nuclear physics, 300 research articles, and many popular articles on theology and science. His lecture for this series was "The Christian Source of Science."

Vitor Westhelle (left),
professor of theology at
LSTC, with David Breed



Niels Gregersen (center) joined by (left to right), Paul Ulbrich, Paul Heltne, Hanne Gregersen, and John Albright.

On Friday, March 10, Niels Henrik Gregersen was the featured speaker at the ZCRS sponsored series, Friday Evening Talks on Religion and Science. The following is excerpted from Gregersen's lecture, "Creation of Creativity."

Science attempts to penetrate into the substantive elements and structures of existence in order to *explain* how the world has come to look as it in fact does. By contrast, religion attempts to *clarify* whatever meaning or meaninglessness might be implicit in the medium-size world that we sense and reflect upon in our everyday life. This points to a decisive surplus of the religious perspective in relation to science. The religious elucidation of existence does not content itself with a theoretical solution to a theoretical *riddle* (such as, how did life arise?), but is an inquiry into the inexhaustible *secret* of everyday life. Thus, from a religious vantage point, every morning is a new beginning, a new task, a new secret. The dance of the light in the morning remains a wonder, even if the rising of the sun is sufficiently well explained by the orbits of the planets around the Sun.

Thus, even though science and religion have overlapping points of interest, they are by no means co-extensive. Each perspective transcends the other in different ways, and these differences should not be concealed. Scientific and religious statements belong to two different contexts of discourse and therefore cannot, and should not, be written together in an overarching synthesis. Nonetheless, I believe that nature's capacity for self-development can be fully appreciated in a theological perspective. I shall argue that in the light of the manner in which God's creativity is depicted in the Biblical traditions of divine blessing, one would expect that the world looks very much like it actually does from the perspective of science. Indeed, we seem to live in a world which seemingly has been programmed for displaying ever new configurations of order. Correspondingly, God is depicted as continuously creating the world by supporting and stimulating the self-productivity of God's own creatures.



The Epic of Creation

The eleventh time around—400 students—still going strong!

When the Epic of Creation Lecture Series was launched in 1990, no one (not even its designer and director, Tom Gilbert) really expected that it would be going strong into the next millennium. But here we are, in the year 2000, with the series consisting of 22 lectures, two each on Monday evenings during the Winter quarter, attracting some of its largest audiences. More than 750 persons have attended in this decade—nearly 400 for academic credit. Whereas the registered students come mainly from Hyde Park's five seminaries and the University of Chicago, other interested persons are drawn from the entire metropolitan Chicago area. And, the series will be offered again next Winter.

Here are the numbers from this 11th time around: 22 students were registered for credit (13 from LSTC, four from McCormick Theological Seminary, two each from Catholic Theological Union and Meadville-Lombard Theological School, and one from the Divinity School of the University of Chicago). The average attendance at the lectures was 60 people.

The Epic presents two stories: the scientific story of creation as told by scientists who are themselves among the many authors of the story, and the biblical story of creation as told by biblical scholars (together with ac-

counts of the Egyptian, Mesopotamian, Babylonian, and Greco-Roman cultures that contributed to the cultural milieu in which the biblical story took form). Theologians present their interpretations of these two stories in the last six lectures.

The motif of the Epic of Creation is the quest for meaning, which may be viewed as our endeavors to answer questions that stem from the existential questions of how we should live (what choices we should make in the innumerable situations we encounter in which we must choose between the alternative courses of action), why (why we should choose one particular alternative rather than others), and how the world works (causal relations between events and what the consequences of our choices are likely to be). These questions are "existential" in the sense that everyone, regardless of culture or religion, must address them in order to continue living. The first two questions are moral/religious questions for which Christians find guidance in the biblical story. The third question is a scientific question for which we can find guidance in the scientific story. Interpreting the stories in a way that reveals this guidance and the relationship of the stories is a theological task.

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Chicago Summer Workshop

June 23-27, 2000

This year's Chicago Advanced Summer Workshop theme is: *Evidence for Design: Finding New Ground for Dialogue between Religion and Science*.

Workshop speakers and their presentations include:

- Dr. Ghulam-Haider Aasi
Inter-Faith Workshop
- Dr. Ian Barbour
Concepts of Design in Evolution
- Dr. Owen Gingerich
Dare a Scientist Believe in Design?
- Dr. Philip Hefner
Created Co-Creator as Testimony to Design
- Dr. Mary Hunt
Designer Theology: A Feminist Perspective
- Dr. James Moore
Process as Design: Theology and Evolution
- Dr. Gayle Woloshak
Harmony in Creation: Unity and Diversity

In addition to individual presentations by the speakers, a poster session is planned in which this year's course award winners will have an opportunity to highlight their winning courses. Several students, winners of a student paper competition, will also be participating in the workshop, and sessions on course materials and teaching are planned. A field trip to Argonne National Laboratories is scheduled and dinner out in popular "Greek Town" is also on the agenda. Prior to the workshop, a one-day inter-faith dialogue is planned—the results of which will be reported on by Dr. Ghulam-Haider Aasi.

The workshop will be held at the Ramada Inn Lakeshore, five miles south of the Chicago "Loop" on the shores of Lake Michigan.

Sponsored by the CTNS Science and Religion Course Program, the Advanced Summer Workshop is supported by a grant from the John Templeton Foundation.

For more information, please contact:

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When viewed in this way, it is clear that religion and science are not independent human activities (non-overlapping magisteria, to use Stephen J. Gould's words) as some scholars have claimed: they are interlinked, complementary human activities. Each of the three existential questions requires answers to the other questions. The choices we make and reasons for our choices would be irrelevant if we had no knowledge of the different consequences of different choices, and gaining knowledge of causal relationships would be no more than an entertaining but irrelevant game if we had no answer to the moral/religious questions.

The Epic course syllabus is undergoing final revisions needed to bring it to the stage that a contract for publication can be signed. Two publishers have expressed a strong interest. We expect to complete the necessary revisions by the end of the year.

Conversation sessions, held before each Monday night lecture session, in which students registered for credit have an opportunity to meet with the lecturers, ask questions, and hear their views on matters not covered in the lectures, were continued. This year a new activity was initiated: an electronic seminar in which stu-

dents and a few of the lecturers continued discussions on the Internet of the various issues and questions that arose from reflection on and interpretations of the stories, at times other than scheduled class sessions.^q

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theories of thermodynamics, the origins of life, the "anthropic" principle, and constructions of a cosmic "evolutionary epic" that must be elaborated and related to thinking about biocultural evolution.

- (4) Practical issues of policy and ethics, as well of spirituality, arise from our scientific theological inquiries. Since these are the primary interests of many of the people who participate in our activities, we also have a challenge to correlate them with our scientific and theological inquiries. Ethics in particular has been a strong element of the trajectory I have described here, for several reasons: (a) since evolutionary theories often focus on behavior, ethics comes to the fore; and (b) since religion is viewed in terms of its impact on the culture as a whole, attention is naturally given to the ethical issues which are critical for the culture at any given time.^q

ZCRS and Mahidol University continue cooperative efforts

Conference planned for Bangkok, Thailand

The Zygon Center for Religion and Science recently welcomed several visitors from Mahidol University in Bangkok, Thailand. Mahidol, a science-oriented university, has a long history with ZCRS and the Lutheran School of Theology at Chicago.



(Left to right) Philip Hefner, Dr. Oraphan, James Nelson, Dr. Pornchai, Dr. Pinit, and Mark Thomsen.

Dr. Pinit Ratanakul, director of the Center for Religious Studies at Mahidol, visited the Center accompanied by Dr. Pornchai, former dean of the Faculty of Science and now the new president of Mahidol, and Dr. Oraphan, an immunologist and dean of the Faculty of Pharmacy. The purpose of their visit was to discuss continued cooperation between ZCRS and Mahidol. Tentative plans include an international conference on religion and science in Bangkok in December 2000.

Representing ZCRS and the Lutheran School of Theology at the meeting were Philip Hefner, Mark Thomsen (director of graduate studies at LSTC), and James Nelson (professor at North Park University and book review editor of *Zygon: Journal of Religion and Science*).



Ursula Goodenough is a cell biologist at Washington University, St. Louis, Missouri. She has served as president of both the Cell Biology Society of America and the Institute on Religion in an Age of Science (IRAS). The following is excerpted from her article by the same name to be published in Zygon: Journal of Religion and Science, September 2000.

RELIGIOPOIESIS

by Ursula Goodenough

Since the publication of *The Sacred Depths of Nature*, I have had opportunities to present the core concepts of religious naturalism in numerous venues: bookstores, colleges and medical schools, museums, youth groups, adult-ed groups and sermons in churches and synagogues, women's forums, writers' workshops. I have also received numerous letters and emails from readers.

Of particular interest to me is the response of fellow scientists. Many have expressed appreciation and gratitude. But many have also expressed incredulity: How did I have the "nerve" to write such a book? How did I "dare" to wander into the topic of religion? Wasn't I concerned, in so "exposing" myself, that I would lose respect as a professional scientist? Didn't I worry that I might not get my grants funded or my papers published?

THE THEOLOGICAL RECONSTRUCTION/RELIGIOPOIESIS SPECTRUM

To most outsiders, and therefore to most scientists, the religion/science dialogue is perceived as a venture in what academic theologians refer to as theological reconstruction: a new insight about the nature of the universe is encountered through scientific inquiry, and adherents of traditional religious faiths then work to find ways to incorporate that understanding into the canon. This cycle of challenge and response, ongoing now for several millennia, has yielded religious traditions that are selected for their resiliency quite as much as for the potency of their Myth. A conspicuous sector of the present-day dialogue continues in this vein. Scientists are to my mind correct in regarding theological reconstruction as outside their ken, since it requires a deep and nuanced knowledge of the histories and trajectories of particular faiths that most scientists—with notable exceptions—have not begun to master.

In a second kind of venture, the scientific understanding of Nature serves as the starting point and its religious potential is then explored. John Dewey, Teilhard de Chardin, and Julian Huxley are among those who have made important early contributions here. A key stimulus for carrying such a project into present times is the transformation that has occurred in the nature of the scientific story itself. Whereas science has, until recently, been segregated into discrete sectors of knowledge—Newton's laws, thermodynamics, Mendelian genetics—there has emerged in the past 50 years or so a coherent cosmology, fully as integrated as Genesis 1, that yields important insights into our nature, our history, and our constraints and possibilities. The second project, which can be called religiopoiesis, takes this story and works with it.

I regard *The Sacred Depths of Nature* as a contribution to present-day religiopoiesis. I stress the word *contribution*. As developed more fully below, no one person constructs a religion. But it is also the case that unless individual persons are encouraged—exhorted!—to offer contributions, there will be no "stuff" available to cohere into new religious orientations in future times.

THE PERILS AND OPPORTUNITIES OF RELIGIOPOIESIS

The poiesis part of religiopoiesis comes from the Greek *poiein*, to make or craft, the same root as poetry. Religiopoiesis, then, is the crafting of religion. The phrase "crafting religion" is in fact deeply problematic—for at least two reasons.



First, many of us have been raised to understand that religious tenets come to humankind via blinding-light revelations, either to great/divine persons in ancient times or to mentally unstable/maniacal persons in modern times, and we feel no identification with either group. “What, me, articulate a religion? You gotta be kidding!” We become embarrassed, uneasy, even talking about the idea. Indeed, to many it can seem blasphemous.

The second problem is that religion is many different things—text, response, ritual, ideology, morality—and most of these topics have not been deeply considered by persons who have devoted their intellectual lives to understanding and contributing to the scientific worldview. An honest response would be “Religion? Don’t know a thing about it. Stopped going when I was eleven.” A more common response is “Religion? What a lot of balderdash! I like the Gregorian chants and all that but the rest is baloney.” Neither of these responses is likely to generate enthusiasm for engaging in the project.

Counterbalancing these difficulties are the opportunities presented by a religiopoiesis project in our times.

Whereas folk wisdom holds that religious cosmologies derive from blinding-light revelation, historians of religion tell us that most are in fact the product of the interaction of cultural traditions and approaches: *e.g.* a story from Mesopotamia is combined with a story from Persia and modified to be coherent with Hebraic tradition. In this respect, the fashioning of our scientific cosmology has been an analogous process. We can attribute key insights to various persons—quantum theory to Bohr, evolution to Darwin, regulated gene expression to Monod—but we all know that these are incomplete attributions, that the “revelations” experienced by these men emerged from a vast cumulation of understandings.

By the same token, the crafting of religious responses to the scientific worldview can, indeed must, be a collective and dynamic project. There are huge domains of knowledge to be considered, and there are millennia of religious quests to be explored, quests that articulate what persons seek in their religious experience. Indeed, it is the collective nature of the project that can serve to deconstruct our uneasiness about engaging in it: no one person is setting himself or herself up as the Guru; we’re all responding from our own perspectives, offering rather than professing.

THE DUALITY WITHIN RELIGIPOIESIS

Granted that religions are complex, we can recognize two poles, and an intervening spectrum, in any religiopoiesis project.

The first pole can be called theology. A theologian, trained in philosophical discourse, uses this rubric to talk about ultimacy: What is the meaning of meaning? How do we know that we know? What are we talking about when we speak of purpose or evil or destiny? These intellectual questions may strike some as sterile and uninteresting, but for others they represent the core of religious life.

Scientists may argue that they lack the philosophical training to engage in such dialogue, but I disagree. Our training has honed our ability to analyze empirical data and understandings, make deductions therefrom, and integrate disparate modes of reasoning. We have much to contribute here, and if our language sounds different from theological language, this may not be such a bad thing.

The second pole can be called spirituality. It is accorded romantic adjectives: emotional, intuitive, poetic, mystical. It explores how we feel when we apprehend a cosmology—religious responses such as hope or fear or fellowship or compassion. The new cosmology invites spiritual responses as well. How does an understanding of biological evolution inform our understanding of empathy? community? gratitude? death? How do we deal with its vast nihilistic underbelly?

Theological/spiritual dualities, and their many intergradations, are inherent in all religions and are seminal to religiopoiesis. It is the integration of the theology and the spirituality that forms the matrix of a viable religious orientation: the theology alone is dry as dust; the spirituality alone is self-absorbed, even autistic. Indeed, one of the important insights from contemporary neurobiology is that these distinctions are at least partially false: without an

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Paul Ulbrich reports on the annual AAAS meeting

INSIGHTS and OBSERVATIONS

In a series of observations and comments, ZCRS visiting fellow Paul Ulbrich, a specialist in emergency medicine, shares his impressions from the recent meeting of the American Association for the Advancement of Science in Washington, D.C., February 10–14, 2000.

1 Religion and Theology at the AAAS Meeting?

The question has been asked, why did I go to the annual meeting of the American Association for the Advancement of Science if I am interested in understanding the science and religion dialogue? The presumption seemed to be that I might get some science there, but certainly no religion or theology, and that the AAAS has nothing to do with religion and theology.

I would say, on the contrary, that there was more religion and theology at this AAAS meeting than most meetings that are devoted explicitly to a theology-and-science agenda. The name of the organization is important: the American Association for the Advancement of Science, not Esoterically Presented Science only for the Scientists. The AAAS agenda is clearly directed at the advance of scientific knowledge not only for scientists but also for other institutions and individuals in our society as well.

2 The President's Address

Steven J. Gould's presidential address was directed entirely toward science's relationship with the humanities and religion. A celebrated paleontologist from Harvard, Gould presented the relationship as one in which science needed, in a previous era, to get away from its "parents" (by which he refers to the restrictiveness of the religious orthodoxy) and in typical teen-age development, become independent. He portrayed science as now having grown up and needing to "make up with the parents." Using Mark Twain's often-quoted wisdom of how smart his parents have become since he was a teen, Gould suggested that the more he matures the smarter those "religious parents" appear to be!

3 Evolution Debate

If teaching evolution in our schools is a religious issue, then the insights into the pertinent history are certainly relevant. Historians of science like Edward Larson (history and philosophy of science, University of Georgia) gave us some history of this debate. Of course, there were also scientific presentations, such as the one by Tim White (biology, University of California at Berkeley) on the current interpretations of the evolution of hominids, the nearest ancestors to humans.

4 Ethical Problems and the Scientific Facts

Theology and religion carry out their moral and ethical functions responsibly by knowing what exists in the world and how it works. There was plenty of basic information to be had on ethical and moral problems that are of concern to our religious institutions. Presentations were made on global warming, our ability to feed the world's future populations, contraception, environmental problems, cyber terrorism to name a few. These problems are not simply problems to be solved by scientists and engineers. Feeding the future world's population, even with large increases in genetic engineered plants, raises even wider more complex social issues. For example, it was pointed out that even the best genetic engineering will not provide food if we continue destroying our essential topsoil. Such issues need to be addressed and discussed by all concerned, including religious communities.

5 Biology and Moral Behavior

E. O. Wilson (an eminent entomologist and one of the "founders" of sociobiology) was honored at a symposium on the occasion of the 25th anniversary of his monumental book, *Sociobiology*. On February 20, his talk, "The Relation Between Biology and the Humanities," started off a day of discussions moderated by the philosopher Michael Ruse and biologist Francisco Ayala. The day included presentations like Terry Deacon's on Co-evolution of Social and Neurodevelopmental Adaptations (Deacon is a lecturer in the ZCRS Epic of Creation series). It finished with a presentation by theologian Philip Hefner, "Understanding Religion: The Challenge of E. O. Wilson," and an open discussion with Wilson of the complex issues in generating ethical proposals. One came away with an increased appreciation of the dependence of science and theology upon each other in making coherent credible moral proposals.

6 Entitlements and Census

Kenneth Prewitt of the U. S. Census Bureau explained the implications of accurate population count for the distribution of entitlement funds, which are considerable portions of the U. S. national budget.

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Center NEWS

Dr. Paul Ulbrich, emergency medicine specialist and visiting scholar at ZCRS, taught a 3-day practicum on drugs at the Lutheran School of Theology at Chicago, February 11–13, 2000. Entitled “What Everyone Should Know About Drugs,” the practicum emphasized the clergy’s role in pharmacology.

Dr. Ingrid Shafer, University of Science and Arts of Oklahoma, is the ZCRS webmaster. Visit the website at www.zygoncenter.org for more information about the Center and see a pictorial essay of the Parliament of the World’s Religions held in Cape Town, South Africa this past December.

In February, ZCRS welcomed **Lea F. Schweitz** to its staff. Lea is a graduate student at the University of Chicago and will receive her M.A. degree from the Divinity School in June. She will continue on in the Ph.D. program studying philosophy of religion. At ZCRS, Lea has primary responsibility for coordinating



New at ZCRS, Lea F. Schweitz

this year’s CTNS Science and Religion Course Program’s Advanced Summer Workshop in Chicago.

In March, **Lea Schweitz** presented a paper at the Midwest AAR Regional Meeting held at

DePaul University (Chicago). Her paper was entitled *Naturalized Epistemology, Super-Naturalized Metaphysics?*

Representing ZCRS at the European Society for the Study of Science and Theology (ESSSAT) meetings in Lyon, France (April 12–15) were **Philip Hefner**, and **Carol and John Albright**.

The spring meeting of the **American Theological Society** (Midwest Division) was hosted by ZCRS at the Lutheran School of Theology at Chicago on April 28, 2000. Featured speakers at the day-long meeting included **Anna Case-Winters** (McCormick Theological Seminary), **Thomas Gilbert** (LSTC and ZCRS), **Zachary Hayes** (Catholic Theological Union), **Jerome Stone** (William Rainey Harper College), **Philip Hefner** (LSTC and ZCRS), and **Larry Greenfield** (Martin

Marty Center and president of the Midwest ATS).

Carol Rausch Albright, ZCRS visiting scholar, was elected Executive Committee Member-at-Large.



William Irons

William Irons (Professor of Anthropology at Northwestern University) is currently leading the ZCRS **Advanced Seminar in Religion and Science** at the Lutheran School of Theology at Chicago. This year’s seminar, *The Evolutionary Foundation of Morality and Religion*, explores the question of what science can tell us about the origin and nature of morality and religion.

Why I Don’t Believe in Miracles, a theological essay by **Philip Hefner**, appeared in a recent issue of *Newsweek* magazine (May 1, 2000).

Connie Hanson, ZCRS executive coordinator since August 1998, will leave the Center at the end of June. Her husband is awaiting call in the Evangelical Lutheran Church in America.

Paul Ulbrich, MD, continues to coordinate the weekly Science and Religion Lunches on Fridays at noon in the President’s Dining Room at LSTC. Please call ZCRS for more information.

Thomas Gilbert, director of the Epic of Creation Project, has been awarded a \$2,000 Development Grant from the CTNS/

Templeton Foundation Science and Religion Course Program. Gilbert, who was for over 30 years a physicist at Argonne National Laboratory, and now is adjunct professor for religion and science at LSTC, received the award in recognition of his work on the Epic of Creation lecture series, and for the purpose of developing further educational offerings in this field. The Templeton Foundation recognized Gilbert and the Epic of Creation series five years ago with a \$10,000 award for excellence.



Thomas Gilbert



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emotional or intuitive component, theological/philosophical issues may have no meaning to the thinker in the sense that s/he will not be able to assign value or importance to alternative outcomes.

METAPHOR

Our scientific facts come to us as facts—DNA sequences, Hubble images, extinctions—but our understandings—scientific, theological, and spiritual—come to us as metaphors, either the metaphor systems we call language and mathematics or the metaphors we call the arts. The richness of our metaphors indicates the depth of our understanding.

I have been told that to say that the life of Christ is a metaphor for how we can best love is to commit a heresy, that one can speak reverently of Christ only by professing full belief in the claims made for him by the authors of Christianity. I am coming to understand that this view, in fact, can itself also be considered a heresy. Christ has always been about metaphor, Christianity has always been about the symbol systems inherent in its texts and art and ritual, and this can be said as well for all religions worth our attention. To be sure, billions of persons have been warned that if they fail to regard religious metaphors as inviolate they will fail to receive the rewards of faith, but those engaging in religiopoiesis can bypass these injunctions and approach the metaphors for their inherent value, for what they tell us about how and why people value what they do. Here we have in a sense come full circle, for we began by saying that theological constructionism also works with the traditional religions. In a religiopoiesis project, however, we are informed but not constrained by previous interpretations. We can ask the traditions to speak to us yet again, in whole new contexts.

Perhaps the most important act in the process of religiopoiesis, then, is to open ourselves to metaphors, those in our traditional religions, those in the poetry and art of past and present times, and those that emerge from our articulation of scientific understandings. The goal is not strict intellectual coherence, any more than the goal of a poem is to fit in seamlessly with all other poems. The goal is to come up with such a rich tapestry of meaning that we have no choice but to believe in it. This is, to my mind, the urgent project before us all.^q

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7 Pleasant Surprises

Some literature has hinted that one does not find women practicing mathematics. Jennifer Tour Chayes, a director at Microsoft's mathematical and physical theory center, certainly makes that stereotype difficult to maintain. In her presentations, "what makes hard problems hard," she made difficult mathematical approaches somewhat understandable even for those of us who are not mathematicians.

8 Politics

In a major public address, Madeleine Albright, U.S. Secretary of State, expressed appreciation for scientific understanding in international diplomacy, and she underscored the urgent need to enhance such understanding. Peace treaties are often only as good as the scientific technical expertise that can back up the resolution of the problems that the treaties are designed to deal with. There were other presentations on weapons of mass destruction and scientific responsibility.

9 Socializing

The Templeton Foundation and the AAAS Program of Dialogue between Science and Religion hosted an informal reception where one could meet many of the interested participants in the science and religion discussion. This hospitality included the opportunity to hear and talk with a Nobel laureate, Dr. Charles Townes, at a dinner that honored the recipients of the Templeton Awards for the Best Books in Religion and Science.

10 Medicine

David Holtgrave, Director of the Center for Disease Control's division of HIV/AIDS prevention, presented strategies for reducing risk factors for acquiring AIDS. One of the more effective interventions was spreading stories of role models that the community can identify with. They sound very much like religious stories. One can only wonder what impacts the religious communities and their stories could be shown to have, if they were studied carefully.

11 Conclusion

So, quite the opposite from those who would think that the AAAS meeting had nothing to do with religion and theology, I think AAAS meeting provided a tremendous exchange between the sciences, religion and theology. The sessions I attended showed how religion and science can be responsibly open to each other and also inform a wider audience of their understandings that can benefit us all.^q



Zygon

Journal of
RELIGION & SCIENCE

A preview of the June issue...

The “many worlds” of the June Zygon

It is becoming clearer every day that there are “many worlds” on the interface of science and religion. An adequate map of the territory along this interface will need not only to locate the different worlds, but also to identify the specific character, motives, and aims of the people who inhabit each world. Even though no one, not even *Zygon*, can undertake such a map, we do attempt to remain in touch with several of these worlds and to publish work that they produce. Our readers can then attempt their own maps, filling in from other sources what we leave out. For the most part, the thinkers in each world are ignorant of what goes on in the others; quite often each world is inclined to believe that the others are on the wrong track in relating religion and science. Since *Zygon* inhabits more than one world in the religion-and-science terrain, we can seek to relate these worlds to each other, at least for our readers. I’ll describe three of the six “worlds” presented in our June 2000 issue.

Gregory Peterson, in the first of the two “Thinkpieces,” describes the complex challenge to theology that is presented by the fact that there are several different theories (or “worlds”?) of evolution presented by leading scientific writers. Ursula Goodenough enters the world of metaphor in both religion and science and, refreshingly, suggests some basic criteria and rules of thumb for navigators in this realm.

The second section explores the resources that naturalist modes of thought and expression bring to the interaction of religion and science. Each of the remaining issues this year will include articles that continue this exploration. We intend thereby to make a contribution to the often skewed and polarized wider discussions in our society that tend to focus on traditional supernaturalist religious thought and atheistic materialism, as if they are the only available positions for persons who seriously attempt to reconcile their personal religious or

philosophical positions with contemporary science. The naturalist approach insists that there is a different way to engage questions of religion and science, and in this sense offers an alternative (not a “middle of the road” position) to our conventional dichotomies. Michael Cavanaugh, William Rottschaefer, and Michael Ruse are the authors in this section

The world of naturalistic thinking is peopled by scientists, theologians, philosophers, religious believers, as well as agnostics. The third section focuses on the world of Christians, mainly theologians, and the ways they attempt to take science seriously. David Byers, working with the National Conference of Catholic Bishops, and Stanley Grenz, an evangelical Christian theologian, hold forth in this “world.”

The world of postmodernity is still relatively unexplored in the religion-and-science discussion. The fifth section presents Jerome Stone’s commentary on the work of Wentzel van Huyssteen, who has devoted many years to interpreting this world, along with van

Huyssteen’s own commentary on Stone’s thinking.

Readers will certainly agree that simply getting in touch with these “many worlds” is challenging. Are we able to

summon our energy to ask how these worlds are related to each other, and whether they are in fact, or ought to be, one world? Even though such questions may be premature at this moment in history, they cannot remain unexplored for long. The editors gladly welcome such explorations.

Philip Hefner

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ZCRS is pleased to be able to offer our programs and publications to you at no charge. Nevertheless, we welcome your contributions, in addition to your interest and commentary.
Thank you!



Visiting Scholar from Korea

Sister Jae soon Kim spends winter quarter in Hyde Park

From January through March 2000, Sister Jae soon Kim, of Seoul, Korea, was a visiting scholar at the Zygon Center for Religion and Science. While in Chicago, Sister Kim attended the Epic of Creation lecture series, and audited the class, Gospel in a World of Science and Technology, taught by Philip Hefner.

Sister Kim, a member of the Religious Order of the Sacred Heart, has a distinguished background. She holds a B.S. in chemistry from Seoul National University (Korea), an M.S. from Marquette University, and a Ph.D. in chemistry from Seoul National University. In addition, she has studied at Harvard University and the Weston School of Theology (Cambridge, MA).

Having spent many years in Korea teaching chemistry and religion, Sister Kim was also president of Song Sim University for Women (Korea). During her tenure as president, the university merged with Catholic University, and Sister Kim served as vice president of Catholic University. She is now professor emeritus of that institution.

Sister Kim entered religious life as a novice in the Order of the Sacred Heart in Albany, NY. She completed probation, the second training in religious life, in Rome, Italy, where she took her final vows. She was Provincial Superior of the Korea Province of the Sacred Heart Congregation.



Sister Jae soon Kim

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