

IRAS

Global Ecology and Human Destiny

Schedule and Program

Institute on Religion in an Age of Science, Inc.

39th Annual Star Island Conference, July 25 to August 1, 1992

Conference Statement

Is human civilization--even humanity itself--approaching extinction? Human beings are inescapably dependent on a nurturing and sustaining global environment. Yet human activity may be altering this environment in irreversible ways that threaten the continuation of many forms of life on Earth. Increasing scientific knowledge is focussing widespread attention on the possible, far-reaching consequences of the depletion of non-renewable resources, the greenhouse effect and global warming, loss of arable land and the destruction of rain forests, increased rate of species extinction, and ozone layer depletion. However, there still is needed more high-level, integrated thinking that considers the social, moral, and religious dimensions of the current crisis situation.

The 1992 IRAS Star Island conference will bring a diversity of natural and social scientific, philosophical, and religious perspectives to bear on questions such as the following:

1. What is the basis for and reliability of current predictions regarding the continuation or demise of various life forms, humanity, and civilization?
2. What visions of how people ought to live should be projected for people today and future generations? How can conflicting visions be reconciled, and how can questions of equity and justice be resolved?
3. How must human ways of living be changed in order to achieve fulfilled lives in life-promoting interaction with the environment?
4. How can proposed changes in behavior be carried out in light of current--or reformed--political and economic systems?
5. What institutional resources--religious, political, legal, economic, scientific, and technological--are available to facilitate changes in behavior, so as to allow for the realization of values that ensure a promising human destiny that also is good for the Earth?

IRAS WELCOMES YOU TO THIS CONFERENCE!

“Global Ecology and Human Destiny” is a theme of most pressing concern for our day. It clearly reflects the purpose of the INSTITUTE FOR RELIGION IN AN AGE OF SCIENCE (IRAS). This conference offers the possibility for all of us to engage in exploring the connections between the knowledge and concepts of science and the human values and hopes expressed through religion and philosophy.

On Star Island each summer since 1954, IRAS brings together scholars and practitioners of several religious traditions with scientists from a wide spectrum of the sciences. Some are designated “speakers,” others as “conferees.” All of us have visions of “human destiny” and are invited to contribute our unique perspectives to the dialogue.

IRAS has been a pioneer in promoting dialogue between religion and science and a primary influence in the emerging religion/science field. It is the hope of IRAS that this week will enrich the lives of all participants and make a major contribution to our understanding of the connections between global ecology and the future of humanity.

Marjorie H. Davis

IRAS President

PROGRAM

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Origin and Purpose of IRAS

In the late 1940's the American Academy of Arts and Sciences organized a Committee on Science and Values to address topics relating contemporary scientific knowledge to fundamental human concerns about life's morals and meanings. The Committee, which included astronomer Harlow Shapley, neurobiologist Hudson Hoagland, geologist Kirtley Fletcher Mather, biologist George Wald, and Ralph Wendell Burhoe, the executive secretary of the Academy, stated that "we believe that . . . the survival of human society depends on the reformulation of man's world view and ethics, by grounding them in the revelations of modern science as well as on tradition and intuition."

Several from this committee accepted an invitation to bring their views to an interfaith group at the Coming Great Church Conference on Star Island in the summer of 1954. Later in 1954 the group from the American Academy accepted an invitation of the Coming Great Church Conference to form the Institute on Religion in an Age of Science, a multidisciplinary society, which carried forward the work of both predecessor groups. Other leaders involved in the establishment of IRAS included Brand Blanshard, Edwin Prince Booth, Dana McLean Greeley, Donald Szanthy Harrington, Henry Murphy, Lyman Rutledge, and Malcolm Sutherland.

Since 1954 IRAS has held an annual conference on science, values, and religion on Star Island, ten miles off the coast of Portsmouth, New Hampshire. IRAS has also conducted--on its own or in collaboration with other groups--conferences in other places with universities and theological schools, the American Academy of Arts and Sciences, the American Association for the Advancement of Science, and the American Academy of Religion.

In 1965 IRAS joined with the Meadville Theological School of Lombard College (later Meadville/Lombard Theological School) to establish a journal: *Zygon: Journal of Religion and Science*. The first issue was published in March 1966 under founding editor Ralph Wendell Burhoe, director of the newly-formed Center for Advanced Studies in Theology and the Sciences (CASTS) at Meadville/Lombard. In 1979 when Karl Peters succeeded Ralph Burhoe as editor, the editorial offices moved to Rollins College in Florida and IRAS, the Center for Advanced Study in Religion and Science (CASIRAS--successor to CASTS), and Rollins College became the joint publishers. In 1989 the editorial offices moved back to Chicago under the editorship of Philip Hefner, director of the newly-formed Chicago Center for Religion and Science. During the past quarter century, *Zygon* has been the chief international voice for the scholarly community in science and religion, and has become very influential in the extending the influence of the IRAS-CASIRAS approach to relating religion and the sciences.

IRAS is a society of natural scientists, social scientists, philosophers, scholars of religion, theologians, and many others who seek to provide a forum for discussing issues of relevance to religion in an age of science. In its Constitution, the IRAS purpose is stated as follows:

"The Institute on Religion in an Age of Science is established:

- (1) to promote creative efforts leading to the formulation, in the light of contemporary knowledge, of effective doctrines and practices for human welfare;
- (2) to formulate dynamic and positive relationships between the concepts developed by science and the goals and hopes of humanity expressed through religion; and
- (3) to state human values in such universal and valid terms that they may be understood by all peoples, whatever their cultural background or experience, in such a way as to provide a basis for world-wide cooperation.

The Institute is to carry on the work initiated by the Conference on Religion in an Age of Science, first held on Star Island, off Portsmouth, New Hampshire, USA, July 31 to August 6, 1954, and to engage in the development of such additional conferences, lectures, study groups, seminars, research projects, publications, etc., as may be useful for its purposes."

IRAS is a non-profit membership organization. Governance is by a volunteer Council whose members are elected from the entire membership. New IRAS members and tax-deductible contributors are always welcome.

IRAS ON STAR ISLAND

Star Island, first settled by Captain John Smith in the very early 1600's, was known as the best fishing grounds in the colonial world. Today one can still see the lobsterers setting their traps. A small museum and island tours allow one to recapture this early human history; and tours of the local flora and fauna, tide walks, and a marine biology lab help one appreciate the local environment.

Because it is ten miles off shore from Portsmouth, New Hampshire, Star Island's temperature is usually ten degrees cooler than on the mainland. It thus became an ideal resort setting for one of the premier late-nineteenth century hotels on the east coast. Today the hotel, along with several cottages and motel-type units, is a conference center run by the Unitarian-Universalist Association and the United Church of Christ; these two religious organizations have formed the Star Island Corporation. Although IRAS is not affiliated with any particular religious organization, we have enjoyed the hospitality of the Star Island Corporation since our first IRAS conference in 1954.

The nineteenth century hotel and other facilities provide both the charm and the amenities of that period. Rooms are provided with wash basins and water buckets, and in most cases the toilet is down the hall. The Star Island management and its staff of mostly college students--called Pelicans--are first rate in meeting the various needs of guests from infants to octogenarians. A highlight of the week is the Pelican Talent show--a delightful "extra" from the hard working staff. And in recent years IRAS conferees have returned the favor with their own talent show on the final night of the conference.

Star Island and other islands in the Isles of Shoals are excellent examples of the rocky New England coast. There are no roads, no cars, no bicycles, no phones (except a ship-to-shore radio-phone for emergency use.), and no TV's. But there are rocks, bushes, grasses, nesting sea gulls, crashing ocean waves, sometimes fog horns, and sometimes crystal clear night skies to explore through telescopes with some of our professional astronomers (IRAS first president was the astronomer Harlow Shapley). There are opportunities for swimming, rowing, tennis (if you do not mind the condition of the courts), and ballroom dancing. And the Star Island Book Store and Gift Shop offer books related to the conference theme and other items to remember the week on the island.

Then there are the people who come to IRAS conferences--more than 200 from a variety of academic and professional fields, as well as a number of well educated "lay persons." Many belong to IRAS, which has about 300 members, and others come because they are interested in how liberal religion relates to science and in the particular topic. There is active dialogue in lectures, discussion groups, and late night "owl sessions"--and also in conversation on the porch overlooking the harbor, on the rocks, and at the social hour before dinner. For those interested, there are opportunities to meditate and worship together in the stone Chapel on a high point of the island, at the Gazebo, or in the reflective evening candlelight services.

Those who have been coming for a long time to IRAS conferences believe that the natural setting, the island history, and the people provide a unique opportunity for rigorous meaningful dialogue regarding religion and values in relation to contemporary science.

GENERAL CONFERENCE INFORMATION

The motif of an IRAS Star Island conference is dialogue on significant questions regarding human welfare in the light of scientific knowledge. There are active discussions among conferees, among speakers and conferees, and among speakers. Discussions take place in various settings: in large group, lecture sessions; in small discussion groups called colloquia or seminars; in late night "owl sessions"; in informal conversations on the hotel porch, in the snack bar, and at various points throughout the island; and in the conference newspaper, the ***Star Beacon***.

The focus of this week's dialogue concerns the future welfare of humanity and our planet, in light of what we know about how human beings are altering our natural environment. After an opening lecture Saturday night that outlines one vision of the problems we face, we will turn to the views of three natural scientists about our situation. Next we will develop some philosophical and religious visions about how we ought to think and behave. Finally, we will raise the question whether we can change our ways of living and our social institutions to bring our visions to bear on the problems we see concerning the human future on Earth.

The lectures will be supplemented by panel discussions involving the speakers at the end of each main section of the conference, invited responses to some of the more technical papers, small response groups to presentations that allow us to reflect in terms of our personal experience, and two summary lectures and a closing panel that will help wrap up what we have learned during the week.

Before the morning lectures there will be chapel services for those who wish to attend. IRAS chaplains provide both spiritual leadership and insightful commentary on the conference theme as it develops through the week. Hence the morning chapel services, this year with Buddhist scholar Leslie Kawamura, are an integral part of the intellectual work of the conference.

Besides main lectures, we will have the opportunity to participate in one of several colloquia, late in the afternoon from Sunday through Wednesday. These are led by people with considerable knowledge about their subjects, but most are also intended to be informal, interactive sessions.

A new feature of IRAS conferences, occurring at the same time as the colloquia, will be a seminar on a book manuscript by an IRAS member. Four people have agreed to lead off these sessions with some critical reflection on the manuscript, to which the author will respond. Open discussion will ensue.

In the early afternoons there is free time for reflection, recreation, discussion, rest, or whatever. For those who have ideas they would like to present and discuss with others, the option of organizing a "free university" during this period is available. Please check with Nancy Anschuetz the day before for a space assignment and, after doing so, give a written note to Jane Bengtson, editor of the Star Beacon.

The Star Beacon is an IRAS tradition. This conference newspaper will appear at breakfast each morning and will give you up-to-date information on the conference and its participants. It also will provide an opportunity for you to publish poetry, commentary, and other forms of artistic expression--all at the discretion of the editor and as space is available.

At the close of the day a candlelight service allows time for quiet reflection and winding down. These have been arranged by Julie d'Aquili. However, for those still eager to engage in dialogue, the late night owl sessions provide the opportunity for mental stimulation.

All activities will start promptly at the time mentioned in the schedule on the back cover. Please be there a few minutes ahead of time. For the main sessions, the porch bell will be rung (a single stroke) five minutes before the session begins. When you hear the bell, please be seated in Elliot Hall.

If you have any questions or suggestions regarding the conference program, please see Nancy

LECTURE ABSTRACTS AND BIO-SKETCHES

CONFERENCE OVERVIEWS

Karl E. Peters, "Some Preliminary Thought on Global Ecology and Human Destiny"

Previewing some of the themes of this conference, my presentation will focus on the problem of motivation.

During the past two decades, the recognition of environmental problems has shifted from a focus on local to regional and global problems. This shift has given rise to a major issue of how humans can be motivated to act constructively on behalf of the planet as a whole for the long term future. It appears that our evolved biology has not prepared us very well for this situation; neither has our culture--including our political and economic systems, and our dominant philosophical and religious ways of thinking. Furthermore, if, as some scientists suggest, it is true that major extinctions are caused by objects from beyond our planet, we face the prospect of "cosmic demoralization," for then all our attempts to adapt to the conditions of earth at this time could be in vain.

Focusing on religious thought, I will suggest a myth based on scientific knowledge about cosmic, biological, and human evolution (including the mass extinction hypothesis). My myth is that the evolving universe is a birth process that gives rise to children of God (or Nature) like Planet Earth. Humans are the Earth become self-conscious, but we are in a stage of adolescence, which we must transcend if we are to fulfill our destiny.

Karl Peters is professor of philosophy and religion at Rollins College and co-editor of ***Zygon: Journal of Religion and Science***.

Besides teaching introductory courses in Near Eastern religions, Far Eastern religions, history of Christian thought, religion in America, and philosophical ethics, he has developed three advanced level courses that are listed in both the environmental studies curriculum and the philosophy and religious studies curriculum: environmental ethics, contemporary religious thought and the environment, and creation in religion and science.

His research and writing focus on issues in religion and science, especially on evolution and God and on theory of knowledge. His current publications are "A Social-Ecological Understanding of Human Nature," ***Religious Humanism***, Winter 1992; "Empirical Theology and Science," in ***Handbook of Empirical Theology*** (Birmingham: Religious Education Press, 1992) and also adapted for *Zygon* September 1992; "Interrelating Nature, Humanity, and the Work of God," *Zygon*, December 1992; and "Pragmatically Defining the God Concepts of Henry Nelson Wieman and Gordon Kaufman," in ***New Essays in Religious Naturalism*** (Macon, GA: Mercer University Press, 1992). He also has begun writing a book tentatively titled ***Interrelating Nature-Humanity-God: Towards an Empirical, Ecological, Evolutionary Theology***.

Leslie Kawamura, Chapel Talks on Human Destiny.

Leslie Kawamura is a professor in the Department of Religious Studies at the University of Calgary. He teaches Eastern Religions; his focus is primarily on the Mahayana Buddhist Tradition of India, China, Tibet, and Japan. He is also Chairman of the Asian Studies Group at the University of Calgary.

During the IRAS Conference on Star Island, Leslie will look each day at global ecology and human destiny concepts from the Mahayana Buddhist point of view.

He has published many articles and books. His most recent publication ***Madhyamika and Yogacara*** is a translation of a collection of essays by Professor G. M. Nagao, his mentor..

THE NATURE OF CURRENT AND PROJECTED ENVIRONMENTAL PROBLEMS

Paul E. Lutz, "Our Ultimate Environmental Problem?"

Global warming is a recent phenomenon that is traceable to the ways humanity is treating the environment that sustains us. Historically, both the ambient temperatures of the earth through the ice ages up to the present and the addition of greenhouse gases for the past four decades are traced and compared. The relationships between the rise of atmospheric temperatures and levels of carbon dioxide are clear and unambiguous. Modelling of the atmosphere has developed a series of scenarios about temperatures, precipitation, storms, polar ice, sea levels and shifting of agricultural regions for the middle of the next century. Other parameters of global warming, including migration of major ecosystems, the inherent lag time and deforestation, will be discussed.

The ability of society to cope with the demands imposed by the threat of global warming is challenged, and the fundamental question is raised as to whether we will make the basic alterations in our life styles to avoid this catastrophic global event. Specific and fundamental changes in our basic operational mores are considered; these basic changes will undoubtedly metastasize into every facet of our lives and the ways we must operate in the future.

Finally, there is a clarion call for the development of a new, workable environment ethic that will guide us in living in a sustainable

environment. Such an ethic will be absolutely indispensable as we go forth in the future in a world whose limitations are far more evident than ever before.

Paul Lutz is Professor of Biology at the University of North Carolina at Greensboro--a position he has held for 31 years. A native North Carolinian, he grew up in rural areas where he developed an early appreciation for living things and the environment. He received his undergraduate degree from Renoir-Rhyne College, a Masters degree from the University of Miami, and his Ph.D. degree from the University of North Carolina at Chapel Hill. Trained as an ecologist and invertebrate zoologist, he has taught a variety of courses including ecology, marine biology, and the biosphere.

His research interests deal with the effects of environmental factors regulating the rate of development in aquatic insects. Specifically, he has studied the separate and combined effects of temperature and photoperiod on larval development in dragonflies. His publications number in excess of 90 and include two books, ***Ecological Renewal (Fortress)*** and ***Invertebrate Zoology*** (Addison-Wesley).

He is an active advocate for environmental issues at the local, state, and national levels. He represented the Lutheran church at the U.N. Conference on the Human Environment (Stockholm), the U.N. World Population Conference (Bucharest), and the Conference on Atmospheric Degradation (Gwatt, Switzerland). Currently, he chairs the Lutheran church's Environment Task Force that is developing a Teaching Social Statement, ***Caring for Creation: Vision, Hope and Justice***, which is to be approved in 1993. A popular speaker, he has addressed various audiences on ecological issues, global warming, population, and the ethical dimensions of the current environmental crisis.

Paul G. Heltne, "Death and Extinction"

Death and extinction are natural processes of individuals and species. The loss of species can be due to natural selection or catastrophe. Major episodes of extinction have occurred many times during the history of the Earth.' The loss of previously dominant groups can sometimes be associated with the opportunity for the emergence of new groups or even whole new systems of biological organization and metabolism. Comparison with the modern crisis of extinction reveals the impact of the activity of the human species directly and indirectly. Better understanding of the natural and geological history of extinction clarifies the levels of responsibility and action in the current global crisis. Better understanding of the nature of biodiversity can reveal pathways to maintaining and restoring the riches of the global life community.

As President of The Chicago Academy of Sciences, Dr. Heltne is committed to promoting science literacy for teachers, school children, and the general public. He was recently appointed by the American Association of Museums (AAM) to serve on their National Task Force on Museum Education. Dr. Heltne is secretary/treasurer of the Association of Science Museum Directors, and the secretary of the Academy for Mathematics and Science Teachers in Chicago, founded by Dr. Leon Lederman. He is co-chair of the Advisory Committee of the Council of the Midwest Museums Conference. He has served as a consultant to the World Health Organization.

Prior to joining the Academy in 1982, Dr. Heltne conducted primate research and was an anatomy professor at Johns Hopkins University School of Medicine in Baltimore. He holds a Ph.D. in anatomy from the University of Chicago and has worked on tropical rain

forest conservation in South America for more than 20 years, editing two books and publishing

many research papers on the behavior, biology, and conservation of South American and Asian monkeys.

He has also organized important scientific symposia at the Academy, including the 1986 and the 1991 international meeting of primatologists, both of which were chaired by Jane Goodall, and a 1987 symposium on "Science Learning in the Informal Setting."

Dr. Heltne co-edited *Understanding Chimpanzees*, published by Harvard University Press in December, 1989.

Thomas L. Gilbert, "The Dynamics of Human Destiny"

The thesis of this talk is that, in order to envision human destiny, we first need to gain an understanding of the dynamic principles that govern the evolutionary process that connects human origins and human destiny. This is an ecological problem, where ecology is understood as knowledge of the relationships of all forms of life with each other and their physical environment--the complex physical, biological, and cultural/socioeconomic processes that sustain life, including human life.

It is suggested that a key to this problem is an understanding of the motivational forces that determine human conflict and cooperation on both a local and global scale. Some conjectures on how this problem might be structured are presented. It is suggested that four factors are involved: our visions (which are different for different individuals and communities) of a future state of existence which we seek to realize; the strengths of our commitments to these visions; our predictions regarding what our future state of existence will be (in

lar, our predictions regarding the consequences of our actions); and our confidence in our predictions.

A relationship between the motivation of individuals and communities and these factors is proposed. The problems of prediction and of the reliability/credibility of these predictions are illustrated by the "overshoot and collapse" model of the Club of Rome. It is suggested that, if the prediction of a collapse (a drastic future drop in the global population) is taken seriously, one must look beyond the collapse in order to find a realistic vision that can sustain hope for a future with greater joy and pleasure and less sorrow and pain. An analogy between biological and cultural evolution is suggested as a way of envisioning possibilities beyond the collapse. Mass extinctions in the past were followed by dramatic adaptive radiation in which new forms of life evolved. Without the mass extinction at the Cretaceous-Tertiary boundary some 65 million years ago, it is unlikely that the species *Homo sapiens* would have evolved.

Tom Gilbert is a theoretical physicist who marks four periods in his professional life. The first twelve years were in applied physics, working on such problems as the development of magnetic recording (his first job was as an assistant to Marvin Camras, inventor of modern magnetic recording methods) and devices for industrial applications. The next twenty-three years were in basic research in the electronic structure of atoms, small molecules, and defects in solids. This was followed by nine years in environmental risk analysis, where he was involved in preparing the environmental impact statement for the accident at Three Mile Island and developing the environmental pathway analysis code used by the Department of Energy for assessing the health impacts of residual radioactivity at contaminated production facilities and low-level radioactive waste

disposal sites. During the last five years, following his retirement from a position as a Senior Physicist at Argonne National Laboratory, he has been pursuing his interest in the roles of religion and science in the evolutionary drama of human life as Associate Director of the Chicago Center for Religion and Science and Adjunct Professor of Religion and Science at the Lutheran School of Theology at Chicago.

Tom was baptized in the Methodist Church at the age of 2, raised in a typical supportive Christian environment, became active as a member of the Board of Stewards and teacher of the adult Sunday School during his young adult years, and then withdrew by letter from the church because of the discomfort from people believing that he accepted the traditional beliefs of the church. During subsequent years, participating in family activities in a Presbyterian church as a guest, able to view Christian beliefs and the role of the church without the need to justify a particular creedal view, he developed certain ideas and convictions regarding how one should approach the fundamental questions, "How should I live--and why?" and "How does the world work?"; and provisional answers that can sustain one in the exploratory journey of life. Freed from the need of getting research proposals funded in order to earn a living, he is now engaged in further exploration of these ideas and in the never-ending process of testing and revising his convictions.

VISIONS THAT PROVIDE GUIDANCE FOR RESOLVING PROBLEMS

Holmes Rolston, III, "Rights and Responsibilities on the Home Planet"

Earth, the home planet, is a troubled planet. The age of the astronauts has brought a vision of one Earth; the ecological crisis threatens that global integrity. Ethics has sought to relate

persons to persons, and a principal achievement is concern for human rights. A human right to an environment with integrity ought to complement other essential human rights.

But "rights," though an appropriate model for interhuman ethics, is a troublesome model for an Earth ethics. There are no "rights" in biological nature. A more appropriate category is "values" intrinsic to the natural world and human "responsibilities" to protect these values. Such values are found in individual animals and plants, in endangered species, ecosystemic communities, and, ultimately, in the global Earth.

Political citizenship fragments responsibilities toward the natural world. Political boundaries pay little attention to ecological realities; national sovereignties are not well adapted for harmonious relations with the commons of the Earth. Human rights, when claimed through national citizenship, can result in inequitable distribution of resources. The lack of a world government results, at best, in negotiated solutions where nations, defending the rights of their citizens, fail to give priority to an integrated, global solution. Nations can become misfits on their landscapes. The United Nations has an important role in developing the sense of global biotic community. On the troubled planet, there are positive signs of awakening to the global crisis, symbolized by the Earth Summit.

Holmes Rolston is professor of philosophy at Colorado State University. He has written five books, including ***Science and Religion: A Critical Survey***, ***Environmental Ethics***, and ***Philosophy Gone Wild***. He also has written chapters in a dozen other books and more than seventy articles, and has lectured worldwide. His work has received critical notice in numerous journals and in ***The Christian Science Monitor***, ***The Los Angeles Times***, and other national papers.

Rolston has served as a consultant with two dozen conservation and policy groups, including the U.S. Congress and a Presidential Commission. He is the area editor for environmental ethics in the ***Encyclopedia of Bioethics***, Edition II, published by Macmillan Company. He is a founder and associate editor of the journal ***Environmental Ethics***, and serves on the editorial advisory board of ***Zygon: Journal of Religion and Science***.

Avocationally, he is a backpacker, field naturalist, and bryologist.

Frederick Ferre, "Persons in Nature: Toward an Applicable and Unified Environmental Ethic"

Environmental ethics cannot yet, as our Star Island program suggests, offer "visions that provide guidance for resolving problems." But this paper works in that direction.

Aldo Leopold's much-admired Land Ethic defines "right" as whatever "tends to preserve the integrity, stability, and beauty of the biotic community." Many champion this "biocentric" ethic; but if the "integrity, stability, and beauty of the biotic community" were to be enhanced by deliberate genocide against humanity, this "ethic" (unsupplemented) could only applaud. What shall humans **do**, given grave problems and a pressing need for practical choices? Misanthropic regrets about the human presence on earth hardly constitute adequate or applicable ethics.

Our fellow-speaker, Holmes Rolston, III, attempts to protect traditional social ethics by cutting it off from environmental ethics. For this he makes a sharp distinction between "culture" and "nature." In nature, predation, innocent suffering, extinctions, etc., are approved as part of a "painful good;" in culture, they are condemned as bad. Thus we end with ethics: one for dealing with nature, the other for dealings in culture.. They must inevitably clash, Rolston admits. What then?

Guidance fails when standards become incommensurable.

The way forward requires rethinking “nature” and culture’s place in it. It requires a metaphysics allowing ethics to include *both* nature and persons in one guidance-permitting context. My paper ends by advancing an organicism that is not misanthropic, a holism that rejects fascism, and a personalism that respects morally considerable (but not egalitarian) value throughout the cosmos.

Frederick Ferre is Research Professor of Philosophy at the University of Georgia, where he earlier headed the Department of Philosophy (1980-88) and in 1983 co-founded the Faculty of Environmental Ethics. He is also Editor of the scholarly annual, *Research in Philosophy & Technology*. Dr. Ferre specializes in religion, science, ethics, and technology. He speaks widely on the philosophical and religious implications of current problems of technology and the environment.

He received an A.B. degree, *summa cum laude*, from Boston University in history (1954); an M.A. degree from Vanderbilt University in philosophy of history (1955); and a Ph.D. degree from the University of St. Andrews, Scotland, in analytical philosophy of religion (1959). The first of many books and articles was *Language, Logic and God* (Harper, 1961), in which the logic of theological discourse is contrasted with the language of the sciences. His interest in the logic of scientific thinking developed into extensive work in philosophy of science and technology, especially as fundamental value-assumptions of science and technology impact on the natural environment. His principal book combining themes from philosophy of religion, theology, philosophy of science, technology, and environmental ethics was *Shaping the Future* (Harper, 1976). More recent books include *Philoso-*

phy of Technology (Prentice-Hall, 1988), and his forthcoming *Hellfire and Lightning Rods: Liberating Science, Technology, and Religion* (Orbis Books, 1993).

Dr. Ferre is past president of the American Theological Society and the Society for Philosophy of Religion. He taught at Vanderbilt University (1958-59), Mount Holyoke College (1959-62), and Dickinson College (1962-80), before joining the University of Georgia in 1980.

Lora Gross, “Women/Nature/Spirit: Towards a New Synthesis”

The salient feminist issues dealing with the notions of nature and spirit are focused in the critique of the dichotomy of spirit and matter. The philosophical bifurcation of the notions of nature and spirit has perpetuated the domination and exploitation of social and economic structures which mediate the domination of nature by preventing active concern for the ecosystem as a whole and specifically for the human community in favor of the immediate advantage of the dominant race, class and sex. The understanding of spirit as the God/world relation itself which evolves from the axiom of the vital character of matter, relates the notions of nature and spirit. Specifically, this reformed concept of spirit supports the challenge which ecofeminism makes to Western religion and science as well as moves an ecofeminist theology of nature forward by linking the idea of spirit with the erotic, overcoming the matter dualism.

I received my Th.D. from the Lutheran School of Theology at Chicago in June, 1989.

Upon graduation I accepted the position of assistant professor of religion at Pacific Lutheran University, Tacoma, where I have taught for

the last three years.

Previous to graduate school I served as a pastor in the Evangelical Lutheran Church in America in Omaha, Nebraska, for seven years. During this same period I held the position of Co-Executive Director of Lutheran Metropolitan Ministries, a social justice agency of the church.

I have attended three previous IRAS conferences.

Emily Bradley Massara, "Creation-Centered Spirituality: A Viable Vision?"

How relevant is the Creation-centered Spiritual Tradition, described by Matthew Fox in his book, *Original Blessing*, as a contemporary ecological theology? This presentation looks at its basic assumptions:

* that nature is alive, interconnected and everbecoming; with all that is flowing abundantly from a divine source, and

* that humans are self-consciously aware "co-creators" in a divine evolutionary process.

as a basis for understanding the dialectic four path spiritual journey and the ideals of the Creation Spiritual Tradition. In so doing, it will also explore the relationship between creation spirituality,, ancient matriarchal traditions and contemporary feminist spiritual religions.

With its view of Earth as an interconnected web of life to be treated by humans with awe and respect, Creation Spirituality would seem to offer a vision conducive to resolving urgent issues of global ecology and human destiny. But can we expect such a theology to be embraced by the cultural mainstream? An anthropological perspective will be adopted to explore

questions of cultural acceptability.

Dr. Emily Bradley Massara received her Ph.D. in cultural anthropology from Bryn Mawr College in 1979. She developed an interest in lifestyle and its relationship to patterns of wellness and disease while conducting her doctoral research on obesity among women in a Puerto Rican community. As a result, she has worked in the weight management field; establishing and directing a clinic, consulting as a member of the Medical Affiliate Staff at Eugenia Psychiatric Hospital, and managing a private weight management practice.

She has also taught anthropology at Franklin & Marshall College in Lancaster, PA' and Hahnemann University in Philadelphia.

Recently, her interest in lifestyle and its effect on health and wellbeing has expanded to include an interest in the relationship of Western lifestyles, and underlying assumptions and values, to the environmental crisis. She teaches an honors course, "Toward an Ecology of Mind" at Temple University and an environmental workshop, "Shaping a Workable, Cost Effective 'Environmentally Friendly' Lifestyle."

Dr. Massara has consulted with Weston Institute (of Roy F. Weston, Inc., Environmental Consultants) to develop a core curriculum to prepare Masters level students for environmental careers in business and industry. She is currently a member of Community College of Philadelphia's Environmental Science Advisory Committee.

Outdoor avocations suit her best, whether walking, hiking, biking, swimming, writing poetry about nature or learning to garden organically.

**BIOLOGICAL, PSYCHOLOGICAL, AND
CULTURAL CONSTRAINTS AND
POSSIBILITIES FOR CHANGING OUR
WAYS OF LIVING IN LIGHT OF OUR
VISIONS**

**II. Rodney Holmes, “*Homo religiosus* and Its
Brain: Reality, Imagination and the Future of
Nature”**

“Were one asked to characterize the life of religion in the broadest and most general terms possible, one might say that it consists of the belief that there is an unseen order, and that our supreme good lies in harmoniously adjusting ourselves thereto. This belief and this adjustment are the religious attitude in the soul. . . .All our attitudes are due to the ‘objects’ whether really or ideally.” (W. James, ***Varieties of Religious Experience***) I wish to refute William James by offering a neuroscientific justification of the reality of religious objects in an order that is not unseen, but precisely is that order seen by human beings and technically by ***Homo religiosus***.

This paper presents three bodies of data: 1) The brain constructs reality by bottom-up, genetically provided mechanisms. 2) Our genealogy traces our origins to Neanderthal Eve and her great...grandmother, Australopithicene Lucy. 3) The evolutionary precursors of contemporary human brains are correlated with cognitive and cultural evolution which has been studied and recently popularized by historians of religion. These data are analyzed by extrapolating between what we know about our neurological and cultural ancestors Lucy and Eve, our cousins the great apes, and ourselves as known by linguists, neurologists, and creative expressors of human experience. From this I conclude that we remain fundamentally a ***Homo religiosus***, and there is a naturalistic justification for the reality of our interpretation of ourselves as integral with ecology (a.k.a. Nature). What stock we can place in our

projections of the future of this ecology, and how we may be constrained or motivated to act on them is the conversation this paper hopes to promote.

Born into the culture of LBJ, raised on Jimmy Dean pork sausage, and indoctrinated at Abilene Christian College, I was “disfellowshipped” by my church, trained in biomedical engineering at Purdue University, and married to Charlene. Predictably I was embraced by the Unitarians and awarded a Ph.D. in physiology (neural control of cardiac function) in Oklahoma City. During my post-doctoral fellowship in Calgary, Charlene heard the call of the wild and insisted that we return to the U.S. for her medical residency--so we compromised by moving to the University of Chicago. Here I completed a post-doctoral fellowship in neuroanatomy, and decided that I did not wish to spend the rest of my life maiming the brains of mammals and inflicting upon myself their revenge by the skull drudgery of rejected and resubmitted grant proposals and technical research papers. I horn-swaggled Chicago into a full-time teaching position in the college where I developed a sequence “Biology, Culture, and Society” and an upper division seminar on professional ethics in science. I teach in the adult “Great Books” program, and recently completed an NSF grant in the history and philosophy of science. Today my most important work is being husband and father to two young children, followed distantly by preliminary concerns of my faculty roles and my contributions to the religion and science field. Undoubtedly this profile can only be scorned by the “Habits of the Heart” moralists and ridiculed by the academy, but is at home with the kind of people who are

Sharon A. Stein “Addicted individuals in an insane culture: What is going to happen to us over time?”

Many proverbs and stories warn against inconsistency between rational intentions and practical actions: Practice what you preach. Actions speak louder than words. Put your money where your mouth is.

Each of these proverbs say that people’s good intentions at one point in time often do not match their later actions. In theory, we all want to save the planet, recycle, and create a global morality that allocates resources equally to all. But when it comes to a daily sacrifice, who can afford to give up driving to work, or even give up Styrofoam? The culture of the United States has far to go before it begins to promote the long term health of all people.

The inability to create consistency between intention and action is most visible in the problem of addictive behavior. The definition of addiction used in this paper includes the inability to stop using drugs, smoking, gambling, or other behavior, despite an individual’s knowledge of the destructiveness of the behavior and desire to quit. The reason for inconsistency between intention and action is that both the voluntary and involuntary behavior are highly motivated; and at the time of choice, an immediate, smaller reward is more compelling than a future, larger reward. The immediate, smaller reward is called “specious” reward because it appears to be the better of two alternatives at the time of choice. This theory of addiction is also generalized to group behavior. Finally, a glimmer of hope for both individual and group “recovery” is offered.

Sharon A. Stein, Ed.D., is an assistant attending psychologist in the department of psychology at McLean Hospital and Harvard Medical School. Her most recent clinical training was

at the Cognitive Behavior Therapy Unit of McLean Hospital, where she has been treating patients with eating disorders, compulsive gambling, obsessive compulsive disorder, and other addictive behaviors. In addition, she is a faculty member of the Norman E. Ziiberg Center for Addiction Studies at The Cambridge Hospital, which is another Harvard Medical School affiliated hospital.

Dr. Stein received her degree from the Human Development and Psychology program at the Harvard University Graduate School of Education. Her research concerns the relationship between human development and recovery from addictive behavior. Dr. Stein works as a clinician and a researcher with a special interest in understanding and treating eating disorders and compulsive gambling, as well as other addictive behaviors.

Barry Allen, “Sustainable Development in an Ecological Age”

This lecture will explore an alternative path to economic development which is consistent with the laws of nature.

Barry Allen is an associate professor of environmental studies at Rollins College. After receiving his Ph.D. from the University of Pennsylvania and completing a stint at the London School of Economics, Allen joined the faculty of Ramapo College as resident economist in their school of environmental studies. He returned briefly to “pure” economics at University, before coming to Rollins in 1982, at the inception of the College’s department of environmental studies.

The key to understanding Barry Allen’s approach to environmental economics lies in this question: “How do you ensure a decent

standard of living for everyone without destroying the foundations of ecological development in the process?" In a world increasingly concerned about the depletion of its resources, Allen believes that sustainable development is the number one global issue. He considers the environment a problem of culture and science, and he has focused specifically on land use in national parks and protected areas.

Solomon Katz, "Can Secular Morality Make a Difference in the Solution of Global Environmental Problems?"

In the United States the longstanding traditions associated with the freedom of expression, cultural and religious diversity, and a very strong sense of individuality that integrates with our economic principles has given rise to a form of national morality that is much more secular than religious. For instance, in contemporary U.S. "culture" there are recent and important social issues such as smoking in public or drinking and driving that have become strongly moralized and resulted in very rapid and substantial changes in public behavioral practices among all ethnic, racial and religious groups. This paper traces the modern development of these broadly based and powerful secular moral movements, evaluates their strengths and weaknesses, and develops a model to explain how they have occurred. Most of these secular moral movements appear to have a number of features in common including among others: (i) a strong scientifically developed factual base and a scientific community willing to pursue the problem; (ii) a strong moral authority figure to communicate the message; (iii) a well developed advocacy group that has sufficient political clout to influence the political leadership to act in favor of laws

that restrict the behavior as well as to continue to provide the financial basis of more complete scientific facts; (iv) a willing communications media to broadcast the message at many levels; (v) a serious understanding of the economic impact of the desired change in behavior; and (vi) an historical tradition that respects and allows for certain kinds of freedom and restraints that tend to govern the social calculus of the society. The essay then applies this model to the contemporary global environmental problems and attempts to sort out the potentials as well as the hazards and the pitfalls for multinational and multicultural secular and religious moral movements to induce rapid and effective changes in the impact of human activities on the environment.

Dr. Solomon H. Katz is an anthropologist at the University of Pennsylvania where he serves as Professor and Faculty Master of The Ware College House Health and Society Program, and as Director of the W. M. Krogman Center for Child Growth and Development. He has twice served as President of IRAS over a period of five years and currently is Co-Chair of the Joint Publications Board which publishes Zygon and is the IRAS Vice President for Science. He also serves as President of CASIRAS. Currently, he is on sabbatical writing a book on the origins of modern food traditions and is founding the World Museum. The paper presented in this conference is based upon work he conducted over the last several years which was generously supported since its inception by the Health and Behavior Network of the MacArthur Foundation. The work also stems from a series of papers he presented at the Chicago Center for Religion and Science (CCRS) on the concept and potential for "Global Morality."

SUMMARIZING WHAT WE HAVE DONE AND WHERE DO WE GO FROM HERE

Closing our conference will be two short lectures that will help us summarize the conference, one from the perspective of a scientist and the other from the perspective of a philosopher of religion.

Ursula Goodenough is Professor of Biology at Washington University in St. Louis, whose research focuses on molecular biology and genetics. Her Ph.D. is from Harvard University, where she has been on the faculty as well. She has been involved with IRAS since 1987, last year as co-organizer with Tom Gilbert of the Star 1991 Conference; she is a member of the IRAS Council.

Loyal Rue is Professor of Religion and Philosophy at Luther College, Decorah, Iowa. His recent publications include *Amythia* (1988), and *Contemporary Classics in Philosophy of Religion* (ed. 1991). He is currently working on a book that explores the role of deception in natural history and culture--a book that attempts to elicit a biocentric myth, whether by hook or by crook. Loyal Rue and Ursula Goodenough have presented a proposal to co-chair a AAAS symposium in February (1993), entitled "Science and the Greening of Religion."

COLLOQUIA ABSTRACTS

Colloquia are held between 4:00 and 5:00 P.M. on Sunday through Wednesday. Usually conferees select one colloquium to attend for the entire week. Locations of colloquia and how to find them will be announced on Sunday.

Colloquia Abstracts:

David C. Bowker, "Human Responses to Climate"

This colloquium aims to explore how climate and human activity interact and influence each other. The approach will involve looking at both sides of the coin—how climate influences many spheres of human destiny (in particular, historical events) and how in turn humans have influenced climate. Many different areas will be considered, ranging from agriculture to Armadas, and rain-making to the D-Day invasion of 1944.

We shall start on a (relatively) small scale, by looking at how weather conditions can vary tremendously over an area as small as Star Island. We shall discuss how this "micro-climatic variation" affects agriculture, and examples will be drawn from a wide chronological span, from ancient Greece to modern developed countries, with due attention to the problems of forecasting and measuring such variation. We shall then look at how the weather has influenced major historical events, such as the Spanish Armada and D-Day. Having established the importance of weather in the outcome of such events, we shall then discuss how humans have tried to alter the

weather, both intentionally (through processes such as rain-making or cloud-seeding) and unintentionally. It is through the medium of the latter that we will explore the final important issue of global warming, discussing not only the extent to which humans have contributed to its possible causes and development, but also how we in turn may be influenced by its effects.

Tanya Bresinsky, "Is the Natural World Good?"

The belief in a natural order has been widespread throughout cultures and history. It is often believed that such an order is good in and of itself, without being subject to human definitions. In this period of man-made crisis in nature, many people feel that we must recognize such an order, frankly and with acceptance, in order to be spiritual; particularly if we do not recognize the God of Christianity.

While not denying that such a conviction represents a change from the popular Christian belief in God's separateness from God's creation, this workshop proposes that we encounter questions with which the Western tradition has had to deal when we consider physical matter as being transparent of some seeming reality, let alone when we "see that it is good." We run into questions of natural evil, theodicy and radical acceptance. This is true not only in the sense that we read abstract meanings into what is concrete, or suggest a grand harmony. We are faced with intractable realities in the physical world, that is, with bodily pain and degradation. The workshop

will also consider relationships between the religious experience of joy and the apprehension of what-is, including scientific exploration.

We will discuss these issues in light of the presupposition that both science and religion try to determine what existence is all about and that such a belief has implications for people: we can then extrapolate what the human condition may be and how people are related to world. Obviously, this affects the ways in which science and religion are perceived by people with ethical preoccupations. Environmental controversy has been especially concerned with the "right" or "wrong" views of nature (and life) put forward by both disciplines.

A provisional list of readings includes A. R. Peacocke, William James, Simone Weil, Teilhard de Chardin, Stephen Jay Gould, Mary Daly, Elaine Scarry (*The Body in Pain*), Terrence des Pres (*The Survivor*), and Etty Hillesum (*An Interrupted Life*).

Audrey R. Chapman, "Exploring the Linkages Between Environmental Protection and Human Rights"

Awareness of the scale, seriousness, and complexity of the global ecological crisis has stimulated discussions about the linkages between environmental protection and human rights. Discovery of extraordinary pollution and environmental degradation, such as in Central Europe and the former Soviet Union, has contributed to the recognition that deterioration of the environment threatens the realization of established human rights, such as the rights to health, life, work, and development. Reciprocally, human rights violations have sometimes had environmental implications, as evinced by the murder of rain forest activist Chico Mendez in Brazil and the harassment of environmental monitors in other countries. Beyond these links, there are proposals to redefine basic human rights to include the right to a clean, healthy, safe, and/or sustainable environment.

There is, however, a lack of consensus about the most feasible and effective way to link environmental protection and human rights. There are at least four different approaches: (1) applying recognized civil and political rights, such as rights to free speech, political participation, assembly and informed consent, to environmental advocates; (2) defining a minimum standard of environmental quality as a precondition to implementing many recognized human rights, particularly rights to life, dignity, health, and well-being; (3) promoting the recognition of a new substantive right or rights to a clean and/or healthy environment through a new human rights convention, and (4) developing environmental rights on a more limited basis through bilateral or multilateral agreements, legislative instruments, or codes of conduct. One objective of the colloquium will be to discuss and evaluate the strengths and limitations of each of these four approaches.

A second purpose of the colloquium will be to explore some of the basic conceptual issues related to utilizing human rights approaches to environmental protection. These include the following: (1) what are the methodological implications of defining environmental issues in human rights terminology?: (2) what are the rationale or foundations for proposed environmental rights? (3) how should environmental rights be defined and measured; (4) are proposed environmental rights consistent or in conflict with other recognized human rights? (5) can the concept of rights be applied to the natural world?

Chris Corbally, "Colloquium with Speakers of the Day"

For those who would like to discuss issues with the speakers in a smaller group and more informal setting, this afternoon "owl session" will provide that opportunity. Each speaker will be present only on the day she or he gives a presentation to the entire conference.

Henry C. Everett, "What's New in Psychiatry?"

Modern psychiatry combines the understandings provided by biology, psychology, and sociology. On each of these fronts new developments have occurred over the past year.

Biology has revealed important information on the genetics of psychiatric disorders as well as an improved understanding of the appropriate medical remedies.

Psychology is developing a greater richness in cognitive and behavioral methods of therapy. The application of philosophy to these methods is becoming increasingly appreciated.

Social forces for good and ill are making a tremendous impact on the nation's mental health. Support groups are fighting the stigma of mental illness, and political activism on behalf of the mentally ill is increasing. On the other hand, the insurance industry has been scheming to curtail the availability of treatment, using the rubric, "Managed Care."

There will be brief presentations and handouts about these developments. The sessions will be interactive. Come prepared to participate!

Tom Fangman, "Creation Spirituality"

In the development of Christian spirituality, there have been two dominant paradigms. One is a *creation centered* spirituality that dates back to the 9th century BC and wisdom literature, and the other is a *Fall/redemption* spirituality that goes back principally to St. Augustine.

In the history of Christian theology, those who were creation-centered derived their theology not from the West but from the East. Also many women, beginning with Hildegard of Bingen, represent the creation tradition and this has continued in today's women theologians. In the sixteenth century musicians, writers,

poets and painters carried on and developed the creation-centered spiritual tradition. Today many scientists, feminists and social prophets have provided insights into creation-centered spirituality.

Matthew Fox, a contemporary ascetical theologian, has been one of the chief proponents of *creation spirituality*. In this colloquium, participants will discuss excerpts of writings from Matthew Fox. These excerpts will be available at the beginning of the Star Island Conference. They will focus both on the distinctions and similarities between creation and redemption spirituality and on the impact of the two paradigms on the environment such as stewardship versus oneness with creation.

Mary Anne Ford, "When the Rubber Hits the Road"

The Earth Summit at Rio last month was accompanied by a phenomenon common to real mountains as well as human gatherings. An avalanche of words tumbled from lips of power brokers, grass roots activists and other assembled world citizens and specialists.

The issue which towers above the rest, post-Rio, is how to move beyond to implementations and beyond the divergent rhetorics to realistic, fair and environmentally responsible results. How do we move from outrage to output? What roles can religion and philosophy play in directing these essential tasks? How might scientific advancements be harmonized with variant philosophical perspectives? When does green become bilious? What consensus and direction can be found amid the cacophonous cries from special interest groups?

Group facilitator Mary Anne Ford claims to have a truffle hound nose for environmental platitudes. She sharpened her sensory skills while in charge of public affairs for the agricultural division of Union Carbide prior to and following the Bhopal accident of 1984. Ford will draw on insights from her corporate environmental experience as well as new ones

developed during her attendance at the Earth Summer at Rio de Janeiro this past June.

Mary Anne is currently a candidate for a Masters of Divinity at Meadville Lombard Theological School at the University of Chicago with a special emphasis in environmental ethics. Expect some devil's advocating as well as a provocative case study and a brief reading for group discussion.

John E. Fryer, "AIDS and HIV in the Larger World Environment"

This Colloquium will focus on AIDS and the Human Immunodeficiency Virus in a variety of settings around the world. Utilizing the deliberations of the larger Conference, participants will be encouraged to define ways in which AIDS might be expected to affect global ecology. It is hoped that concrete interventions might be developed which might positively alter these effects.

Sunday--AIDS in the "first and second world"--gay males, hemophiliacs, drug abusers, sexual contacts of the above, etc.. . what is the current status in these populations.. . .

Monday--AIDS in the "third world"--Africa, Thailand, Southeast Asia.. what are the realities in these settings.. what are the interactions with the "first and second world.. . what is the role of palliative care.. . .

Tuesday--Given the data of the first two days, what are the enumerated positive and negative ecological effects (e.g., control of rampant population explosion vs killing off of whole generations in Uganda and elsewhere in Africa)

Wednesday--What can we or anyone do? What should we or anyone do?

Ward Goodenough, "How Insular Societies Respond to Population Pressure"

The problem of population pressure in relation to the resources that sustain desired standards of living and even life itself is now a global

one. The world is becoming a single island on a macro-scale much like the small and often quite isolated islands of the Pacific on a micro scale. On the Pacific Islands human populations quickly bred up the limits of the local resources to sustain them. The different social adjustments made on different islands reveal the range of possibilities for and practical constraints upon the kinds of social and institutional arrangements by which population is maintained in balance with resources. They include wars in which victors take over the resources and expel or marginalize the defeated; rules of eligibility for having children, along with abortion and infanticide; and sexual practices that result in considerable female sterility. Still other physically isolated societies, like the Tibetans, have used eligibility to have children coupled with monasticism. Natural disasters, such as typhoons, also put island societies at sudden risk, where the food necessary to feed much of the population has been destroyed. They provide models for management of such crises as well.

Underlying all of these adjustments is the fact that in one way or another some people must sacrifice their eligibility to marry and have children, their access to what is necessary for a healthy life, or their actual lives in order for the larger community of which they are members to survive as a community. The problem confronting people is how to implement such sacrifice in a manner that best conforms with and appeals to their public values. The converse problem is how to adjust public values so as to make necessary sacrifices morally justifiable.

In this colloquium we shall explore actual cases and the harsh realities they indicate. We shall discuss what these imply for people in a multi-ethnic and multi-cultural world, where values differ and different groups compete with one another as to who shall pay the costs and where the burdens of sacrifice are to lie.

Suggested reading: W. H. Goodenough, "Social Implications of Population Control." *Expedition* 14.3 (1972): 11-14. (Copies will be available at Star Island.)

Eugene F. Mallove, “Cold Fusion: *Real* and Revolutionary”

As the 20th century ends, a startling event has occurred: the unexpected discovery of cold fusion--what is now believed to be a new kind of nuclear reaction that could turn the world's oceans into bottomless fuel tanks. The unprecedented and extremely controversial cold fusion story, which was ignited by electrochemists Drs. Martin Fleischmann and Stanley Pons at a press conference at the University of Utah on March 23, 1989, began the public's awareness that a new age of endless, clean energy might soon be upon us. Unfortunately, there has been a bizarre hiatus in that fully justified expectation. The contention of Dr. Eugene Mallove and a community of like-minded scientists now numbering in the thousands is that cold fusion is real after all. But close-minded scientists--with and without vested *hot* fusion interests--have tried and are still trying to bury it! Nonetheless, intense research and development of cold fusion is proceeding rapidly, particularly in Japan. The Third Annual Conference on Cold Fusion will be held in Nagoya in October, 1992, sponsored by seven Japanese physical societies. Meanwhile in the U.S., the media mockery of and the establishment witch hunt against the infant science continue.

According to the account of the controversy prepared by the author in the Pulitzer prize-nominated *Fire from Ice: Searching for the Truth Behind the Cold Fusion Furor* (John Wiley & Sons, May 1991), cold fusion is real beyond any reasonable doubt and will likely become a major power source of potentially spectacular depth and breadth for the world. Moreover, the related scientific ramifications of cold fusion are similarly impressive. Eugene Mallove, who is now deeply involved in cold fusion research and development, will suggest how this impending revolution has and will come about. He will give an inside account of then rapidly moving technical and political developments that will begin to make a tumultuous energy upheaval happen.

Frank Toppa, "Music, Theology, and Ecology"

The ringing of bells and the beating of drums touch and connect all of creation. The singing of hymns can sanctify as well as desecrate the environment.

This workshop will explore the relationship of bells, drums, and song to nature. We will look at historical theological writings as well as contemporary reflections about music and the environment. We will explore whether humans are apart or a part of the music that they create.

Participants will:

1. Ring bells, beat drums, sing ecology songs.
2. Compose our own Star Island ecology songs.
3. Write our own theological treatises on music and the environment.
4. Listen to Haydn's Creation and Paul Winter's music.

Barbara Whittaker-Johns will lead one session, and she will interpret hymns and their implications for the environment.

Kevin Sharpe, “Physics and Environmental Philosophy”

David Bohm's physics and philosophy is a possible resource for developing more holistic thinking about human beings and our relation to the planet. This colloquium will be a discussion of some of Bohm's main ideas, as well as other ideas that will help us ground environmental philosophy in contemporary physics.

IRAS SEMINAR

The seminar will discuss Philip Heftier's new book-length manuscript in four sessions. Each session will begin with analysis and criticism by one of the following scholars:

Solomon Katz, anthropology; University of Pennsylvania

Philip Ode, biology, Thiel College

Marjorie Hall Davis, theology, Granby, CT

Loyal Rue, philosophy of religion, Luther College

The manuscript, entitled *The Human Factor: Evolution, Culture, Technology, and Religion in Theological Perspective*, presents a theological concept, and it argues that this concept functions as a theory that interprets credibly the human situation today and sets forth a program for human response to that situation. The concept is *Homo sapiens* as created co-creator. There are four components to the argument.

First, scientific understandings are employed to suggest that *Homo sapiens* is distinguished by its being constituted by a genetic component, emerging, from genetic evolution, and a cultural component which must be compatible enough to the genetic that it can co-evolve with it and co-adapt with it to the environment. At the same time, human culture continually creates new conditions under which the genotype must survive. Humans could not survive on genetic information alone, they require the augmentation of the cultural information. In the creation of new conditions for survival (a kind of "stretching," to speak metaphorically) the human species has made its striking innovations within the evolutionary process. The genetic conditioning of *Homo sapiens* is the ground for speaking of it as *created*; the cultural factor in human being is the ground of speaking of the *co-creator*.

Second, the philosophy of Imre Lakatos is employed to show that this theory of the created co-creator should be brought to bear as the core of a progressive research program. Much of the manuscript is devoted to arguing that this progressive research program does indeed follow from the concept. The program throws light on (creates "new 'facts'") freedom and determinism, myth and ritual, morality and ethics.

Third, the challenge to human being today is described. The challenge is to construct a cultural system of information and guidance comparable to the genetic system, so as to be able to conduct human life in a manner that is viable. Human existence is constituted by the attempts to construct this cultural system and the management of the genes/cultures symbiosis that is called for. Technology is the most dramatic expression of our cultural capacity. The human dilemma today is clarified by this analysis, in that the threats to human and planetary welfare are rooted in our inability to construct the cultural system and to maintain the symbiosis viably. Issues arising from environmental crisis, from economic-political-social crisis (hunger, freedom, poverty, etc), from war/peace crises--all of these are clarified by viewing them from the perspective of the created co-creator's dilemma.

Fourth, it is suggested that classical Christian myth, ritual, and doctrine are on the one hand challenged by this analysis to reform itself so as to become more credible, and also provides on the other hand a deeply meaningful framework for interpreting the created creator. It also is suggested that Jesus stands as the symbolic model of the created co-creator. What is implied by Jesus as model, represents the Christian religion's symbolic/mythic proposal for the human community today.

CANDLELIGHT SERVICES: BIOGRAPHICAL SKETCHES

The day ends except for the owls, with a candlelight service that is a longstanding tradition of the IRAS Star Island conferences. Services are led by conferees recruited by the Coordinator of Candlelight Services. The congregation gathers at the East end of the Oceanic porch each night, a few minutes before the start of the service. The Pelicans hand out candles and the congregation proceeds up the path to the chapel in silence. Candles are hung on the horizontal crosses to provide light for the service and retrieved after the service to light the walk back down the path, also in silence. Biographical sketches of the Candlelight Service leaders for 1992, compiled by Julie d'Aquili, the Candlelight Coordinator for 1992, are given below.

Saturday, July 25, 1992

Larry Fagg

Larry Fagg describes himself as a wayward Episcopalian. Despite his attitude (or perhaps because of it) he received his Ph.D. in physics from Johns Hopkins in 1953. His professional field is experimental nuclear physics. He has, as a sideline, written a book called *The Two Faces of Time* (1985). His hobby is skiing--that is, when he is not managing his 72 acre farm of chestnut trees.

Sunday, July 26, 1992

Tanya Bresinsky

Tanya is an old Shoaler who graduated from Boston University in 1991 with a degree in religious studies. She is currently living in Norman, Oklahoma, working on a degree in library science. At present she is not a member of any organized religious group.

Monday, July 27, 1992

David Bowker

David is an old Shoaler who is currently a teacher of classics and meteorology. He is a Fellow of the Royal Meteorological Society. This group awarded a prize to him for his report of a storm on Star. His favorite hobby is serious walking. He has bought a home in a medieval town in Yorkshire which is surrounded by sheep. The house is about 1200 years old.

Tuesday, July 28, 1992

Rabbi and Mrs. Bernard Bloom with Neil Wollman

The Blooms are new Shoalers who have lived in Schenectady, New York, for 24 years. Mrs.

Bloom is a piano teacher who is working on a Masters in public policy. Their hobbies are music and the arts.

Neil Wollman is an old Shoaler. Unfortunately, we were unable to contact him for information.

Wednesday, July 29, 1992

Katherine and Emily Houk

Katherine is Executive Director of a non-profit educational association (Alliance for Parental Involvement in Education). Her daughter, Emily, who is 10 years old, accompanies her to a Unitarian Universalist church. Katherine loves dancing and is interested in feminist issues and alternative education. Emily loves animals, theater and dancing.

Thursday, July 30, 1992

Sean Daly

Sean is an old Shoaler who is currently living in Paris with his significant other, Catherine. Sean feels he needs a complete change of life every 2 years. He has been a bike messenger, waiter, struggling musician, and for a brief period cut his hair and worked on Wall Street. Right now he is a computer consultant. In his free time he likes to work as a handyman around the house.

Friday, July 31, 1992

Eugene G. d'Aquili with Andy Newburg

Gene, who has been coming to IRAS since 1974, is a physician and anthropologist.

Andy is a medical student with a great interest in philosophy and religion.

PEOPLE

1992 IRAS Star Island Conference Planning Committee

Nancy Anschuetz and Karl Peters, Cochairs

Planning Committee Members: Jane Bengtson, Tom Gilbert, Ken Gjemre, Philip Hefner, Loyal Rue, and Sharon Stein.

Conference Facilitators

Announcements, David Burwasser
Book Table, Majorie Young
Candlelight Coordinator, Julie d'Aquili
Children's Program: Ruth Brady, Anne Schnare, and Andrea Simoneau
Conference Coordinator, Edward Rutledge
Choir Director, John Fryer
Owl Sessions Coordinator, David Breed
Program Book: Tom Gilbert and Doris Lynn
Registrar, Bonnie Falla
Social Hour Coordinator, Sara Sturges
Star Beacon Editor, Jane Bengtson

Chairpersons

Saturday: Nancy Anschuetz

Sunday: Chris Corbally

Monday: William Falla

Tuesday: Evelyn Pitcher

Wednesday: Carol Albright

Thursday: Robert Sorensen

Friday: Karl Peters

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President

John Bowker (religious studies), Vice
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Solomon Katz (anthropology), Vice
President-Science

Kevin Sharpe (mathematics, theology),
Vice President-Interdisciplinary Affairs

Barbara Whittaker-Johns (theology),
Vice President-Conferences

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dent-Development

Weiant Wathen-Dunn (physics, speech
processing), Secretary

Thomas Fangman (chemistry, educa-
tion), Treasurer

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Davis, William Falla, Tom Fangman, John
Fryer, Thomas Gilbert, Ursula Goodenough,
Ward Goodenough, Rodney Holmes, Solomon
Katz, Leslie Kawamura, Elizabeth Lau,
Robert Sorensen, Loyal Rue, Karl Schmitz-
Moormann, Kevin Sharpe, Weiant Wathen-
Dunn, Barbara Whittaker-Johns.

CONFERENCE READING LIST

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**Schedule for the 1992 IRAS Conference on *Global Ecology and Human Destiny*
Saturday, July 25, through Friday, July 31**

Period	Activity	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Focus		Orientation	Problems	Visions		Constraints and Possibilities		Summary
Chairperson		Anschuetz	Corbally	Falla	Pitcher	Albright	Sorensen	Peters
8:00-9:00 a	Breakfast							
9:00-9:45 a	Chapel		Kawamura	Kawamura	Kawamura	Kawamura	Kawamura	Kawamura
9:45-10:00 a	Free							
10:00-12:15 a ¹	Morning Lectures		Lutz Heltne	Rolston Response Groups	Gross Massara	Holmes Discussant	Allen Katz	Goodenough/Rue Panel
12:15-12:30 p	Free							
12:30-1:30 p	Lunch							
1:30-4:00 p	Free				Appledore Excursion ²		IRAS Annual Meeting ³	
4:00-5:00 p	Colloquia⁴	Star Island Orientation						
5:00-5:30 p	Free					IRAS/Zygon Reception		
5:30-6:30 p	Social Hour							
6:30-7:30 p	Dinner					Lobster Dinner ⁵		
7:30-9:30 p	Evening Lectures	Peters	Gilbert Panel	Ferré	Panel	Stein Response Groups	Panel	Talent Show ⁷
9:30-9:45 p	Free						Pelican Show ⁶	
9:45-10:15 p	Candlelight							
10:15-10:45 p	Free							
10:45-11:45 p	Owl Session							Farewell Party

¹There will be a fifteen minute refreshment break from 11:00 am to 11:15 am.

²There will be an opportunity to visit Appledore Island, where a Marine Laboratory of the University of New Hampshire is located, on Tuesday afternoon, leaving at 2 pm and returning at 5 pm. Those who go on the Appledore Excursion will miss the Tuesday colloquia.

³The Annual IRAS Meeting will start at 2 pm and probably be over by 3 pm. It will be followed immediately by a meeting of the new IRAS Council, which may last until 5 pm. Council meetings are open; observers are welcome.

⁴Colloquia are regularly scheduled for every afternoon on Sunday through Wednesday

⁵There will be a lobster dinner on Wednesday for those who purchase tickets. Tickets are \$5.50 per person and should be purchased by Monday noon. Lobster diners should be seated by 6:15 pm.

⁶The Session at 7:30 pm will be followed by the Pelican Show at 9:00 pm. The Candlelight Service will start at 10:15 pm.

⁷The Session at 7:30 pm will be followed by the Talent Show at 8:30 pm. The Candlelight Service will start 15 minutes after the Talent Show ends.