

IRAS

IS NATURE ENOUGH?
The Thirst for Transcendence

Program and Schedule

The Institute on Religion in an Age of Science

49th Annual Star Island Conference, July 27 to August 3, 2002

CONFERENCE STATEMENT

Is Nature Enough? The Thirst for Transcendence

Scientists search for naturalistic explanations, and today they sometimes seem able to propose such explanations for almost everything, including subjective experiences traditionally expressed in religious terms. Yet for many, some scientists included, there persists a feeling or belief that there is “something more,” variously described as transcendent or supernatural or at least nonmaterial, which provides a basic context for their lives. This conference will explore whether our contemporary understanding of nature is or is not sufficient to satisfy our search for meaning and transcendence. Some speakers will argue that nature *is* enough and others will argue it *is not*, while others will examine the notion of transcendence itself. But each will offer a robust response to the question and its implications for human meaning. Although diverse positions will be taken, the speakers have been chosen partly for their ability to enter into constructive dialogue with one another and with conferees. Join us, as together we seek common ground that is intellectually, emotionally, aesthetically, and morally satisfying.

The conference will explore many subsidiary issues. For example, we will explore the degree to which nature can:

- Explain human moral choices
- Sustain us in times of suffering, and give comfort in the face of death
- Help us make meaning out of evil in the world
- Explain consciousness
- Account for art
- Provide us a sense of gratitude and/or reverence
- Account for the existence of Nature itself

WELCOME TO STAR ISLAND!

Whether you are quite new here or an "Old Shoaler", I am so glad that you have come to IRAS's 49th conference on Star Island.

In the year since IRAS last gathered here events have occurred that severely to disturb our sense of security, both national and global. It is probably quite a relief to come to this idyllic island, but this is an island whose inhabitants and buildings have themselves survived a severe storm last year. The island's survival was due to devoted and skilled work by those who love the place.

Such devotion and skill does, in its own real way, put us in touch with the transcendent, however each of us wishes to define that "something more" that brings warmth and meaning to our lives. What is wonderful is that I know that there are going to be many other ways in which the transcendent will break in upon us this week.

Each of us will find his and her own way to explore and become renewed: for some the prime stimulus will come from the invited speakers and the workshop leaders; for others it will be the mealtimes and casual conversations; and always there is the natural beauty of the island, enjoyed from a favorite rock or chair.

Whatever the ways you find, I wish you a deeper peace, a greater sense of strength in yourself and in those dear to you, and a firmer basis for those actions you know are possible and necessary. Do let me know if I can help make your week both more delightful and memorable.

Chris Corbally

Christopher Corbally, S.J.
President of IRAS

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ORIGIN AND PURPOSE OF IRAS

In the late 1940s 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. Other early members included Ashley Montagu, B.F. Skinner, Theodosius Dobzhansky, and Ian Barbour.

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: at universities and theological schools, and at meetings of 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. IRAS, the Center for Advanced Study in Religion and Science (CASIRAS--successor to CASTS), and Rollins College became 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 (renamed the Zygon Center for Religion and Science in 1999). During the past quarter century, *Zygon* has been the chief international voice for the scholarly community in science and religion, and has greatly strengthened the influence of the IRAS-CASIRAS approach to relating religion and the sciences.

IRAS is a multi-disciplinary society of persons who seek to understand and reformulate the theory and practice of religion in the light of contemporary scientific knowledge, and provide a forum for discussing issues relevant to that goal. The IRAS Constitution states the formal purpose as follows:

- (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.

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 contributions are always welcome.

IRAS ON STAR ISLAND

Star Island, first settled by Captain John Smith in the early 1600s, is situated in what was known as the best fishing grounds in the Colonial world. Today one can still see the lobstermen 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 TVs, and one public phone. (A cellular phone, 603-534-2190, is for emergencies only.) 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's first president was astronomer Harlow Shapley). There are opportunities for swimming, rowing, tennis, 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 many well-educated "lay persons." Many belong to IRAS, which has about 400 members. 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, conversation on the porch overlooking the harbor and 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

Plenary session lectures and discussion are scheduled in the *morning* (starting at 10 am) and *evening* (starting at 7:30 pm). The speakers will develop the theme of the conference as they address different issues and questions from their own disciplines and perspectives. The porch bell will be rung (a single stroke) five minutes before the beginning of the morning and evening sessions, at 9:55 a.m. and 7:25 p.m. We hope this advance warning will enable everyone to reach his/her seat in time to allow a prompt start at 10:00 a.m. and 7:30 p.m.. A coffee/hot chocolate/bouillon break is scheduled for 10:55 - 11:15 a.m. each morning. When you hear the bell at the end of this break, please return quickly to the auditorium. *Afternoons* offer a variety of optional concurrent activities.

The **IRAS seminar** this year will be on the manuscript *Developing the Horizons of the Mind: Relational and Contextual Reasoning and the Resolution of Cognitive Conflicts* by Helmut Reich. It will be on Monday, Tuesday, and Wednesday, 1:40 to 2:40 pm. Further information may be found on page 13.

"Free University" sessions, from 1:40 to 2:40 pm each day except Thursday, provide conferees with an opportunity to present their ideas and discuss them with others. We expect that some conferees will, as in past years, volunteer to conduct these sessions, which will be announced in the *Star Beacon* and posted on the chalkboard. For those planning to organize a free university session, 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*.

Workshops and Discussion Groups will be offered during the afternoon from 2:50 to 3:50 and 4:00 to 5:00 pm. Leaders and workshop locations are listed in the schedule on the back page of this program booklet, and workshop descriptions are on pages 14 to 21

"Happy Hour" takes place at the end of afternoon activities, from 5:30-6:30 pm. We gather informally in Newton Centre for an hour of libations, snacks, and socializing. Contributions to cover the cost are needed and appreciated. The Happy Hour in Newton Centre on Tuesday will be a reception sponsored by IRAS and Zygon. It will be an opportunity to learn more about IRAS and Zygon as well as to enjoy an hour of free libations, snacks and socializing. Newcomers are especially welcome. Oldtimers will be there to welcome you.

Recreation: Afternoons are also opportunities for recreation: talking, thinking, napping, reading, walking, and playing. You can visit the Marine Laboratory of the University of New Hampshire on Appledore Island on Monday afternoon. (Please sign up at the front desk in advance – the boat capacity is limited.) Various tours by the Star Island staff will be announced or posted.

Swimming: The hardy (or masochistic) can enjoy a polar bear swim in the morning before breakfast. The rest of us can enjoy swimming throughout the day.

Special meals: There will be a traditional lobster dinner on *Wednesday* (tickets *must* be purchased by Monday noon). The traditional IRAS banquet will be on *Friday*.

Shows: The Pelican show (organized by the Pelicans, the young people who do all the hard work to make our stay on Star Island so delightful) will be on Thursday evening, and the IRAS talent show on Friday. If you would like to participate in the Talent Show, especially if you have talent (this is an optional requirement — all hams are welcome), Bill Stone, the talent show coordinator, will be happy to hear from you.

Newspaper: 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 provides opportunities for you to respond to lectures and conference theme, challenge ideas, publish poetry, commentary, and other forms of artistic expression, including humor — all at the discretion of the editor and as space is available.

Candlelight services allow time for quiet reflection and winding down at the close of each day. These have been arranged by Betty Lau. Following the Candlelight service, the "Musical Postlude" program in the chapel will feature recorded classical music.

The **snack bar**, open until 11 pm, is a favorite place for congregating and socializing after the candlelight service.

An informal **farewell party** will be held on Friday night. This will be an opportunity for final conversations with old and new friends in a pleasant, noisy setting before "packing up," and for using up any refreshing substances left over from the social hours.

For sharing a **bus** on Saturday morning at the end of the conference, from the dock to Logan Airport (Boston), please see Bill Griswold. Spaces are limited, so talk to him early in the week.

Children must participate in the children's program unless Nancy Anschuetz receives a signed waiver.

Discrimination and abuse: The Star Island Corporation has requested that all conferences formulate guidelines for the prevention of child and adult discrimination and abuse. The IRAS Council has adopted such guidelines. Information about the policy is available from IRAS President, Chris Corbally.

If you have any questions or suggestions concerning the conference, please bring them up with Nancy Anschuetz, Michael Cavanaugh or Terry Deacon.

ARCHI PELAGOS: IRAS CONFERENCE YOUTH PROGRAM

While parents cogitate, their children play, create, explore Star Island, and develop friendships under the guidance of professional teachers and counselors. Our goal is to enjoy together stimulating games, opportunities for creative expression, crafts, stories and song. Our hope is to deepen our connection with Star Island and each other. We explore marine biology and island flora and fauna directly out and about and in the science center with island staff. We row over to Smuttynose Island for a close-up of intertidal life and feast on fresh seaweed mussels on the beach. We have access to the island historian and marine lab assistants.

We meet each morning at 9:00 am in age specific groups until 12:15 pm. The morning session is structured with both energetic and quiet activities. Older groups integrate conference themes. This year's senior group is our largest ever with twenty-three youths fourteen to seventeen. Many of these young adults have been attending the youth program its full seven years. Afternoons are free and youth are under the supervision of parents and guardians until the social hour (5:15-6:15 pm).

Snacks are offered at 5:00 pm on the front porch of Oceanic. Choices for social hour include playground, field games, island exploration, and preparation for the dance and talent show.

Following supper we offer a sunset program (7:30-8:30 pm) featuring bonfires with singing and s'mores on Saturday evening, music (including a Wednesday evening dance), storytelling, mysteries and games, and our own chapel service on Thursday (8:00-8:30 pm). Parents and friends are requested to accompany their young children in these evening activities. The activities are thoughtfully but not rigidly prepared and inspiration is appreciated in this vibrant place where we discover and nurture our collective being.

After seven years, many returning staff as well as children have found in Star Island a spirit home. We are grateful.

Sandra Woodworth, Coordinator

Archi Pelagos Special events

Saturday Evening:	Bonfire, down on rocks left of summer gazebo (bring flashlight)
Sunday, 8:30 am:	Youth photo
Tuesday, 4:45-6:15 pm:	Field games
Wednesday, 7:30-9:30 pm:	Dance in Brookfield — open to everyone!
Thursday, 8:00-8:30 pm:	Chapel service
Friday, 5:15-6:15 pm:	Talent Show in Brookfield

Please check the bulletin board on the porch for daily details and notices of changes or additions.

There will be a brief meeting for parents, children, and staff on Saturday at 5:15 pm in Elliott, immediately after the Star Island Orientation Meeting. All parents with children in the Archi Pelagos program are required to attend.

LECTURE ABSTRACTS AND BIOSKETCHES

SATURDAY EVENING

IS NATURE ENOUGH? THE SEARCH FOR TRANSCENDENCE – AN INTRODUCTION

Michael Cavanaugh

ABSTRACT

The first evening introduces the conference theme and the speakers. After some comments on the nature of the Star Island Conferences, a first approximation of what the terms "nature" and "transcendence" mean will be presented.

Nature: While we could take either a historical or a cultural approach to the various meanings of "nature" that have prevailed, this first approximation will simply list some meanings that prevail *now*, which often conflict with one another and confuse the discussion if they are not teased apart and clarified. For example nature can mean 1) That which contrasts to the super-natural; 2) Everything that exists, including what has traditionally been understood to be part of both God and humanity; 3) That part of earth's processes and activities which has nothing to do with humans; 4) That which happens in human life, excluding the parts we consider unhealthy or perverted or "unnatural."

Transcendence can likewise mean different things, including 1) The process of interacting with God or the Divine or the Ultimate; 2) A recognition that the whole is more than the sum of its parts, leading to the claim that the universe itself is transcendent; 3) Trying to go further back than we can really go, in some versions leading to the claim that transcendence is an empty class or an invalid term; 4) A state of mind, completely within the realm of nature, which has been called "horizontal transcendence" and would presumably include the kind of transcending we routinely do here on Star Island; and finally 5) that we exceed our own expectations and thus "transcend" our usual expectations of ourselves, especially in social contexts.

BIOSKETCH

Michael Cavanaugh (born 1944) practiced law until he was 40 when, with his wife Carolyn's much-appreciated support, he began to concentrate on making personal sense out of the science/religion interaction. University Press of America published his book on the subject in 1996 (*Biotheology: A New Synthesis of Science and Religion*), and during the research for that book he discovered first *Zygon: Journal of Religion and Science*, co-published by IRAS, and then IRAS itself – he joined IRAS in 1993 and first came to Star Island in 1994. Besides law and science/religion issues, his interests include two long-term discussion groups, birding, genealogy, investment, and trying to return to Carolyn just a portion of the support she provides him, by helping in all her various pursuits. Michael and Carolyn have no children and no television, but somehow this doesn't seem to give them more time than anyone else has – one of their goals during the next few years is to take a year-long sabbatical from all their commitments, before deciding how to live out their remaining years with joy and meaning.

SUNDAY MORNING

IS NATURE ENOUGH?

Jack Haught

ABSTRACT

After briefly reviewing the tenets of "naturalism," I will raise questions about its sufficiency as a worldview from the point of view of rational consistency, explanatory adequacy and spiritual resourcefulness. Is nature enough, in other words, to satisfy the human longing for ultimate coherence, explanation and meaning? Or is it possible that in the pursuit of these goals we are still rightly guided by many of the religious traditions of the world to extend our reach beyond "nature," especially as the latter notion is understood in an age of science? I will approach these questions by asking specifically whether there is a legitimate place for theological explanation in our accounting for life, intelligence and religion.

BIOSKETCH

John F. "Jack" Haught (Ph.D. Catholic University, 1970) is Professor of Theology and former departmental chair at Georgetown University. His specialization is systematic theology, with a particular interest in issues pertaining to science, cosmology, ecology, and religion. He is the author of several books, including *Responses to 101 Questions on God and Evolution* (2001); *God After Darwin: A Theology of Evolution* (2000); *Science and Religion: From Conflict to Conversation* (1995); *The Promise of Nature: Ecology and Cosmic Purpose* (1993); *Mystery and Promise: A Theology of Revelation* (1993); *What Is Religion?* (1990); *The Cosmic Adventure* (1984); and *Nature and Purpose* (1980); as well as numerous articles. His next book, *Deeper than Darwin: Evolution and the Question of God* will be published next year by Westview Press. Haught lectures often on topics related to science, theology and ecology. He has recently established the Georgetown Center for the Study of Science and Religion. He and his wife Evelyn have two sons and live in Arlington, Va.

SUNDAY EVENING

NATURE IN CULTURE: AN EXCURSION THROUGH THE MENTAL WORLD OF PRIMATES

Volker Sommer

ABSTRACT

Look at your fingernails – and those of a gorilla. The remarkable similarity is due to the fact that, a couple of million years ago, we shared a common ancestor. Few people have a problem with this evolutionary perspective on our "hardware". However, to apply Darwinian theory to our "software" – our thoughts, wishes, fantasies, beliefs – is still met with much greater resistance. We could insist on the existence of a "mental rubicon" that divides humans and other animals. An evolutionary reconstruction of our mental universe, on the other hand, would force us to either

"zoomorphize" people or to "anthropomorphize" other animals – or to do both. Take, for example, "society." Evolutionary analysis reveals that humans tend to associate in ways that are greatly influenced by ecological conditions – throwing doubt on the idea of a "free will". However, non-human primate societies are also far from reflecting the execution of rigid innate programs since they also show a remarkable flexibility in response to varying environmental conditions. In order to find "true" culture, we will have to identify traits that are independent from environmental constraints. Increasing evidence for this is provided by studies of chimpanzees. These apes possess population-specific tool-kits and customs, which are often idiosyncratic and unique, indicating considerable cultural diversity across Africa. How cultural traits are transmitted is a matter of debate. The most efficient way would be social transmission via imitation and teaching – but this would require the ability to understand what somebody else is intending to do. "Aping" would thus be far from being a "cheap trick". Instead, those who are able to truly imitate would have to possess a "theory of mind". Various other complex behavioral patterns depend on this type of mental representation - in particular the ability to manipulate and deceive others, but also the ability to develop empathy and spiritual beliefs.

Primatologists and cognitive psychologists are heavily debating whether monkeys and apes can put themselves into the shoes of others. On the other hand, many of our actions, too, may be guided by much simpler mental processes than we tend to believe. In any case, the rubicon between the "cultured humans" and our "natural relatives" is quickly drying up as primatologists go on to learn more about our closest relatives.

BIOSKETCH

Volker Sommer is Professor of Evolutionary Anthropology in the University of London. Born in 1954, he studied biology, chemistry and theology in Germany. He received his Ph.D. in anthropology (1985) and habilitation in anthropology and primatology (1990) from the Georg-August-Universität, Göttingen, Germany, and served as Heisenberg-fellow of the German Research Council (1991-1996). He was a research associate at the University of California in Davis (1992-1994), and joined the Department of Anthropology, University College London, in 1996 where he is tutor for the MSc in Human Evolution and Behaviour.

Dr. Sommer has been involved in ongoing long-term field studies of the eco-ethology of langur monkeys in Rajasthan, India (since 1981), of white-handed gibbons in the Khao-Yai rainforest, Thailand (since 1990), and he is the principal investigator of the "Gashaka Primate Project" in Nigeria that studies monkeys and chimpanzees (since 1999). His main research interests include the evolution of social and sexual behavior in primates, cognition, and rituals. He has published more than 100 articles – scientific as well as popular – and more than a dozen books, including novels and poetry. He is amongst the best known science journalists in German-speaking countries, regularly featured by magazines (such as GEO, Stern, Natur, Die Zeit, Der Spiegel, FAZ, Die Welt, Bild der Bissenschaft), on radio, television and through numerous

public talks. His award-winning writings have been translated into English, Walloon, Italian, Spanish, Hindi, Korean and Japanese.

MONDAY MORNING

IS NATURE ENOUGH? A VIEW FROM RELIGIOUS NATURALISM

Jerome Stone

ABSTRACT

Religious naturalism has been receiving much attention recently in *Zygon*. Although it goes back to Santayana, Dewey, Wieman and Burhoe, with roots at least as far back as Spinoza, current writers, including some in IRAS, are developing this viewpoint, although not everyone uses the label. This presentation sets forth a suggested generic definition of religious naturalism broad enough to include all of these thinkers. Major divergences among these writers are explored and the current version of the speaker's own variety of religious naturalism, his "minimalist vision of transcendence" is sketched. Then it is noted that many of the standard issues in the science/religion dialogue that are faced by a theistic approach are seen to fade in significance for religious naturalism.

The presentation then makes some suggestions for our understanding of science, rationality, and empirical inquiry. 1) While scientific inquiry has a significant role, there are "transcognitive" abilities, such as insight and appreciation, which pass beyond the bounds of science as now understood. 2) We need a revised notion of rationality, including the distinctiveness and importance of empirical inquiry, as an alternative to the more extreme versions of postmodernism. Articulating the transactional nature of experience will help in refashioning this notion of rationality. 3) We need to practice speaking across the boundaries of our epistemic communities, valuing rational dissensus as well as consensus. 4) The nurture and education of appreciation especially needs to be stressed.

The possibility of the hermeneutics of religious traditions by religious naturalism is explored. Four things which religions often offer to morality are mentioned: challenging ideals, specificity of ideals, empowerment, and living with moral failure and a sense of value beyond morality. As an example of the appropriation of religious traditions, the issue of what Christians call grace and works and the Japanese Buddhists self-power and other-power is explored in Hindu, Buddhist, Jewish, Christian and Chinese traditions. Four hermeneutical principles are then abstracted from this discussion. Finally an approach to the issue of self and other power is delineated using the speaker's own minimalist naturalism.

BIOSKETCH

Dr. Stone taught philosophy at Kendall College in Evanston, IL from 1964-1981 and at William Rainey Harper College in Palatine, IL, from 1981-1999, specializing in Medical, Business, and Environmental Ethics, World Religions, and Logic. He received his MA and PhD in theology from the University of Chicago, his MDiv. From Andover Newton Theological School, and his BA from the University of Chicago. He is currently adjunct professor at

Meadville Lombard Theological School (Unitarian Universalist) teaching 20th Century American Liberal Theology and world religions survey. An ordained United Church of Christ minister, he has served as pastor for 17 years in Southborough, Mass., Danville, Ill. and Chicago. He is the author of *The Minimalist Vision of Transcendence: A Naturalist Philosophy of Religion* and co-editor of *The Chicago School of Theology – Pioneers in Religious Inquiry*, 2 vols., and articles in *Zygon* and other journals. He lives with Susan, his wife of 49 years, near two children and 2 grandchildren in Chicago.

MONDAY EVENING

CHAOS THEORY, PASCAL'S WAGER, AND
TRANSCENDENCE

Pranab Das

ABSTRACT

The great power of the sciences in general and physics in particular arises in large part from our expectations for a mechanistic, deterministic world. Since the ancient Greeks, it has been appreciated that absolute mechanism presents disturbing challenges to any sense of freedom (or even change) in the world. Lucretius suggested the "swerve" as a saving grace but science has generally left the disturbing issue of creativity unresponded to. I argue that we are in a position, ultimately, to make a Pascal's wager in favor of free choice. Making such a wager, however, undermines mechanical predictability and, hence, the basic assertions of the scientific project. It is possible that the deterministic unpredictability inherent in chaotic systems offers us a solution to this dilemma. Chaos theory shows us that arbitrarily small regions of uncertainty can hide arbitrarily large unpredictabilities of outcome. Hence, no analytic investigation can ever provide complete predictability in systems that are chaotic. One might make the argument that this kind of analytic unpredictability is a good candidate to cloak the connection point between mechanistic reality and transcendence. Grounded in the dynamics of the world, a chaotic mechanical system could allow for connection to the unpredictable, the truly free as long as the perturbations are sufficiently small. If we want to have a universe in which the ordinary, mechanical world is predictable but free choice and creativity nonetheless exist, we must posit the coexistence of two distinct kinds of reality. If truly free action exists (as distinct from simply complicated, random or not-yet-understood mechanisms), it must stem from a place that transcends the mechanistic, scientifically analyzable. Perhaps chaos offers us a way of thinking about where the connection between the two realms can live in such a way that it does not subvert either.

BIOSKETCH

Dr. Das was born in Boston and did his undergraduate work at Reed College with theses in both theoretical physics and international studies. His Ph.D. is from the University of Texas at Austin where he was a member of the Ilya Prigogine Center for Complex Systems. He was the first to show the presence of chaotic dynamics in a very small model neural network and has published several papers in that area. His academic work spans the fields of neuroscience, nonlinear dynamics and chaos theory, the

physics of granular materials, media studies and the history and the philosophy of science. Dr. Das is currently Chair of the Department of Physics at Elon University. His work there has been supported by many awards and grants including a Templeton Foundation Course Award and other private foundation funding as well as the National Endowment for the Humanities. His forthcoming book, *Science and Religion: Bridging the Gap*, will be released by Wadsworth in 2002. In the popular press, Pranab Das has written scores of newspaper columns and book reviews and is presently at work on two book projects entitled *Grappling Titans: The History of Science and Religion* and *Being Free: Mindfulness, Science and Human Freedom*.

TUESDAY MORNING

TRANSCENDENT NATURE AND THE EMERGENCE
OF HUMANNESS

(How I Gave up the Ghost and Learned to Love Evolution)

Terrence Deacon

ABSTRACT

The overwhelming majority of western religious thought is based on a metaphysics that is intrinsically dualistic, deterministic, and preformationist. In this view the world is an artifact formed from outside by an unfathomable intelligence and into which souls are thrust and later withdrawn. This is often treated as the only alternative to an even less inviting "clockwork metaphysics" in which there are only atoms careening through the vacuum, and all consciousness and value are but illusory epiphenomena. Current developments in physics, evolutionary biology, neuroscience, and complex systems research are beginning to articulate a rather different metaphysics of emergence which undermines many of these assumptions about the way the world works.

Emergence refers to the unprecedented unfolding of new structure and function in the world, and it is epitomized by evolutionary and mental processes, though it can be traced to less convoluted physical processes. Emergent phenomena are self-transcending and self-complexifying. Besides employing the concept of emergence to explain how material processes can be nonetheless creative, I will use it to suggest an approach to human consciousness, values, and our place in the cosmos that is based on this logic of immanent creativity.

The origins of humanness can only be adequately understood in terms of evolutionary emergence. The evolution of our novel form of linguistic communication, based on symbolic representation, has played a critical role in shaping hominid brains and has also presented humans with novel forms of conscious experience. This semiotic-biologic interaction is the source of many uniquely human predispositions that lead us to experience the world differently than other species. The ways that this has augmented cognition have further facilitated the elaboration of symbolic forms that make novel use of human brains, recruiting systems in entirely unprecedented ways, and affording juxtapositions of representational and emotional states which were previously mutually exclusive. Aesthetic, ethical, and spiritual sensibilities are just some of

the emergent forms of experiencing the world that result from such unprecedented synergies.

How we conceive of both spirit and the source of value in the world (including our cognizance of the ethical and the sacred) is about to be radically changed by these scientific revelations, and in ways that could ultimately lead to a new realignment of science and spiritual traditions. However, the fear of this new world often leads to a tendency to cling ever more tenaciously to the dualistic, deterministic, preformationist metaphysics we are familiar with. This tendency carries with it the danger of supporting increasingly insular belief systems, with a growing alienation from a physical world understood as dead clockwork, when in reality that physical world is the very stuff of which souls are made.

BIOSKETCH

Terrence W. Deacon received his PhD in Biological Anthropology from Harvard University in 1984. He was a professor at Harvard from 1984-1992; a professor at Boston University from 1992 -2002; research associate at Harvard Medical School 1992-2000; and is currently (as of July 1, 2002) a professor in the Department of Anthropology and the Program in Neuroscience at the University of California Berkeley. His research has focused on brain evolution and development, and particularly the neurobiology of language. He has also contributed to neural transplantation and stem cell research. Terry is the author of over 100 published works including the book *The Symbolic Species: The Co-Evolution of Language and the Brain* (W. W. Norton 1997) and he has a new book in press with W. W. Norton due out next year called *Homunculus*. He has been a frequent speaker at Star Island, a member and Vice President for Science of IRAS, and has contributed papers to a number of science and religion dialogue conferences and edited volumes, including a symposium at the Parliament of World's Religions in Cape Town South Africa (1999), which is published in *When Worlds Converge* edited by Matthews, Tucker, and Hefner (Open Court, 2002).

TUESDAY EVENING

ON LANDSCAPE, LANGUAGE, EMPATHY, AND IMAGINATION

Anne Spirn

ABSTRACT

Human survival depends upon adapting ourselves and our landscapes – cities, buildings, gardens, roadways, rivers, fields, forests – in new, life-sustaining ways, shaping contexts that reflect the interconnections of air, earth, water, life, and culture, that help us feel and understand these connections, landscapes that are functional, sustainable, meaningful, and artful. My career as landscape architect and planner, teacher, scholar, author, and photographer has been dedicated to advancing this goal. I once thought that the obstacle to achieving it was lack of knowledge, and I wrote my first book, *The Granite Garden: Urban Nature and Human Design*, to fill that void. After its publication in 1984, I was surprised by how many people, including scientists and naturalists, resisted or ignored the evidence that human settlements, including

cities, are part of the natural world. I have come to realize that ideas of nature and what is natural stem from strongly-held feelings and beliefs. These views are highly personal and varied, and changing them is not simply a matter of marshaling compelling verbal or mathematical arguments, but of reaching both mind and heart. I now believe that our survival as a species depends upon more than knowledge alone. Equally important are a sense of empathy – the projection of one's own consciousness into another being, thing, or place – and the power of imagination.

Gregory Bateson once said that humans must learn to speak the language "in terms of which living things are organized," in order to read the world not as discrete things, but as dynamic relations, and to practice the art of managing complex, living systems. Aldo Leopold wrote of the need for humans to "think like a mountain," to escape the short-sightedness that threatens the larger habitats of which humans are part. I wrote my book *The Language of Landscape* to describe such a language, its elements, grammar, and poetics and to suggest how it might be used.

The language of landscape prompts us to perceive and shape the landscape whole. Reading and speaking it fluently is a way to recognize the dialogues ongoing in a place, to appreciate other speakers' stories, to distinguish enduring dialogues from ephemeral ones, and to join the conversation. The language of landscape reminds us that nothing stays the same, that catastrophic shifts and cumulative changes shape the present. It permits us to perceive pasts we cannot otherwise experience, to anticipate the possible, to envision, choose, and shape the future.

BIOSKETCH

Anne Whiston Spirn is Professor of Landscape Architecture and Planning at MIT. She received a B.A. from Radcliffe College and an M.L.A. from the University of Pennsylvania. Before coming to MIT, Spirn taught at the University of Pennsylvania and Harvard. She is the award-winning author of several books, including *The Granite Garden: Urban Nature and Human Design* (Basic Books 1984) and *The Language of Landscape* (Yale 1998). Since 1984 she has worked in inner-city neighborhoods on the design of community open space and urban landscape plans. She is director of the West Philadelphia Landscape Project, which has integrated teaching, research, and community service since 1987. In November 1998, the Philadelphia School District named her Person of the Month for the Mill Creek Project, a five-year collaboration with teachers and students in an inner-city school. She was the recipient of the 2001 International Cosmos Prize for her contributions to the integration of nature and humankind.

WEDNESDAY MORNING

ARE THERE INTIMATIONS OF DIVINE TRANSCENDENCE IN OUR COSMIC COCOON?

Lawrence Fagg

ABSTRACT

An examination of the scriptures and doctrines of the major world religions certainly suggests that for the adherents of these religions nature has not been enough for millennia, and may not have been since the dawn of human

consciousness. I will support this belief, but in a modern context by discussing why such a claim might be reasonable in the light of what we know about some features of the physical universe and about theologies involving nature today.

As a basis for the discussion I will start with how I define transcendence and the distinction between it and immanence. I will suggest that perceptions of transcendence present a problem by the almost unavoidable tendency to think of it in spatial terms.

I will begin the body of the lecture by offering the concept of the universe we live in as a "cosmic cocoon". That is, I see us as being ensconced in a vast cosmic cocoon whose limits are defined on one extreme by the finite speed of light (defining the frontier of the observable universe) and on the other by the Heisenberg Uncertainty Principle specifying the limits of observability of the microscopic world. We live very roughly near the center of this vast scale. There are phenomena encompassed by this scale that, in the context of natural theology, I believe might be considered as pointers to a transcendent God. The first is quantum non-locality as observed in the many experiments based on the original Einstein, Podolsky, Rosen (EPR) thought experiment. The second is that as anything approaches the speed of light, according to relativity theory, its clock approaches cessation. The spacetime interval (not the space interval or the time interval separately) of a photon of light connecting any two points is zero.

My final observation concerning the physical world is that the facts of our cosmological future (e.g., possible asteroid collisions, the sun becoming a red giant star and enveloping the earth, and the accelerating expansion of the universe) in a sense force us to consider the possibility of transcendence and its relation to eschatology. This will lead to a discussion of transcendence as seen in the writings of selected mystics, theologians, and scholars of the western religions. Equally important is the majestic concept of transcendence in Vedantic scriptures and in the Bhagavad Gita as well as that expressed in the Tao Te Ching.

I will conclude by first observing that what I have discussed is primarily in the context of natural theology, but also has direct relevance to a theology of nature. Following theologian Thomas Torrance, I will argue that the two must be brought into closer coherence. Finally, I will point out how the thirst for transcendence can actually be considered a God-given blessing.

BIOSKETCH

Lawrence Fagg is a Research Professor of Nuclear Physics (retired) at the Catholic University of America (CUA) in Washington, DC. A graduate of the U.S. Military Academy, he has Masters Degrees in physics from the Universities of Maryland and Illinois and a PhD. in physics from Johns Hopkins University as well as an M.A. in religion from George Washington University. A Fellow of the American Physical Society, his professional career was spent mostly at the Naval Research Laboratory (NRL) and CUA, where he performed experiments in nuclear physics using particle accelerators in the US, Holland, and Germany. In 1974-5 he was Acting Director of the NRL Accelerator. This work resulted in the publication of some

65 papers in refereed journals, two monographs reviewing his field, and chapters in four edited books.

He is an Academic Fellow and former Vice-President of IRAS and the author of some 20 publications in science and religion, including articles in journals and edited books as well as three books: *Two Faces of Time*, *The Becoming of Time*, and *Electromagnetism and the Sacred: at the Frontier of Spirit and Matter*. He has lectured on the relevance of electromagnetism in theologies dealing with nature and on parallel time concepts in modern physics and the major world religions in the US, Canada, Germany, Italy, Holland, Denmark, and Poland.

WEDNESDAY EVENING

DARWIN'S CATHEDRAL: EVOLUTION, RELIGION, AND THE NATURE OF SOCIETY

David Sloan Wilson

ABSTRACT

Religious believers frequently compare their communities to a single organism or even to a social insect colony. Recent developments in evolutionary biology allow this comparison to be treated as a serious scientific hypothesis. Evolution occurs not only by mutational change but also by social groups becoming so functionally integrated that they become higher-level organisms in their own right. This transition, from groups OF organisms to groups AS organisms, may have (partially) occurred during human evolution in addition to the evolution of social insect colonies and metazoan organisms. *Darwin's Cathedral* is a book-length exploration of this hypothesis, explaining morality and religion as a product of evolution, providing a "social physiology" that enables human groups to function as adaptive units. Despite being a purely scientific theory of religion, the hypothesis remarkably affirms many religious values.

BIOSKETCH

David Sloan Wilson is an evolutionary biologist with a strong interest in human behavior. He has studied a diversity of subjects but is best known for championing multilevel selection theory, in which natural selection potentially operates at all levels of the biological hierarchy. He has published over 140 papers in psychology, anthropology, and philosophy journals in addition to biology journals. He is author of *The Natural Selection of Populations and Communities* (1980), *Unto Others: The Evolution and Psychology of Unselfish Behavior* (1998; with philosopher Elliott Sober), and *Darwin's Cathedral: evolution, religion, and the nature of society* (2002).

THURSDAY MORNING

A CONSILIENT FRAMEWORK FOR ETHICS AND MORALITY

Michael Cavanaugh

ABSTRACT

Although many persons have tried to construct a consistent and cohesive approach to ethics over the course of intellectual history, it probably was not possible to do it

before 1975. In order to construct such a framework, I will first review the two classic approaches to ethics, re-naming them for purposes of this talk. I will call one category "Inherent Ethics," and place four other theories under it (Theistic ethics, Sociobiological ethics, Contractualist and Kantian ethics, and Intuitionist Ethics). The second major category, "Consequentialist Ethics," will contain two remaining theories of ethics (Utilitarian ethics and Virtue ethics). Then I will re-organize all of these into a framework that seems to make more sense in light of modern biology. Although the framework will be favorably disposed toward a naturalistic approach to morality and ethics, it will also make room for more traditional approaches, as well as for modern critiques such as the feminist critique of ethics.

BIOSKETCH

See the Biosketch for the Saturday evening talk.

THURSDAY EVENING

PERSPECTIVES ON NATURE AND TRANSCENDENCE: HINDU AND SCIENTIFIC PERSPECTIVES

V.V. Raman

ABSTRACT

My assignment today is to reflect on this two part theme in two modes: First, from the Hindu framework, and then from my own perspective which has been colored or corrupted, enriched or expanded, as the case may be, by penetration into modern physics.

The first part of my talk will be to inform the audience on the notion of the Transcendent as envisioned by classical Hindu thinkers and mystics. I will present the views expressed in some of the Upanishads (canonical philosophical works) as well as in the Bhagavad Gita (the classic Hindu Book of Spiritual Wisdom).

Next, I will touch upon Nature and Transcendence from the perspective of physics: classical and current.

Finally I will share my own reflections on the topic, expounding on the idea that aside from Nature (classical physics), and Transcendence (traditional religion), there is a third element introduced in the history of ideas by 20th century physics.

BIOSKETCH

Varadaraja V. Raman received his Bachelor's and Master's degrees in Physics and Mathematics from the University of Calcutta, and his Ph.D. in Theoretical Physics from the Sorbonne (University of Paris). He served Rochester Institute of Technology for 33 years as Professor of Physics and Humanities before becoming Professor Emeritus and continuing to read, reflect, and write. He has been happily married for forty years plus to Marilu of Curaçao. They have two children, both in academia. He is an active participant in Science-Religion dialogues. Some of his books are listed elsewhere in this Orange Book.

FRIDAY MORNING

IS NATURE ENOUGH FOR YOU?

Closing Panel of Participants and Speakers

All participants and speakers are invited to review the week together and make brief closing summaries of how the week has impacted your life and ideas.

IRAS SEMINAR

In the IRAS Seminar, seminar leaders comment on a manuscript or recent book by a member (or members) of IRAS, followed by open discussion by all who would like to participate.

The book being reviewed this year is

Developing the Horizons of the Mind: Relational and Contextual Reasoning and the Resolution of Cognitive Conflicts

by K. Helmut Reich, to be published by Cambridge University Press. The three seminar sessions will be held in Marshman on Monday, Tuesday, and Wednesday from 1:40 to 2:40 pm. Invited responders will be John Albright, Barry Boggs, and Mladen Turk. Carol Albright will moderate.

DESCRIPTION

Reich's book focuses on the use of relational and contextual reasoning (RCR) as a way of dealing with issues that cannot successfully be resolved by the use of binary logic (either-or), or through reasoning by analogy or dialectical logic. Too often, people do attempt to solve such problems using these inappropriate methods, with unsatisfactory results. Reich explores the parameters of RCR, compares it with other methods of logic, examines the development of the ability to use this sort of reasoning, and provides examples of issues where RCR is the best approach to problem solving. It is especially useful in the science and religion dialogue.

PROCEDURE

On **Monday**, John Albright will present an overview of the book and Mladen Turk will comment from the perspective of logic. Each response will be followed by open discussion by all who would like to participate. Those who would like to stay beyond the 2:40 closing time may do so, since Marshman will remain available.

On **Tuesday**, Barry Boggs will respond from the perspective of developmental psychology, and open discussion will follow.

At the close of Tuesday's session, the group will select a focus topic for intensive discussion on **Wednesday**. Author Helmut Reich has prepared a list of sample issues especially suited to analysis through relational and contextual reasoning. Reich, who is hoping to assess the effectiveness of his work, will provide a final response.

BIOSKETCHES

Helmut Reich, who holds doctorates in both physics and electrical engineering (and is preparing one in the psychology of religion), served as a senior scientist in applied physics at the European Laboratory for Particle Physics (CERN) in Geneva, Switzerland, from 1955 to 1983. He was also a visiting researcher at Harvard, Brookhaven, and other labs.

In 1984, he began a second career, as a Senior Research Fellow at the School of Education at the University of Fribourg, Switzerland. His current main research interests

include the cognitive development of children, adolescents, and adults, in particular in the religious domain, and the relationship between science and religion. In 1997, he won the William James Award of the American Psychological Association for contributions to the psychology of religion. Helmut and his wife, Ursula, make their home in Montreux, on the shore of Lake Geneva.

John Albright served on the physics faculty at Florida State University for over 30 years. His research included high energy experimental physics at Fermilab, Brookhaven, and other labs. He won two all-university teaching awards and held a joint appointment in the Humanities Program. His undergraduate course on religion and science was one of the original five science-and-religion courses selected as exemplars by the John Templeton Foundation. In 1995 (after marrying Carol Albright) he relocated to Purdue University Calumet, near Chicago. While serving as department chair there, he also worked with Carol for almost seven years as a regional co-director in the Religion and Science Course Program.

William Barry Boggs was educated at Rhodes College, the Chicago Theological Seminary, and Vanderbilt University, where he completed a doctorate in child clinical psychology. He is the principal in his own consulting firm, Applied Behavioral and Cognitive Sciences, P.C., consults with various Tennessee agencies concerned with child welfare, and conducts workshops for professionals and parents. He has authored numerous reports and studies on the welfare of children, and has completed a manuscript entitled *Natural Spirituality*, in which he explores the emergence of spirituality in the preschool child. Barry, his wife, Elizabeth, and their two younger children live in Memphis, TN.

Mladen Turk is co-author of the standard text for undergraduate courses in logic in his native Croatia. Mladen's foundational training took place there. He served as a clergyman in the Croatian Lutheran Church in the early 90s – a difficult time – and became national president of the association of pastors. He earned a Master of Philosophy degree from the University of Bergen, Norway, and a Master of Theology degree from Lutheran School of Theology at Chicago where he currently works on his PhD dissertation, "Constructivist and Structuralist theories of Religion." Mladen and his wife, Barbara, and their son, Mihovil, live in Chicago.

Moderator **Carol Rausch Albright** was executive editor of *Zygon* for nine years, and a regional co-director of the JTF/CTNS Religion and Science Course Program for six. Currently president of the American Theological Society, Midwest Region, and treasurer of the Center for Advanced Study in Religion and Science, Albright has written or edited several books in religion and science, of which the best known is *The Humanizing Brain*, co-authored with the late James B. Ashbrook.

IRAS WORKSHOPS

In IRAS Workshops, topics related to the conference or of continuing general interest are explored and discussed in small groups.

WHEN NATURE IS TOO MUCH: TRANSCENDENCE, TRANSGRESSION, AND THE TRANSFINITE

Monday and Tuesday, 4-5
Marshman

Stacey E. Ake

When people speak of theological naturalism, they speak as human beings (subjects) looking at nature (an object). In so doing, are they not perhaps ignoring one very important kind of nature: human nature? In this workshop, I hope to facilitate a discussion of the limitations of theological naturalism given the nature of human nature. I also hope to explore the relationship between contemporary theological naturalism and traditional paganism as well as to consider the following questions: Does "theistic" religion result because of some aspect or limitation of human nature? Is theological naturalism a product of the domestication of nature? How do we respond to the excesses of an uncontrollable nature? Please note: this workshop will take the form of a facilitated discussion. It is not a presentation or a lecture, so please come prepared with your own ideas, inspirations, poems, literature, and so on.

BIOSKETCH

Stacey E. Ake is editor of Metanexus Online, the internet presence of the Metanexus Institute on Religion and Science located in Philadelphia, Pennsylvania. Her interests include the philosophy of Soren Kierkegaard, the theology of Dietrich Bonhoeffer, the genetics of E. coli and other wee beasties, the semiotics of C. S. Peirce, the literature of Walker Percy, and the pursuit of the perfect curve ball.

MUSIC FOR GUITAR

Friday, 2:50-3:50
Chapel

Helen Avakian and Terry Champlin

Helen and Terry will play classical/flamenco guitar duets, do a bit of singing, and talk about their work in celebration of the life of Barbara Avakian.

BIOSKETCHES

Helen Avakian is a versatile musician, performing on her own and with various groups ranging from orchestras to folk/rock bands. She has appeared at Lincoln Center's Avery Fisher Hall, and on PBS television. She shared the stage with actors Vanessa and Rachel Redgrave as the guitarist in their production of "Sarah Bernhardt Comes to Town." She is an accompanist for the Flamenco dance program at Bard College, as well as a guitar instructor for Dutchess Community College. Her CD, "Vanishing Point," was voted Favorite Recording by Rhythm and News Magazine.

Terry Champlin was originally educated as a theoretical physicist at MIT, then switched to music at the age of 21.

He has written over 100 pieces for all mediums, from orchestra to solo classical guitar. His music has been performed in Korea, Japan, Mexico, Greece and throughout Europe. He has performed in Carnegie Recital Hall, at Avery Fischer Hall, with the Concord String Quartet, at the Bar Harbor New Music Festival, and in the Fairbanks Music Festival. Several of his recordings have been released on the "Viennese Modern Masters" label. He has been frequently featured on WNYC where he has presented many of his own works, and his compositions have been broadcast on the "Ars Nova" television series. In addition, Mr. Champlin has done extensive editing and arranging, working with, among others, Alan Hovhaness, William Schumann, and David Amram. He teaches at Vassar College and the Mannes College of Music. His arrangements of music from the classical and romantic masters are often featured in his performances.

TRANSCENDENCE, OR "WHO AM I?"

Tuesday, Wednesday, Thursday, Friday, 2:50-3:50
Elliott

Paul Bernstein

This workshop understands the 'thirst for transcendence' as meaningfully related to the modern's 'midlife crisis', and to the ancient's 'dark night of the soul'. One contributor to all of them is the two-edged nature of our ego-identity — first our ego empowers us but, eventually, it can limit us. In this workshop we examine how psychotherapy and/or love, by helping people transcend patterns established early in life, also have the potential to help them transcend certain aspects of their ego-identity. That, in turn, opens them to experience what religions call spirituality, what philosophers call numinosity, and what we ordinary folk call ecstasy, intuition, and profound peace. [It is highly recommended that attendees read ahead of time the xeroxed dialog, "Life's 3 Stages: Infancy, Ego, and Transcendence," available free at the IRAS Book Table in the hotel lobby. Any session can be attended without having attended those that precede it.]

BIOSKETCH

Paul Bernstein's academic education includes a Stanford University social science doctorate and a University of Michigan biology degree. His psycho-spiritual education has included mediumship, Findhorn, est, Tai Chi and Qi Gong, Silva Method, Re-evaluation Counseling, and transcendental meditation; as well as exposure to shamanism, Hawaiian Huna, Buddhism, Jungian therapy, kundalini and hatha yoga. His research experience has included organizational democratization, dolphin cognition, alien abduction, and cultural reporting. He currently serves on the board of the International Association for Near-Death Studies and is the editor of their newsletter, *Vital Signs*.

MAKE IT HAPPEN!

Wednesday, 2:50-3:50
Sandpiper Room

Elizabeth Bjorkman

Would you like to have a Star Island Conference on _____? Come and fill in the blank with your plan and/or ideas, and suggestions for speakers. Or just come and think out loud about what you would like to explore at future conferences. Your Long Range Conference Planning Committee wants your input and will try to help connect ideas and people to make your suggestions happen.

Moderated by **Elizabeth Bjorkman** on behalf of the IRAS Council and Long Range Conference Planning Committee, of which she is a member.

NATURE: FINDING WHAT IS OURS

Wednesday, 4-5
Elliott

Paul H. Carr

"Getting and spending we lay waste our powers
Little do we find in nature that is ours"

–Wordsworth

We will see photographs of spectacular Star Island and Swiss sunsets together with the beauty of Star Island flowers and Caribbean seas. Captions include nature poetry and Thoreau wisdom. I hope to share the transcendent serenity I experience while viewing clouds, mountains, and fall colors reflected in New England Lakes. "Water indeed reflects heaven." (Thoreau) We will discuss Thoreau's pantheist belief that the Divine is manifest in nature but also transcends it, as well as Wordsworth's phrase above. I exhibited these photographs at the Marblehead Arts Association in March 2002.

BIOSKETCH

Paul H. Carr has presented workshops at Star Island since 1998 and has taught a philosophy course "Science and Religion: Cosmos to Consciousness" at the University of Massachusetts Lowell. He organized the Science and Religion Session of the International Paul Tillich Society Conference in New Harmony, IN, as well as presenting the paper "Science and Religion: Original Unity and the Courage to Create," published in the June 2001 issue of *Zygon*. In his former life, he led the Component Technology Branch of the Air Force Research Laboratory, which did research and development on microwave ultrasound, surface acoustic waves, superconductors, and laser activated antennas. He is a Life Fellow of the Institute of Electrical and Electronic Engineers and a Life Member of the American Physical Society. He earned his Ph.D. in physics from Brandeis University and his M.S. and B.S. from MIT.

EVERYTHING YOU ALWAYS WANTED TO KNOW
ABOUT RELIGIOUS NATURALISTS – AND SOME
THINGS YOU DIDN'T

Thursday 2:50-3:50
Marshman

Jeff Dahms

Philosophic naturalists often have life attitudes/values that they or others sometimes characterize as religious. What is less understood are the kinds of personal aesthetic and value choices that underlie that non-theistic vision. There is much more to it than they looked into their telescopes or microscope and "kinda felt warm and fuzzy." So how do they get there? Are America's philosophic minority just phase locked adolescents forever living out pointless rebellion? Is it a grab for 'cool' – a little identity achieved cheaply by wearing one's philosophic baseball cap backwards? Philosophic naturalists are rarely simply failed believers – just couldn't in any conscience "do the faith and belief thing." They didn't take philosophy courses and figure the great syllogism. How differently do they feel about things? Well they sometimes feel things for example like: a theistic universe would feel like a second-class universe not worth calling home. How would someone feel like this about what for theists is usually the ultimate comfort? Come talk about the things in the psychological basement that really determine the edifices we build – life, death, moral choices, slow dancing, and how we get through the night.

BIOSKETCH

Jeff Dahms is an Australian NYC-based physician-surgeon and research scientist who works intermittently in primary care in developing countries. His scientific interests are in mind/brain evolution and the philosophy of science, particularly in the fundamental areas of physics and biology, and in relational areas such as the science/religion discussion. He is a fundamentalist philosophic naturalist who dances with theists.

TWO WORKSHOPS ON PHYSICS

Monday, 2:50-3:50, Newton Front
Thursday, 2:50-3:50, Pink Parlor

Herb Fried

Two workshops are planned. The first is entitled "An Apparent Convergence of Scientific and Religious Belief," and deals with the change in scientific procedure experimentally forced upon modern Physics because individual quarks and gluons cannot be measured. A brief introductory discussion will be given of the differences between measuring conventional charged particles (electrons, protons, photons) and the basic particles defining the strong/nuclear forces (quarks and gluons), resulting in a shift of scientific thinking to that of a "belief" status more usually found in religion.

The second Workshop, "Some New Ideas of Modern Physics" will deal with a handful of new ideas that are gradually becoming more relevant to modern scientific thought: An Accelerating Universe, Strings and Branes, Branes and a Fifth Dimension, and Essential Singularities in Laser-Particle Production.

No Math is needed; rather, only the willingness to grasp a few new ideas of Modern Physics.

BIOSKETCH

Herb Fried is a retired Professor of Theoretical Physics at Brown University, who continues a full research program and does occasional teaching at Brown. He is the author of three books on topics in Quantum Field Theory, a Director of ongoing Physics Workshops in France, and a Trustee of the American University of Paris.

IS BEING ALONE ENOUGH? THE THIRST FOR TERRESTRIAL TRANSCENDENCE

Sunday and Monday, 4-5
Elliott

Russ Genet and Cheryl Genet

A massive scientific search has been mounted to find Earth-like planets circling nearby stars, to detect evidence of life beyond Earth, and to receive signals from extraterrestrial civilizations. Extra-solar planets are now being discovered by the score, signs of other (probably simple) life is likely to be observed within a decade, and the search for extraterrestrial intelligence (SETI) is being intensified. Russ, an astronomer, will give a brief update on the scientific search, having just attended two key NASA conferences: Scientific Frontiers in Research on Extrasolar Planets, and Astrobiology Science Conference 2002. He also recently interviewed key researchers at the SETI Institute. When Earth-like planets are found and life elsewhere is detected, what effect, if any, might these discoveries have on our world views and religious perspectives? Cheryl, a religion and science doctoral student, will lead the discussion on the contemporary spiritual responses to our search for extraterrestrial life. What would finding such life mean to humanity? What does it tell us about ourselves that we can't resist searching for other life?

BIOSKETCH

Russ Genet, an astronomer, founded the Fairborn Observatory in 1979. He pioneered the development of robotic telescopes so he could sleep at night. Russ was the 51st president of the century-old Astronomical Society of the Pacific, and is the author of a half-dozen books on astronomy and robotics. He "retired" at 50 to study humanity—while camping on the beach in the South Pacific. There he wrote his most recent book, *The Chimpanzees Who Would Be Ants: The Evolutionary Epic of Humanity*. Russ is currently working on three more books. They are: (1) *The Epic of Evolution: Humanity's Cosmic Drama*, (2) *Kepler: The Search for Earth-Like Planets*, and (3) *Darwin's Unfinished Agenda: The Cultural Evolution of Humanity* (with cultural evolutionary expert Peter J. Richerson).

Cheryl Genet, a doctoral student at the Union Institute and University, is majoring in Science and Religion. Her areas of special interest include complexity, self-organization, emergent phenomena, process thought, and global community. Cheryl's Master's thesis, at California State University, Fullerton, was "Science and Theology Interface: A Comparison of Intelligent Design and Theistic Evolution." Cheryl taught both United States and World History at Central Arizona College, and has also taught religious education courses. Recent publications include "World Community: Our Search for a Global Cosmology"

(Journal of Faith and Science Exchange), "Photoelectric Photometry of the Bright Cepheid U Aqu" (Bulletin of the American Astronomical Society), and "Undergraduate Astronomical Research: Adventures in Photometry" (Proceedings of the Symposium On Telescope Science).

IS IT NATURAL TO BE MORAL?

Sunday, 2:50-3:50, Marshman
Monday, 2:50-3:50, Sandpiper Room

Ursula Goodenough

Social organisms are scripted to engage in various behaviors that stabilize communities, such as kin altruism, attention to hierarchy, and strategic reciprocity, behaviors that also promote self-interest. Pro-social emotions ("moral sentiments") such as empathy and friendship, which transcend self-interest, are evident in non-human primates. Terry Deacon and I are working with the idea that an emergent property of our symbolic human minds is the capacity for moral experience, the capacity to access, abstract, elaborate and combine such pro-social emotions. We are further exploring the notion that the attendant apperception of moral beauty, akin to but distinct from the apperception of aesthetic beauty, provides core motivation for such "virtues" as humaneness, fairmindedness, and reverence. A seminal role of religion, we suggest, is to offer idealizations of moral beauty that are resonant with human moral experience.

I will present these ideas in the first session; in the second session we will consider them together.

BIOSKETCH

Ursula Goodenough is Professor of Biology at Washington University, a past-president and currently a vice-president of IRAS, a frequent contributor to *Zygon*, author of *The Sacred Depths of Nature*, and co-chair of several previous IRAS conferences. The ideas to be considered in this workshop will feature in the proposed Star 2003 conference, tentatively entitled "Ecomorality," with co-chairs Brian Swimme and Mary Evelyn Tucker. She is here with her son, Thomas Goodenough Heuser.

RAMIFICATIONS OF INTENTIONALITY IN ANIMAL AND HUMAN BEHAVIOR

Tuesday, Wednesday, Friday, 4-5, Sandpiper Room

Thursday, 4-5, Pink Parlor

Ward Goodenough

Human ancestors, like other foraging and predatory animals, had to learn to interact with their environment in order to survive. Their behavior had to be guided by purpose and intention, further complicated by the requirements of social living. With language and culture, human purposes have been greatly multiplied and their management in the context of social living has become increasingly complicated. We shall explore how these complexities are expressed and managed in the major arenas of human activity. There will be four one-hour sessions: 1. the structure of human existence: activities and getting things done; 2. the four basic social modes of managing human purposes and the universality of social contract; 3. managing access to the means of livelihood and managing social order and harmony; 4. world view and the meaning of existence.

BIOSKETCH

Ward Goodenough is university professor emeritus of anthropology, University of Pennsylvania. He is a past president of IRAS and occasional contributor to *Zygon*. He is the author of several books, including the just published *Under Heaven's Brow: Pre-Christian Religious Tradition in Chuuk*. He is a member of the National Academy of Sciences, the American Philosophical Society, and the American Academy of Arts and Sciences.

WAS NATURE ENOUGH FOR EMERSON?

Sunday, 2:50-3:50
Sandpiper Room

Joan Goodwin

"I will be a naturalist," young Waldo Emerson wrote in his journal after visiting the Jardin des Plantes in Paris. He gave his first lecture series on natural history. Nature was the title of his first book and the topic of essays and poems to follow. Yet Emerson is known as a transcendentalist. We'll look at excerpts from his work and try to decide how he might answer the question raised by this conference.

BIOSKETCH

Joan Goodwin has been a member of IRAS for a number of years and currently serves as Council Secretary. She got interested in Emerson while doing research for her biography of Sarah Alden Ripley, Emerson's aunt, and has been reading his work and works about him ever since. The science/religion aspect of Emerson's thinking is an intriguing field for IRASians to explore.

THE BOOK OF JOB FROM A STANDPOINT IN RELIGIOUS NATURALISM

Tuesday, 2:50-3:50, Sandpiper Room
Wednesday, 2:50-3:50, Marshman

Walter Gulick

What if the divine voice from the whirlwind were heard as distinct from that God parody who negotiates with Satan and casually allows Job's children to be annihilated? What if the two figures of divinity were understood as representing alternative expressions of ultimacy in human experience? The book of Job too often has been read as supporting irrational theistic power and fear-driven blind faith. In this workshop it will be argued that the book is better seen as a brief for a species of religious naturalism. Contribute your unique perspective as we seek fresh insight into this classic search for meaning in a time of suffering.

BIOSKETCH

Walt Gulick is Professor Emeritus of Philosophy, Humanities and Religious Studies at Montana State University-Billings. The "Emeritus" was just added this spring, and since Walt has a post-retirement agreement for three years, it still seems like the title must belong to someone else. Some aspects of the workshop were included in an article Walt published in *Theology Today* in 1991.

NIGHTINGALES, ETERNITY AND COLORED CRYSTALS OF BURNT EARTH

Sunday and Monday, 4-5
Pink Parlor

Jason Keune

Olivier Messiaen, the twentieth century French composer, left behind as detailed and thorough a guide to his musical language as any composer ever has. In his works, he brings the listener into a weave of birdsong numerology, Catholic mysticism, music/color association, naturalism, Indian ragas and talas, and more. He surrounds the notes with words, texts, and poems that point the way to an ecophilosophical worldview that hangs in the midst of it all. In this two-part workshop, I will play a few of my favorite Messiaen recordings, accompany them with some details of the music's construction and share some ideas that emerge from the music that seem to soften the boundaries between nature and culture.

BIOSKETCH

Jason Keune just quit his job as organist at Emmanuel Episcopal Church in Stamford, Connecticut and moved to St. Louis for medical school. This summer, he's been studying exocytosis in PC12 cells in a lab at Washington University, playing hours of chamber music with his friends, and enjoying his mother's cooking.

A VALUABLE PERSONAL ORIENTATION

Wednesday and Thursday, 4-5
Marshman

Ernest Lane

Certainty. Uncertainty. Value. Outlook of science: receptivity to new information. Outlook of religion: value of eternal truth. How might the opposing orientations of science and religion be reconciled? Or be compatible? How might such compatibility relate to a fullness of life? What is a fundamental orientation for a fullness of life? Is it an outlook of reverence? love? compassion? responsibility? mindfulness? freedom?

This workshop will explore the role of openness and thankfulness in the full life. The discussion has implications for greater insight into the nature of the conflict and possibility for compatibility between the outlooks of science and religion.

BIOSKETCH

Ernest Lane was exposed in childhood to a surprising mix of religions---Judaism, Catholicism, Methodism. After medical training he practiced medicine for over thirty years, mostly in Oregon, with short stints in Asia, Africa, and at several Indian reservations. Through the years he came to realize that, though he was oriented toward a scientific outlook, many other individuals derive much value from their religious beliefs. On retirement in 1989 he devoted himself to a greater understanding of the science/religion conflict. This developed into publication of his first book, *God Unmasked*. A second book, *Silverstein, Levy, Lane*, an autobiography, tells of his quest for this understanding. Sometimes he doesn't quest. He has a wonderful wife, three married sons, and eight grandchildren. Also, he clears his mind with small scale farming: garlic and fir trees.

SORTING OUT CAVANAUGH

Friday, 2:50-3:50 and 4-5
Marshman

Ted Laurenson

In his lecture, Michael Cavanaugh will present a way of categorizing traditional distinctions in "metaethics", plus his own proposed synthesis. Since he will be attempting to say something worthwhile about some of the most debated issues in philosophy (and theology), what he offers will have to be controversial. In these sessions I will offer, if necessary, some of my own thoughts on what Michael says for the purpose of catalyzing additional discussion in the aftermath of a doubtless vigorous Q&A following his lecture, but the purpose of the workshop will be to analyze and extend his exploration in any direction the participants find engaging. While participants will be encouraged to bring to bear any level of sophistication they possess in moral philosophy, no particular background will be presumed, nor do I expect that we will reach a consensus except by accident. The title of the workshop is derived from R.M. Hare's recent book, *Sorting Out Ethics*. The discussion is scheduled to occur in back-to-back sessions, but it will last only as long as the participants are interested in pursuing it.

BIOSKETCH

Ted Laurenson practices corporate and securities law in New York City. At Amherst College he started out in psychology but became an anti-war political activist, sharpened his interest in philosophy and public policy and spent his last year doing an independent study project focusing on the intersection of political and ethical philosophy and psychology. Although he ultimately decided to go into the private practice of law, at Yale Law School he focused primarily on public policy issues and legal philosophy. He has always had a deep interest in science and, having fallen away from theism and Catholicism by the time he was 15, became a Unitarian Universalist in his mid-twenties. He found IRAS a natural home when he first started coming to Star in 1990. From 1993 to 1996 he did the conference write-ups for the newsletter, and he has been the newsletter editor since 2000. After a couple of false starts on other conference ideas, he co-chaired the 1999 Human Sexuality conference. He has served on the IRAS council since 1997. In recent years he has returned to his interests in moral and political philosophy, and reading and writing in the area occupies quite a lot of his spare time.

THE BIOMETAPHYSICS OF DIALOGUE

Tuesday, Wednesday, Thursday, 2:50-3:50
Newton Front

Louis Martin

The general concept is to provide one solution to the question of dialogue between Religion and Science. The first step is to put all human experience and knowing in a biological context: i.e., cognition as a function of the development and operation of the living (and evolved) brain. Step two is to create an historical frame for the occurrence of Dialogue, with emphasis on the characteristics of the pre-Galilean and post-Galilean world views. Step three is to focus on God in a metaphysics of

existence (more Thomistic than anything else), with a frame for the Dialogue ... emphasizing the context of Step One and Step Two. Process: hand out one-page outlines of each phase ... spend 20 minutes in presentation and clarification ... rest of time devoted to conversation. The context is realism (i.e., what concepts inform about a real world) rather than psychologism (i.e., what concepts do for us functionally or ritualistically).

BIOSKETCH

Louis C. Martin M.D. has spent his life more in the trenches than in academia. For the last 10 years he has been the psychiatrist for the Nebraska Forensic Mental Health Service. He grew up in Omaha and still lives there, with many adventures afield. Early training was philosophical ... followed by clinical and psychiatric experience. Struggles are with legal concepts of sanity and responsibility (which have invisibly small relationship to philosophical correctness), and with practical sanity (bureaucratic and clinical). Late in life (ahem), chief interests are in the science-religion dialogue

THE END AGING PROJECT

Wednesday, Thursday, Friday, 4-5
Parker

Ann Nozawa and Bob Schilling

Because the science is already being done, this workshop seeks to evaluate the feasibility, the desirability, and the challenges and opportunities of promoting a national "Curing Aging" project along the lines of the Manhattan and Apollo projects. We see Malcolm Gladwell's *The Tipping Point* (Little, Brown and Company, 2000) as relevant to the feasibility of such a project. Questions of ethics, economics, domestic and foreign policy, etc., may come up, but could it be done, and should it be done will be the main bases of discussion.

BIOSKETCHES

Ann Nozawa has adopted all the traditional female roles, including working as a nurse, RN, MS, for forty-two years before retiring a year ago. A significant part of her career was spent teaching nursing, giving her experience and continuing interest in adult education, curriculum planning, and that aspect of teaching which John Dewey refers to as the log with the teacher at one end and the student at the other. Far-left political and economic thinking has molded her behavior at times, giving rise to some of her most valued adventures. She is still searching for adventure, appropriate (or not) to her advancing age, while living life as an active and committed Unitarian Universalist.

Bob Schilling did two years of graduate work in sociology after being in the Korean War, but followed G. William Domhoff's advice, given in one of his textbooks, not to do it as a profession, the better to keep one's objectivity. Instead, in addition to being a relatively mild-mannered activist for civil rights in the 1960's (he never got locked up), and working as a school teacher and social worker, he worked as a nightclub musician for 25 years in the Washington D.C. area. A couple of years were spent playing at the Rotunda Restaurant at a time when that was the fanciest place in town. This "fly on the wall" opportunity to see and hear lobbyists and politicians up close did lots more than graduate school to reveal the way things work in business and government, and also to suggest what is possible. His acquaintances included Bobby Baker and Mark Russell, but

no conclusions should be drawn from this except as it bears upon the quality of his sociological "informants" at the time.

VERSES FOR LAUGHTER AND REFLECTION

Tuesday and Wednesday, 4-5
Pink Parlor

V.V. Raman and **Marilu Raman**

In this workshop we will be reading selections from V.V.'s book, *Random Rhymes and Various Verses*, which includes thoughtful couplets, philosophical poems, history of science in verse, funny lines, and other pieces. The general concept is to provoke thoughts and images through words and rhymes, based on the idea:

Thoughts sound good if sometimes
They are cast in old-fashioned rhymes

BIOSKETCHES

V. V. Raman is physicist, philosopher, and incorrigible versifier whose funny lines and serious poems have been published in different places.

Marilu Raman is a professor of mathematics at the National Technical Institute for the Deaf, and also serves as the primary inspiration for V. V.'s thoughts and writings. She edits and enjoys V.V.'s tireless verbal output, polishing them up and making them more presentable. She comes from the sunny island of Curacao and speaks Spanish, Dutch, and French as fluently as English.

THE NEO-TRANSCENDENTALISTS?

Sunday and Monday, 4-5
Sandpiper Room

Edmund Robinson

A stream of contemporary writers, though not scientists themselves, typically use nature as their canvass and weave into their observations traditional religious imagery and concepts. How does this strain of literature evoke the Transcendentalists of the nineteenth century and how does it differ? Attention will focus on Annie Dillard, with Mary Oliver making appearances as well.

BIOSKETCH

Edmund Robinson is a minister, lawyer, banjo picker, and dancer who lives in Arlington MA and is married to Jacqueline Schwab.

IS NATURE ENOUGH? AN ANSWER FROM TWO POETS

Sunday, Monday, Tuesday, Wednesday, Friday, 2:50-3:50
Pink Parlor

Robert Schaible

This workshop will look at some answers to the question posed by this conference as provided by two American poets. The poets we will read and discuss are A. R. Ammons and Mary Oliver. Both offer ways of talking about human transience and meaning in wholly naturalistic ways. Their perspectives are sometimes humorous, sometimes complex, sometimes celebratory, but always engaging.

BIOSKETCH

Bob Schaible is an Associate Professor of the Arts and Humanities at the University of Southern Maine. His teaching and scholarship are primarily interdisciplinary in the areas of literature, religion, and science.

TWO WORKSHOPS ON ADAPTIVE STRATEGIES

Thursday and Friday, 4-5
Elliott

Jeremy Sherman

Two workshops are planned. The first (Thursday), entitled "The Seven Wonderings of the Ancient and Modern World," asks: Is nature enough? For what? For a sense of joy and connectedness? Unitarians proved long ago that people can get that through congregational uplift regardless of consensus on cosmology. For guiding the perplexed? After religious certitude, some people suspect that nature's guidance is bound to be a bit of a let-down. Jeremy disagrees and presents a new interpretation of nature's enough-ness, focused not on adaptive hardwiring or an Omega Point, but rather on the universal tough judgment calls (Wonderings) that have bedeviled life since the beginning and drive all increases in fitness, whether through biological adaptation, learning, cognition, or culture. The approach engenders an appreciation for the good guidance we've accumulated and for our persistent perplexedness, thereby providing "spiritual" benefits that may satisfy secularists for whom God is no longer enough.

The second (Friday) is entitled "Mining our Intellectual Autobiographies." Evolutionary theory, being rich in implications, highly interpretable and culturally credible as pure-science has always been a tasty Rorschach blot upon which the human appetite for conviction-affirmation feasts. If it were metallurgy, we wouldn't debate its significance as heatedly. But it's not. It's the meaning of life-science, and we care what it turns out to say about us. Jeremy will offer a brief taxonomy of strategic moves people make in negotiating the dialectical relationship between strong appetite and scientific evidence. By self-revealing example, he'll initiate an open conversation about the practical and personal uses we make of the theory.

BIOSKETCH

Jeremy Sherman, PhD, came to evolutionary theory for consolation in mid-life crisis, and stayed because it was the richest vein he'd ever tapped for the meaning of life, for intellectual fun, and for figuring out what the hell to do with oneself. A multi-level selection theorist, attentive student of Terry Deacon, Jeremy is also a popularizer seeking to provide a subtler and more meaningful "Cliffnotes Darwinism," for people who won't brake for intellectual stimulation but will brake for ideas to make their lives better. Jeremy runs www.adaptivestrategies.net, a strategic consulting firm, and just completed his first book: *Doubt: A user's manual*.

THE GENES OF THE GODDESS: ON THE CONFLICT
OF THE SEXES AND THE ORIGIN OF RELIGION

Sunday and Monday, 2:50 - 3:50
Elliott

Volker Sommer

Religious beliefs take place in brains that have a long natural history – and it is unlikely that this history has not influenced the very way people believe in the supernatural. Of course, religion is notoriously difficult to define – but some associated features are often found. For example, rituals are often ostentatious, and they are mostly performed by males. Religious beliefs are also often constructed around dichotomies – such as good versus evil, life versus death, transcendence versus here and now, salvation versus damnation. A current theory tries to reconstruct the history of such pattern through a merger of paradigms from cultural and biological anthropology.

The starting point is the reproductive strategies of proto-human females who had to nurture increasingly encephalized infants. Because brain is an "expensive tissue," females needed to extract male provisioning. Coalitions of females are believed to have synchronized their menstrual cycles (a mechanism also found in other primate species), thus lowering male-male competition and encouraging group-hunting by males. A cyclical pattern of "sex-strike" (coinciding with menstruation and the dark-moon phase) was followed by a period of sexual activity and feasting (following hunts around full-moon) – a prototypical dichotomy of no versus yes. Archaic female coalitions manipulated males through signals that indicated non-availability. Body painting, transvestism and therioanthropic decoration induced collective illusions ("religion").

This model (C. Knight, C. Power & I. Watts, *Cambridge Archaeol. J.* 5: 75-114, 1995) sheds light on the origins of symbolic culture and language. Intersexual conflict provided the context to the origins of both rituals (which are costly, multi-media displays and thus "honest" signals directed towards males) and language (cheap signals used in kin-groups where the average overlap of interest is high). Palaeolithic matrifocal groups were replaced by patriarchal societies which developed with the advent of agriculture and societal stratification. High-ranking males were then able to wrest control over female sexuality and the structure of rituals. Males gained increasing spiritual power by mimicking female traits as e.g. reflected in circumcision rites (ritualised menstruation) and myths of child-bearing males.

BIOSKETCH

Volker Sommer is Professor for Evolutionary Anthropology in the University of London. His research interests include primate socio-ecology (fieldwork on monkeys and apes in Asia and Africa) and the function of rituals.

STAR ISLAND: SHAPING A LANDSCAPE OF
LEARNING, REFLECTION, MEMORY, AND WORSHIP

Thursday 4-5
Newton Front

Anne Spirn

See page 22, "Art as Experience," for the workshop description and biosketch.

RELIGIOUS NATURALISM IN INTRODUCTION TO
PHILOSOPHY CLASS

Sunday, 4-5
Marshman

Bill Stone

This workshop will brainstorm ways in which an Introduction to Philosophy class may discuss religious naturalism. Most introduction classes examine religious arguments and it is one of the few places that many students will hear the strengths and weaknesses of competing religious claims. I will briefly define religious naturalism according to *Zygon* contributors and ask the group members to propose ways to discuss the arguments of religious naturalism in an Introduction to Philosophy class setting.

BIOSKETCH

Bill Stone is a speech and philosophy instructor at Northeast Mississippi Community College. This is his third year at Star Island.

SONG

Thursday, 2:50-3:50
Chapel

Philemon Sturges

A decade ago I began a new and successful career writing children's books. To my mind children's stories are more than just for fun. They are vehicles for instilling 'myths', primal ideas, those notions (from Pegasus to Pooh) that dwell deep in our minds and emerge to instruct us as adults. In order to write lesser myths it's necessary to understand the greater myth. My effort to understand our great myth led me to the Epic of Evolution conference on Star Island in 1996. It was there that Eric Chaisson asked that I write the Epic in 3000 words or less so a kid could understand it. I said that I've just spent a week listening to Terry Deacon, Robert Wright, Ursula Goodenough, Loyal Rue, Phil Hefner, Mary Evelyn Tucker; Connie Barlow, Brian Swimme, and my fellow IRASians discuss the Epic and its cultural implications in enormous detail. I also said that it's clear that you experts are only beginning to understand it. How am I, a retired architect, supposed to make the Epic crystal clear to normal adults, never mind children?

Terry, Ursula, Loyal, and Connie urged me to try. Eric said he'd help. They all said they'd be readers to make certain that both the science and metaphysics will be right. Finally I agreed to try. But I said it would be at least 4000 words and not for kids. The reader at least had to have passed eighth grade science. "Good," said Loyal. "And," he added with his wry Mephistophelean smile, "like a true epic, it must be in verse!" I gasped... This is the result.

I'd like to read it once to a group of interested listeners and get as much feedback as possible. When I return from Star I will add finishing touches and select a publisher.

BIOSKETCH

Philemon Sturges, during his years as architect/planner, designed with his partners the waterfront-boat basin on Nantucket, produced the master plan for Historic Hill and waterfront in Newport and later designed the Visitor's Center there. He also designed the 'other side of the river' in Exeter, NH which included the town library and a 140 unit rehab and addition to Exeter Mill. During his long career he produced many schools, office buildings, houses, and multi-unit residential developments. In the recession of the late eighties things were slow. His best beloved, Judy Sue, (who teaches illustration at RISD and has a studio that produces children's books) asked him to write a story for one of her artists. He did, and *Ten Flashing Fireflies* received a three star review in *Kirkus*. A new career emerged. Now he has about 15 books in or about to be in print. He hopes *Song* will be among them soon.

ARGUMENTS FOR AND AGAINST MORAL AND ETHICAL SYSTEMS BASED ON SCIENCE AND TECHNOLOGY

Tuesday, Wednesday, & Friday, 4-5, Newton Front
Thursday 4-5, Lawrence

Paul Ulbrich

One of our greatest human challenges is to make coherent acceptable moral and ethical systems that are compatible with our expanding scientific and technical knowledge. This workshop will advocate the possibilities of using science as the universal language of ethics and morals. It will examine the scientific and technical limits of applied ethics and morals. It will ask questions about the coherency, congruency and interactions that are needed for well-functioning ethical and moral systems to interact rationally with science and technology. It will promote the concept that science and technology can and should be used to construct the questions and find the answers to our fundamental moral and ethical questions.

BIOSKETCH

Paul Ulbrich is a retired emergency physician who spent most of his career practicing and teaching emergency medicine on the south side of Chicago. He has had an interest in science and religion dialogue for the last 10 years. He has been a visiting scholar at the Zygon Center for Religion and Science and is now actively pursuing several diverse interests. For the last 10 years Paul has worked on creating systems of ethics that use sciences and technology as their foundation. He has given presentations of "Synesthetics" to the American Academy of Religion, taught courses on Pursuit of Consciousness at Du Page Community College. Lectured the freshman class of osteopathic medical students on "Taking a Sexual History," and made a presentation to the World Parliament of Religion in South Africa entitled: "An Estimate of the Number or Premature Deaths Prevented by Adherence to Religious Ethics."

HOW TO BE RELIGIOUS WITHOUT BELIEVING IN GOD -- AND WHY

Tuesday 4-5
Elliott

Matt Young

I once spent Yom Kippur (the Day of Atonement) at a scientific conference in York, England, the site where Jews were massacred in 1190 C. E. while the King was away fighting a religious war. My friend from Bell Labs spent the morning grilling me as to why I was fasting and why I observe many other Jewish rituals, since I have no belief in God or for that matter anything transcendental. Why then do I affiliate myself with religious humanism rather than secular humanism?

Here briefly are my answers to these questions. (1) People seem to need religion and ritual, and rationalism will probably never replace them. (2) Religion is too important to be left to the scriptural literalists. (3) The Jewish culture is very rich and comprises much more than religion. (4) We may transvalue the sancta of a religion or culture to make them meaningful to modern people. (5) We may be universalists, but we are also tribal animals and more able to communicate with people who share similar background and culture. I hope to discuss your answers and your reactions at the workshop.

BIOSKETCH

Matt Young is Adjunct Professor of Physics at the Colorado School of Mines, retired Physicist with the National Institute of Standards and Technology, Fellow of the Optical Society of America, winner of the Department of Commerce Gold and Silver Medals for work in optical communications, and a former Trustee of the Hillel Council of Colorado. He is the author of *No Sense of Obligation: Science and Religion in an Impersonal Universe*, 1stBooks Library, 2001, and two other books.

ART & EXPERIENCE

Anne Whiston Spirn

Star Island: Shaping a Landscape of Learning, Reflection, Memory, and Worship

Newton Front: Thursday, August 2, 2002; 4:00-5:00 p.m.

What is the nature of the Star Island landscape and the wonderful fit between the place itself and the various educational and spiritual programs that take place there? How can the landscape continue to sustain and enhance those programs in the future? And how can it be shaped deliberately to express the values of those who come there. This workshop will present a reading of the Star Island landscape in words and images and suggest an approach to its design and management based on the goals expressed by "Vision 2000: Charting the Future Direction of Star Island, An Updated Strategic Plan of the Star Island Corporation," March 2000 (available for review at the Front Desk). My hope is that it will enrich the discussion on these issues. I teach a course at MIT called "Reading and Telling Landscape: Photography as Inquiry," where we engage in an extended discussion on similar issues to those covered in this short session. In late June 2002 I spent several days on Star Island, photographing and writing. It is a landscape that presents rich material for reading and telling.

Artist's Statement

Photography is central to the way I see the world. I went into landscape architecture, originally, to support myself as a photographer. For over thirty years, landscape architecture has been my sphere of action, service, and scholarship; photography another way of knowing and telling. The beauty of ordinary things and phenomena motivates all my work: photography, landscape design and planning, writing, teaching. Landscapes speak to me. They are living and dynamic, not static scenes. Rocks, rivers, trees are actors, not props. I am drawn to photograph a landscape the way one might photograph a person: to capture their distinctive spirit, to reveal their history, to show the contexts that shape them. You won't see many people in my photographs, but their traces and the stories they tell are everywhere: in the landforms people shape, the paths they make, the soil they till and plants they tend, the structures they build, the places they dwell.

Photography, for me, is a disciplined way of seeing that fuses thinking and feeling. The act of selecting, then framing, a view makes me see and appreciate things I would otherwise miss. I try to see things fresh by ranging broadly, then gradually zeroing in, often drawn to a detail without knowing yet what the whole is, then coming to understand the whole through many significant details. Landscapes don't stand still. Wind, clouds, light, appearances are ever shifting. Like most photographers of landscape, I spend a lot of time waiting and often spend those minutes and hours writing in my journal, describing sights, sounds, smells, textures and reflecting on their import. Together, photographs and field notes form the basis for much of my writing.

Anne Whiston Spirn is Professor of Landscape Architecture and Planning at MIT. She received a B.A. from Radcliffe College and M.L.A. from the University of Pennsylvania. Before coming to MIT, Spirn taught at the University of Pennsylvania and Harvard. She is the award-winning author of several books, including *The Granite Garden: Urban Nature and Human Design* (Basic Books 1984) and *The Language of Landscape* (Yale 1998). Since 1984 she has worked in inner-city neighborhoods on the design of community open space and urban landscape plans. She is director of the West Philadelphia Landscape Project, which has integrated teaching, research, and community service since 1987. In November 1998, the Philadelphia School District named her Person of the Month for the Mill Creek Project, a five-year collaboration with teachers and students in an inner-city school. She was the recipient of the 2001 International Cosmos Prize for her contributions to the integration of nature and humankind.

CHAPEL AND CANDLELIGHT SERVICES MUSICAL POSTLUDES

Activities of the day begin right after breakfast each morning with chapel.
Scheduled activities of the day end with a candlelight service followed by musical postludes.

CHAPEL SERVICES 9 - 9:45 am

Barbara Whittaker-Johns will serve as our chaplain. The theme will be: *Enough Is Enough - Let Us Be at Home in the Universe*

Recent Star Island conferences have included reflection on the place of story in our spiritual and ethical appropriation of the "new cosmology." Among the various roles of story explored have been the use of narrative, ritual and the arts to help us internalize the transforming power of the scientific story of evolution. Recent conferences have also touched upon a link between the universe story and our personal stories of faith. In the chapel services we will explore the role of the big story of cosmogenesis and our personal stories in enabling us to satisfy our thirst for transcendence – for going beyond the everyday barriers that keep us asleep, untrusting, isolated, fearful. At the same time, we will acknowledge that countless beings and the earth have suffered enough from locating the transcendent outside of and in opposition to the natural universe. We will explore instead that the transcendent is the radically indwelling capacity of love to bring new life and a sense of being at home to us, to the people of the world, and to the planet.

Barbara Whittaker-Johns is Senior Minister of First Parish Unitarian Universalist Church in Arlington, MA, and has been in parish ministry for seventeen years. She studied for the ministry at Harvard Divinity School, and two years ago completed a Doctor of Ministry degree at the University of Creation Spirituality in Oakland, CA – a program started by the theologian Matthew Fox. Before becoming a minister, Barbara had a sixteen year career in education, earning a Master of Science degree in Special Education from Yeshiva University. She has been active in IRAS since 1984, serving as Chaplain in 1987 and 1993 and as Co-Chaplain in 1999 for the conference on Sexuality and Human Nature. She was Vice President for Conference Planning from 1989-1996. She comes to Star Island with her husband, Frank Toppa, and their thirteen year old child, Isaac Toppa, who has come to the IRAS conference every summer since he was a new-born. As a Maine native, however, Barbara remains the only Star Island polar bear in the family. She is grateful to have been asked again to be Chaplain this summer. Her reflections will be continuous with those of 1999 in exploring the redemptive role of story in enabling us to connect, personally, with the scientific epic of evolution; however, as she seeks to apply this approach to a new theme, she hopes this year's reflections will be – just enough.

CANDLELIGHT SERVICES 9:40 - 10:10 pm

Saturday: **William Falla** - "Divining the Divine"
Sunday: **Carol Orme-Johnson** - "Creating Community"

Monday: **Jason Kuene** - "...and Portsmouth is reduced to a string of multicolored lights on the horizon..."
Tuesday: **V.V. Raman** - "The Beneath, the Beyond, and the Bliss"
Wednesday: **Edmund Robinson and Marion Griswold** - "Will the Circle be Unbroken?"
Thursday: **Ann Friend** - "Thoughts on Rethinking the Human Place in Nature"
Friday: **Ursula Goodenough** - "Horizontal Transcendence"

MUSICAL POSTLUDES Saturday through Thursday 10:10 - 10:40 pm

A "musical offering" of recorded classical music will be a part of each day's schedule: a kind of reflective postlude to the day's events and efforts. These will take place in the chapel immediately following Candlelight. Each will last not more than 30 minutes, of which at least 20 minutes will be music. These sessions will be led alternately by Jason Keune and Thomas Heuser, who will provide introduction to and commentary on the music, all of which will be chosen to reflect in some way the context in which we find ourselves: in a chapel at a conference on an island in an ocean under a wide and starry sky with birds flying around. The music will tend towards the reflective (as befits the hour), will require no musical expertise to understand and appreciate, and will be unrelated to the music offered on other nights, so conferees may attend as frequently or infrequently as they choose.

Jason Keune is a violinist/violist and organist. For the past 5 years, he held the position of Organist and Music Director at Emmanuel Episcopal Church in Stamford, Connecticut. He recently moved to St. Louis for medical school.

Thomas Heuser is a pianist. He attends Vassar College, where he is pursuing a double major in Philosophy and Music Performance under the instruction of Columbian pianist Blanca Uribe.

The IRAS Choir

The IRAS Choir meets to rehearse on Monday through Friday immediately after lunch in the Pink Parlor. The choir is a lively and enthusiastic group, and looks forward to preparing music for the closing banquet, the talent show, and for a chapel service. All singers are warmly encouraged! Accomplished instrumentalists are welcomed with open arms! Speak to Jane Penfield if you have any doubts, and she will persuade you they are misplaced.

PEOPLE

Conference Planning Committee

Michael Cavanaugh	Cochair
Terrence Deacon	Cochair
Nancy Anschuetz	
Tanya Avakian	
Carolyn Cavanaugh	
Edwin C. "Ted" Laurenson	
Karl Peters	

Conference Administrators

Conference Coordinator	Nancy Anschuetz
Registrar	Bonnie Falla

Conference Facilitators

Announcements	Joan Hunter
Book Table	Ann Friend
Candlelight Coordinator	Betty Lau
Children's Program	Sandra Woodworth, Coordinator
Music Director	Jane Penfield
IRAS/Zygon Reception	Nancy Anschuetz
Program Pamphlet	Tom Gilbert
Social Hour Coordinator	Sara Sturges
<i>Star Beacon</i> Editor	Jane Bengtson
Talent Show	Bill Stone
Workshop Coordinator	Ursula Goodenough
Equipment Facilitator	Dave Pierson

Most of the facilitators are recruited on the Island. A more complete list of facilitators will be prepared for the banquet program pamphlet after we know who they are.

The successful functioning of the conference is utterly dependent on the facilitators. If you would like to become actively involved in the functioning of the conference and meet and work with new and old friends, the conference chairpersons and coordinator, choir director, and *Star Beacon* editor and production manager would like to hear from you.

IRAS Scholars

Paul Bernstein
Jon Lanman
Mark Patterson

IRAS Officers

Christopher Corbally	S.J.	President
Karl Peters		Immediate Past President
Mary Evelyn Tucker		Vice President, Religion

IRAS Officers (cont.)

Solomon Katz	Vice President, Science
Billy Grassie	Vice President, Interdisciplinary Affairs
Robert Schaible	Vice President, Conferences
Ursula Goodenough	Vice President, Development
Joan Goodwin	Secretary
Karl Peters	Treasurer

Elected Council Members

Elizabeth Bjorkman	Edward Lowry
Douglas Burton	Bruce Naylor
Michael Cavanaugh	Andrew Newburg
Billy Grassie	John Teske
John Grim	Mary Evelyn Tucker
Marion Griswold	Barry Werner
Rodney Holmes	Barbara Whittaker-Johns
Edwin C. Laurenson	

Other Council Members (Ex Officio)

Philip Hefner	<i>Zygon</i> Editor
Solomon Katz	CASIRAS Representative
Nancy Anschuetz	Conference Coordinator

Others with Official Responsibilities

Marjorie Davis	Historian/Parliamentarian
Paula Fangman	Membership Coordinator
Edwin C. Laurenson	Newsletter Editor
Douglas Burton	Webmaster
V.V. Raman	Discussion Groups Coordinator

Honorary Officers

Donald Harrington	Honorary Vice President
Macolm Sutherland	Honorary Vice President
Philip Hefner	Honorary Vice President
Karl Peters	Honorary Vice President
Solomon Katz	Honorary Vice President

Committee Chairs

Archives	Philip Hefner
Awards	Joan Goodwin
Development	Ursula Goodenough
Finance	Karl Peters
Internet	Billy Grassie
Long-Range Conf. Planning	Robert Schaible
Membership	Nancy Anschuetz
Newsletter	Ted Laurenson
Nominating	Nancy Houk
Publicity	Marion Griswold
Scholarship	William Falla

BOOKS FOR ADDITIONAL READING

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ACKNOWLEDGMENTS

We are grateful to our speakers and workshop leaders, and to those who said "yes" when we asked them to be facilitators — all of whom shared our enthusiasm for this conference and who generously contribute their time and talents without pay as they carry out the planning and innumerable tasks necessary for a successful conference.

We express our appreciation to the Star Island staff for the competent, courteous, and efficient way they take care of our needs and help make our week on the Island so rewarding.

We are also thankful for our conferees, many of whom let us know their ideas and appreciation for the topic in advance, and all of whom were so prompt in their registrations that the conference was full with a long waiting list by April 1 — one of your co-chairs (his name will not be mentioned, but his initials are MC) was convinced this was a cruel April Fool's joke annually played by the Registrar, but she assured him to the contrary. In other ways as well the conferees have been great, and it is of course for them primarily that IRAS sponsors this conference.

Finally, we appreciate the person who originally conceived the idea of the "Orange Book," has served as its editor for 12 years, and will turn the task over to Doug Burton next year — Tom Gilbert. Without the Orange Book to keep us all organized, our job would be almost impossible.

49th Annual IRAS Conference, "Is Nature Enough? *The Thirst for Transcendence*," Saturday, July 27, thru Friday, August 2, 2002

PERIOD	ACTIVITY	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Morning Activities: Chapel and Plenary Lectures								
8:00 -9:00 am	Breakfast							
9:00-9:45 am	Chapel	Barbara Whittaker-Johns, Conference Chaplain						
10:00-10:55 am	Lectures (El)	WELCOME TO STAR ISLAND	John Haught	Jerome Stone	Terry Deacon	Larry Fagg	Michael Cavanaugh	Conferee Comments & Speaker Responses
10:55-11:15 am	Break							
11:15-12:15 pm	Discussion							
12:30-1:30 pm	Lunch							
Afternoon Activities¹: Recreation², Seminar, Workshops, Free University³, and Socializing								
1:40-2:40 pm	Annual Meeting IRAS Seminar Free University	ARRIVING, GETTING SETTLED, GREETING FRIENDS, EXPLORING		IRAS Seminar-Ma	IRAS Seminar-Ma	IRAS Seminar-Ma	IRAS Annual Meeting	
2:50-3:50 pm	Session I Workshops		U. Goodenough-Ma Goodwin-Sp Schaible-PP Sommer-El	Fried-Nf U. Goodenough-Ma Schaible-PP Sommer-El	Bernstein-El Gulick-Sp Martin-Nf Schaible-PP	Bernstein-El Bjorkman-Sp Gulick-Ma Martin-Nf Schaible-PP	Bernstein-El Dahms-Ma Fried-PP Martin-Nf Sturges-Ch	Avakian/Champlin-Ch Bernstein-El Laurenson-Ma Schaible-PP
4:00-5:00 pm	Session II Workshops	MANDATORY STAR ISLAND ORIENTATION-4:00⁴ PARENTS MEETING-5:15⁵	Genet/Genet-El Keune-PP Robinson-Sp Stone-Ma	Ake-Ma Genet/Genet-El Keune-PP Robinson-Sp	Ake-Ma W. Goodenough-Sp Raman/Raman-PP Ulbrich-Nf Young-El	Carr-El W. Goodenough-Sp Lane-Ma Nozawa/Schilling-Pk Raman/Raman-PP Ulbrich-Nf	W. Goodenough-PP Lane-Ma Nozawa/Schilling-Pk Sherman-El Spirn-Nf Ulbrich-Lw	W. Goodenough-Sp Laurenson-Ma Nozawa/Schilling-Pk Sherman-El Ulbrich-Nf
5:30-6:30 pm	Happy Hour (Newton)				IRAS/Zygon Reception ⁶			
6:30-7:30 pm	Dinner					Lobster Dinner ⁷		Banquet
Evening Activities: Plenary Lectures, Candlelight Services, and Late Evening Activities								
7:30-9:30 pm	Lectures and Discussion	Michael Cavanaugh	Volker Sommer	Pranab Das	Anne Spirn	David Wilson	V.V. Raman	Talent
							Pelican Show ⁸	Show
9:40-10:10 pm	Candlelight⁹ Services (Ch)	Bill Falla	Carol Orme-Johnson	Jason Keune	V. V. Raman	Edmund Robinson & Marion Griswold	Ann Friend	
10:10 p - ?		Musical Postludes, Snacks, Conversations, Dancing, and Socializing¹⁰						Farewell Party (Newton)

¹Room abbreviations are: **Br** = Brookfield; **Ch** = Chapel; **El** = Elliott; **Lw** = Lawrence; **Ma** = Marshman; **Nb** = Newton back; **Nf** = Newton front; **Pk** = Parker; **PP** = Pink Parlor; **Sp** = Sandpiper; **WR** = Writing Room.

²There will be an excursion to Appledore Island on Monday afternoon. Please sign up on Sunday

³"Free University" and other activities organized by conferees will be announced on the Island and scheduled for the 1:40 to 2:40 pm period.

⁴The Star Island Orientation, conducted by the Star Island staff starting at 4 pm, is the one and only scheduled activity that is mandatory for all conferees.

⁵ All parents with children in the Archi Pelagos program, and their children, are required to attend a brief meeting at 5:15 pm in Elliott.

⁶The IRAS/Zygon reception is scheduled to start at 5:15 pm. All are invited; we urge you to join us. It will be followed by the Happy Hour starting at 5:30 pm.

⁷There will be a lobster dinner on Wednesday. Tickets are \$5.50 per person and must be purchased by Monday noon. **Lobster diners should be seated by 6:15 pm.**

⁸On Thursday evening the plenary session discussion ends at 8:55 pm, the Pelican show starts at 9:05 pm, and the Candlelight Service begins as soon as the Pelican Show is over.

⁹The Candlelight Services will be immediately followed by a half hour Musical Postlude (also in the chapel) on every night except Friday.

¹⁰The snack bar closes at 11 pm. Socializing and informal discussions can continue until dawn. There will be dancing in Brookfield after the Candlelight service.