



Star 2006: Emergence – Nature’s Mode of Creativity

Ursula Goodenough

Warm greetings to you all.

George Fisher and I are most excited about the upcoming conference. To our knowledge this is the first time ever that the topic of emergence will be given this kind of full-blown, two-year consideration, and it is certainly the first time that a conference will consider the concept in a religious/spiritual/philosophical context.

Things will begin with **Stuart Kauffman**, whose work at the Santa Fe Institute very much initiated the current wave of interest in emergence dynamics. Stu is a remarkable thinker and presence, and his 1997 book, *At Home in the Universe*, is a classic in multiple ways.

Stu’s development of emergence begins with chemistry, but last summer I became aware that a group of physicists has recently begun to consider emergent properties at the level of deep physics. I tried to read a layperson-pitched book by one of them but it was way over my head, and I’d given up on including this perspective at the conference until, in November, I heard **Michael Silberstein**, a philosopher, give a talk about it at a conference. He was able to explain the physics such that I felt I was at

least getting the drift, and his commentary on the implications of it all was truly fascinating. So, I rushed up afterwards and invited him to join us as a speaker.

We’ll next consider the emergent dynamics of the planet, where our guide will be **Michael Wysession**, whom some of you may remember from the Epic of Evolution conference in 1996. Michael and I teach an Epic of Evolution course together at Washington University so I can attest first-hand both to his astonishing knowledge about all things planetary and his splendid communication gifts. Through Michael I predict that you will come to understand the Earth for the first time.

And then we need to make life. **Bruce Weber**, a professor of science and natural philosophy and a life-long protein chemist, has moved increasingly into thinking about life’s origins from an emergentist perspective. He’s worked a lot with Terry Deacon on this, and will give us an unforgettable account of how nonlife-to-life transitions make deep sense when viewed through this lens.

At this point we will shift to **Gordon Kaufman**, one of the truly eminent theologians of our times and a Star 1996



IRAS choir singing at the Variety Show.

alumnus, who will suggest how God concepts can be coupled with the creative forces that generate the emergent natural world.

It's important to note at this juncture that while Gordon's talk is the first on religious subject matter, this will by no means be the first presentation of a religious perspective in the conference. **George Fisher** and his wife **Gretchen van Utt** will start each day with chapel reflections on religious connections to emergence in nature. Gretchen is pastor of Harundale Presbyterian Church, near Baltimore; George is emeritus professor of geology at Johns Hopkins, and is now teaching principally at the Ecumenical Institute of St. Mary's Seminary in Baltimore. Moreover, all of the speakers have been encouraged to weave religious and philosophical perspectives into their plenary presentations, and conferees representing various religious and philosophical traditions have been invited to open each post-break discussion hour with reflections on what we have been hearing.

But back to the science. I, **Ursula Goodenough**, will consider the remarkable breakthroughs in our understanding of embryo development and evolution that have occurred in the past few decades, embryology being basically a continuous manifestation of emergence, and will suggest that death is itself a necessary emergent outcome of our multicellular complexity.

Our dear friend **Terry Deacon** will continue with what will most assuredly be a fascinating consideration of how brain-based perception both develops and evolves as a consequence of emergence dynamics. Terry, it should be said, is both a highly trained neuroscientist and one of the foremost developers of emergence theory in our time, and his insights are sure to permeate every conversation. He and theologian Phil Clayton will be chairing the Star 2007 conference on emergence in the human.

Barb Smuts, who has graced us with her brilliant presence at several previous conferences, will take up the emergence of animal social behavior and explore the evolution of sociality, a backdrop for our consideration of human social dynamics in 2007, with a focus on primates and wolves/dogs.

And then, pulling much of this together, *Guy Hoelzer* will consider ecosystems, which he also calls evosystems, as emergent phenomena. Like Barb, Guy studies a variety

Getting to Star Island

This summer there will be two boats departing for Star Island from the port at Rye, New Hampshire at 2:00 pm and 3:30 pm on Saturday, July 29. To facilitate travel to Rye, several IRAS participants have offered to provide shuttle service between the C & J bus terminal at Pease International Tradeport and the port at Rye. If you wish to use this service, please send an email to Jack Dennis (dennis@csail.mit.org) giving your expected arrival mode and time at the bus terminal and your contact information, and we will confirm arrangements to help you. We will also try to provide service from downtown Portsmouth and possibly other nearby locations if that is needed. In addition Ursula Goodenough will coordinate travel by shared limousine trips from the Manchester and Boston (Logan) airports; contact her at ursula@biology2.wustl.edu.

of animals, including fish and macaques, and gives deep consideration to how groups of organisms interact with their environment to generate an ecology.

Last but hardly least, **Mary Evelyn Tucker** and **Brian Swimme**, both Star veterans who collaborate in much of their work and thought, will weave all of these themes in the context of their vision of a planetary civilization. Mary Evelyn and Brian have been deeply influenced by both Teilhard de Chardin and Thomas Berry, and Mary Evelyn founded and heads the Forum on Religion and Ecology.

If this isn't enough richness for one week, there is much more on offer. We have already received exciting workshop proposals from Jennifer Morgan who writes children's books on the Universe Story, and from Susan Sgorbati whose dance choreography is deeply influenced by the principles of emergence, and we hope to receive many other workshop proposals from those of you who register. Gillet Page, a professional artist, will be present in the Art Barn, and my musician-children Jessica and Thomas will augment the wonderful music programs developed by Jane Penfield.

We can't wait to see you all there, and to help open your minds, hearts, and spirits to this magnificent way of viewing nature's modes of creativity.

Hold an IRAS Workshop!

Andrew Millard, Workshop Coordinator

Have you got an idea that you'd like to share with other IRASians? Propose an afternoon workshop for Star Island this Summer!

If you'd like to give an afternoon workshop during the conference, just write to webmaster@iras.org by 15th May, including both a summary of what you'd like to cover in your workshop and a brief biographical sketch of yourself. Models for both can be found in previous conference books at

<http://www.iras.org/pastconf.html>

The conference co-chairs and workshop coordinator will schedule a selection of afternoon workshops from the proposals based on thematic considerations and the availability of space. Other proposals can be scheduled for the daily "Free University" hour once the conference has begun.

For more information, please see <http://www.iras.org/irasfaq.txt>

President's Letter

What's Cooking?

John Teske

Dear Friends,

A dinner for international students was the occasion for my last big batch of *gumbo*, trying to better connect some of these students to a fuller Etats Unis than the wilds of Penn's Woods. So Buddhists from Nepal and Sri Lanka, Hindus from India, Christians from Ecuador, Mexico, and Japan, a quiet Moroccan, and a token *philosophe* from Spain entered my candle-lit home, with my wall of *masques*, to the sound of Delta Blues, the smell of my ersatz Cajun cooking, and my "Welcome to N'Awlins." In the febrile stew of my own mind, this is a trope to talk about what is cooking in IRAS, and its relationship to the wider communities we serve. The take-home message is this: The multiple levels of emergence, the topic of this summer's conference, include crucial contemporary issues across a number of disciplines, and have direct application to the dialogue between religion and science, as well as to our lives of meaning as humans. Hence our embarkation on a two-year cycle of Star Island conferences on this topic.

You are wanted, each and every one, to pull your oar. We are a community, which is one of the things that make us uniquely valuable. That means we are all a part of whatever success or failure we have, and of the future of our IRAS mission. Come to the conference if you can, help us get the word out to everyone we should, make the personal appeals and individual contacts that are really our heart, and jump in whenever and however you think to help our momentum.

By whatever gracious accident, my seafood gumbo was reduced from its initial gallons to a mason jar of leftovers. When asked what was in it, I confessed that the major ingredient is really okra, without which it isn't really *gumbo*. Of course it isn't *nothing but* okra, as there is something else. Like most Cajun cooking, it starts with a *roux*, which really is nothing but flour and vegetable oil. Well, not quite: After a half hour on a low flame, my spatula sliding back and forth until it takes on a deep mahogany hue, it is *something more*. The ingredients in a particular relationship, over a long enough period of time, do become something quite different than they were alone. A few vegetables sautéed in the *roux*, and then simmered a few hours with okra and chopped tomatoes, in a stock with bay leaves, thyme, cayenne, and then another half hour with shrimp and catfish, topped with ground cloves and a little file, and poured over some rice, and it is so fine!

Anything emergent is a consequence of these kinds of natural relationships, out of which comes creation, causality, morality, and even human meanings and purposes, just as a gumbo comes from a particular marriage of a *roux*, a few vegetables, and some ordinary bayou seafood. It is in the



discipline of a particular process by which this comes about, and a rigorous understanding of this process, the role of emergence in cosmic evolution, the origins of life, of brains, social conventions, and ecosystems that can so richly inform how we understand and interpret our religious understandings, and our worldviews as a whole. This is the meal that will be spread before us this summer, a meal to which we are all invited, and encouraged to welcome others who may hunger for such a meal. And hunger they do: Part of our appeal is to those who struggle with the integrations of science with their own religions and worldviews because it matters not just in how they think, but to how they live and breathe.

On this other level of emergence, it is the people involved, and how they are changed, made *something more* that is our most profound challenge. Having the ingredients, doing the cooking, preparing our welcome, is a huge intellectual challenge, and we have some of the best minds in a range of disciplines to help us with this: Stuart Kauffman on complexity, Michael Silberstein on physics, Michael Wyssession on planetary structures, Bruce Weber on the emergence of life, Ursula Goodenough on embryos and death, Terrence Deacon on brain evolution, Barbara Smuts on animals and social convention, Guy Hoelzer on ecosystems, rounded out by the bigger interpretive pictures of Gordon Kaufman on God as creativity, Mary

IRAS Makes News!

The theme of the 30th IRAS Star Island conference in 1983 was: "What Is and What Makes a Person? Consequences of Current Genetic Research for Scientific and Religious Evaluations of Human Nature." It was a time when then-Congressman Al Gore advocated a Presidential commission on genetic engineering, and when American church leaders signed a statement urging a curb on genetic research.

As usual, both scientists and religionists gave lectures at the conference. At week's end IRAS made public a statement giving the scientific background on such research as well as a set of recommendations: 1) Genetic engineering in humans should be directed only to gene therapy: the cure or amelioration of disease; 2) Gene therapy should be undertaken only after careful assessment of possible harms and likely benefits; 3) Regulations should be developed, but they should not impede the development, or delay the availability, of beneficial medical treatments; 4) Science writers should be encouraged to make information available to the general public regarding advances in gene therapy and concerning regulations bearing on the subject; 5) A continuing commission should be established, composed not only of scientists and physicians, but also of lawyers, ethicists, and lay persons, to review the moral and public policy issues raised by future advances, or likely advances, in molecular genetics and gene therapy.

At least three newspapers carried stories on the conference: *The New York Times*, the *Orlando Sentinel*, and an Australian paper, *The Leader*. Now, a quarter-century later, the controversy continues!

Joan Goodwin, IRAS historian

Evelyn Tucker on religion and ecology, and Brian Swimme on planetary civilization. Wow. Who would miss this?

Unfortunately, like my international gumbo dinner, everyone has to get to it. We Irasians too must be concerned about our own logistics, of ferries and housing and supporting housing, and education, and our moving rituals, but also about our own longer term strategies. One of the things the Council empowered me to do at our Mid-winter meeting is to form a Committee on Venue. We know this year is a risky experiment. Despite our optimism and our efforts to produce a fuller Star Island conference, we do have to consider, succeed or fail, whether we can continue to do this in the long run. Why do people come to a particular IRAS conference on Star Island, and why do they not? Do we have the fullness of participation of our membership and those we inspire to join us to sustain this expanded relationship? What are our other options? Do we need to think about our particular conference themes and their diversity? Should we consider sharing our island week with another group, or is it time to explore other venues? Things grow and change, and

out of challenges and tensions something more can still come, from the particular way that we form, maintain, and grow our relationships. We'll be working on this, to be sure, before, during, and after Star Island. As Barbara Whittaker-Johns pointed out last year, being part of this community, exploring religions and growing spiritually in an age of science can be a frustrating and difficult task, all the more reason that we need to sustain and grow our wonderfully trusting and open community. We share the risk, we share the anxiety, as much as we share our accomplishments and our failings. For me, it is the faith in our larger project that makes this possible.

My little cajun-fest for international students, and my nurturance of ongoing and future relationships with this group, is really just a tiny part of the wider educational enterprise of my College. So IRAS, encompassing the idea-fests of our annual conferences, the intellectual salons of our burgeoning interest groups, and even the library of resources represented by *Zygon*, is part of a larger cultural project. In the midst of natural devastations, the ecological difficulties faced on our planet, and the worldwide ideological, geopolitical and economic tensions of an unfortunately quite natural human sort, we humans have need to understand the sense and meaning of their lives when science needs to be allied with the ethical guidance historically, but not necessarily, provided largely by Religion.

There is ferment in the world of public intellectual culture. Must empirical investigation of religion as a natural phenomenon result in *Breaking the Spell* of religion, to use Daniel Dennett's phrase? Perhaps only if religion is conceived as little more than a belief in commerce with supernatural agents; but is that the baby, or the bathwater, and how can we tell? Or can we have *Reenchantment Without the Supernatural*, to use David Ray Griffin's earlier book title? The origins of religion, how religion itself emerges, is certainly one aspect of this debate. I happily enjoyed watching international students glancing through my new copies of *Zygon*, the issues of *Science and Spirit*, and the new "emergence" issue of *Science and Theology News* sitting on my coffee table. Even more pleasing was their curiosity about a bookshelf full my own reading on the origins of religion: Boyer's *Religion Explained*, Atran's *In Gods We Trust*, McCauley and Lawson's *Bringing Ritual to Mind*, Lewis-Williams and Pearce's *Inside the Neolithic Mind*, Burkert's *Creation of the Sacred*, and Barber and Barber's *When They Severed Earth From Sky*. Naturally, this gave me the chance to hold forth on Deacon's *Symbolic Species*, Donald's *A Mind So Rare*, and Greenspan and Shaker's *The First Idea*. Gee, one even has a copy of the March *Zygon*, signed by my own "Neuromythology" article. No better route to the professor's heart than his vanity. Given worldwide tensions, best illustrated by the response of the Muslim world to some Danish cartoons, the question of where religion is going may be of even more paramount importance. Do certain forms of religion threaten our very existence, as Sam Harris argues in *The End of Faith*, or, as Rodney Stark argues Christianity did in

his *Victory of Reason*, may other forms lead to planetary salvation?

IRAS and its members certainly have plenty to say on these and other topics, but we have much work to do in widening our visibility in a world in which such conversations are expanding. There are new technical possibilities for our own website, but we need greater visibility at seminaries, churches, synagogues, and mosques, as well as a more visible presence in the universities where many of us find our homes. Let us think ahead. How can we better make people aware of, and make better available our unique resources—the quality of work published in *Zygon* and the quality of our membership and our discussions? Should we open our Interest Groups more widely? Can we develop a speakers bureau? Should we stay with Star Island? Can we? Why and how do people decide to join IRAS, and come to Star Island?

Our Conference Planning Committee has collected wonderful ideas for future conferences following 2007's explo-

ration of emergence in the human context. Let us be sure people hear about them and that we do our best to fill them. The ideas include: Religious and Ethical Perspectives on our Energy Future; War: From the Vantage Points of Religion and Science; and Gods, Scientists, and the Paradoxes of Individuality.

After my international students had consumed gallons of my gumbo, one later gently asked, "Did you burn it a little bit?" Not a silly question, even for someone who knows that one of the cajun specialties is blackened catfish. I really didn't think so, but there was that moment when I added a little more ground clove. And then I remembered what my mother (who couldn't cook to save her life) said when she burned something: "Oh, that's just a little black magic." We do have magic in this world. It is real. It actually works. We call it science.

John Teske
IRAS President

Annual Meeting Notice

The Annual Meeting of the Institute on Religion in an Age of Science, Inc. will be held in Elliot Hall, Oceanic Hotel, Star Island, Isles of Shoals, N.H., on Thursday afternoon, August 3, 2005, at the call of the President.

Joan Goodwin, Secretary

Nominating Committee Report

The Nominating Committee presents the following persons for service on the Council, all for three-year terms:

Sol Katz
Chris Corbally
Stacy Ake
Andrew Millard
Carol Orme-Johnson

The Committee also nominates Donald Braxton to fill the position on council vacated by John Teske when he became President, and to serve an additional three-year term 2007-2010.

The Committee also nominates Ruth Bercauw to a three-year term on the Nominating Committee.

Edmund Robinson, Nominating Committee Chair



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Information on IRAS can be found at www.iras.org. Star Island is described at www.starisland.org. Information on conference fees, room and board, and registration can be found at www.iras.org/conference.html, or contact Bonnie Falla, IRAS Registrar, 810-1/2 N. Ninth St., Allentown, PA 18102.

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