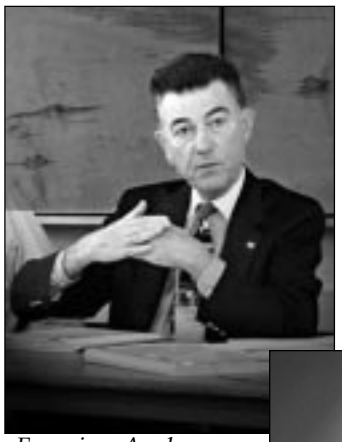
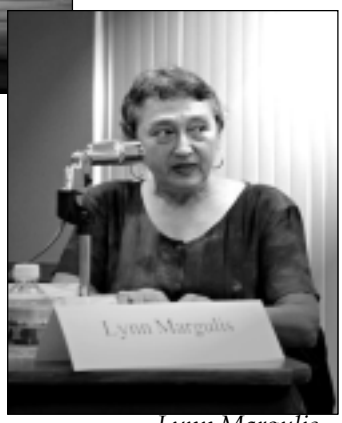
Evolution: Divine Action? Natural Process? Both?

by Gordon Reid

In 2004, the Center for Process Studies began a new program: "Dialogues Concerning Science and Natural Religion." Funded jointly by the Metanexus Foundation's Local Societies Initiative and the Helios Foundation, this initiative seeks to explore commonalities and points of departure between "hard sciences" like physics and biology, on the one hand, and a process theology or process metaphysic on the other. The format of these dialogues consists of three conferences, each of which addresses the relation between a particular field of scientific inquiry and natural religion. The first of these, "Religious Interpretations of Evolutionary Biology: Neo-Darwinism in Dialogue with Process Thought and Lynn Margulis," was held October 21-23, 2004 in Claremont. Conferences on quantum physics and cosmology will follow in the Fall of 2005 and Fall of 2006 respectively [see p. 19 of this issue].



Francisco Ayala



Lynn Margulis

This conference brought together leading scholars from a number of viewpoints, including Francisco Ayala, Lynn Margulis, Howard Van Till, Ursula Goodenough, Ian Barbour, Dorion Sagan, David Ray Griffin, Jeffrey Schloss, Pete Gunter, John Greene, Jack Haught, Philip Clayton, Robert Valenza, and John B. Cobb, Jr. For four days, these philosophers, theologians, and scientists met in order to discuss how different models of evolutionary biology relate to theories of divine action in the world. Each day consisted of spirited debate and discussion among participants and was capped by a public lecture each evening.

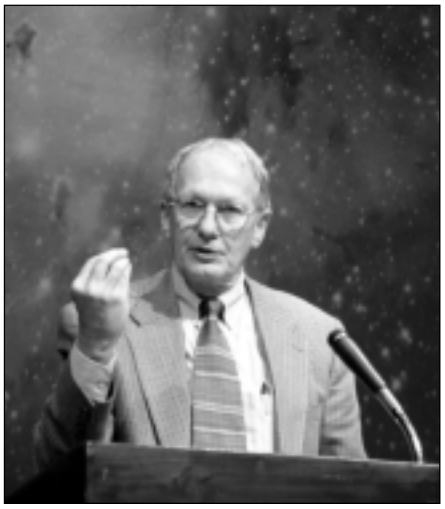
Thursday night's lecture was titled "From Paley to Darwin: Design to Natural Selection," given by Francisco Ayala, an evolutionary biologist from the University of California-Irvine. Representing those scientists who accept the Neo-Darwinian synthesis, Ayala discussed the differences between Rev. William Paley, who argued that biological development was the result of God's design, and Darwin. Ayala argues that Darwin's lasting contribution was the revolutionary notion "that everything in nature, including the 'design' of living organisms, can be accounted for as the result of natural processes governed by natural laws. This is nothing if not a fundamental vision that has forever changed how mankind perceives itself and its place in the universe."

However, Ayala also remarked that although "nothing in the world of nature escapes the scientific mode of knowledge, and that we owe this universality to Darwin's revolution… a scientific view of the world is hopelessly incomplete. There are matters of value and meaning that are outside science's scope."

Lynn Margulis, Distinguished Professor in the University of Massachusetts at Amhesrt's Department of Geosciences, presented "Evolution: The Inheritance of Acquired Genomes," on Friday evening. Margulis began by defining evolution simply as any change over time. Consequently, evolution includes stars, the Earth's tectonic plates, and interstellar nebulae. Biological change—and consequently Neo-Darwinian theory—only accounts for a small portion of evolution. Margulis' thesis is that the symbiosis between organisms, and not genetic mutation, constitutes the fundamental causative factor in the origin of species. Symbiosis or symbiogenesis—which stipulates that the merging of individuals leads to new life forms (e.g. beneficial bacteria are absorbed into an organism's cell wall to become a new organelle)—is a more accurate description of evolution. As she points out, humans are 10% bacteria—clearly then, we need the symbiotic to survive.

Howard Van Till, Professor Emeritus of Physics and Astronomy at Calvin College, spoke on "From Calvinism to Claremont, Now That's Evolution! One Scientist's Evolution from Calvin's Supernaturalism to Griffin's Naturalism." Van Till described how, as a Reformed Christian scholar in the Academy, he "knew" that "Christians were up against a tough enemy out there in the larger North American world, especially in the secular academy. That enemy's name was 'Naturalism,' the contentious problem child of the Enlightenment." Caught between the demands of his faith and his scientific studies, Van Till struggled to reconcile doctrines of *creatio ex nihilo* and God's intervention in the world with the scientific evidence to the contrary, eventually proposing that God was able to interfere with the natural order of the world, but chose not to do so. Invoking the "formational economy of the universe," which is the sum total of all resources,

structural and functional potentialities, and formational capabilities that are to be found, Van Till argued the "Right Stuff Universe Principle," which posits that the universe, at the moment of creation, contained all the resources and raw material necessary for the development of any complexity we may find. Evangelical communities, however, criticized this theory as a variety of deism because (on their view) God does not do anything.



Howard Van Till

Eventually, Van Till encountered David Griffin's writings, which encouraged him to dare to be consistent and reject supernaturalistic action. Embracing naturalistic theism instead, Van Till was able to describe God's action in the world as natural, enriched to include purposeful and effective, but non-coercive, divine action. This way, naturalism and theism need not be enemies. Van Till suggested that he might reformulate his "Right Stuff" principle as follows: "The formational economy of the universe is sufficiently robust to make possible the actualizing, by wholly natural processes and events, of every type of physical structure and life form that has ever existed—with the understanding that natural processes and events, while they do preclude any form of coercive divine intervention, may nonetheless include non-coercive divine action as an effective factor."

The final public lecture of the conference, given by Ursula Goodenough, "Exploring the Concept of Religious Naturalism," proposed another perspective that might mediate between the purpose-driven doctrine of divine action and non-theistic naturalisms. Goodenough reported a suspicion that in her United Church of Christ congregation, "People are there on a Sunday morning because they can't accept that the wonders opened up by science, astronomy, etc. are all a matter of chance. They have rejected traditional views of a God in heaven judging HIS sinful creation, but awe without purpose and meaning behind it is just as meaningless to them." So, Goodenough describes the facts discovered by science as a grand narrative—an evolutionary story shared by everybody. After giving a detailed account of this narrative, including both the vastness of time and space,

Ursula Goodenough

Goodenough notes that religious naturalism interprets this narrative to imply that human beings emerged out of this process, and are a part of the natural order. The spiritual response elicited by the narrative is apprehension, awe, and potentially understanding. Finally, this narrative also provokes a moral response: a responsibility to the natural order and divinity exhibited in the narrative. Goodenough claims that religious naturalism is coherent with or without "God language." The non-theist may deny purposive direction in evolution—after all, the universe spawns life without concern for consequences—but the non-theist also admires the magic and beauty of the process. However, religious naturalism is also compatible with theism, since one can describe science's account of evolution—Goodenough's "grand narrative"—as the way that God created and continues to create the world.

The confluence of so many inspiring and creative thinkers from diverse fields sparked intense discussion concerning divine action in the world, evil, free will, the significance of emergence, implicit and explicit metaphysical assumptions of science, and the scientific adequacy of theology and philosophy. This was brought out in particular by the debate on Sunday morning led by David Ray Griffin. Griffin explained Whitehead's view that all potentialities are part of the primordial nature of God. Although there is no fixed predestined pattern to biological development, some alternatives are better, or more compatible than others, and they tend to prevail. For Griffin, freedom and consciousness are not accounted for in Neo-Darwinism, and process thought can offer an answer, by adding that the universe develops in terms of God's bias toward beauty and intensity of experience.

Though few conclusions were universally accepted among the participants, hopefully the challenges raised this October in Claremont will provoke productive conversations to come.