The new brain trust

Scientists, theologians share quest for truth

By JENNIFER BOETH
Staff Writer

FOUR CENTURIES they've been the best of enemies. First, there was the church, telling science and scientists what they might study, drawing the boundaries around what they might believe. Then it was science, returning the favor, rejecting religion as unproved, unprovable and therefore untrue.

Now at least they're talking to each other.

Four Nobel Prize-winning scientists and two noted theologians are participating in a series of dialogues in Dallas on "the convergences of sciences and religion." The scientists are saying some surprising things. One is questionimg the very existence of the universal laws, the cornerstone of modern science. Another is urging the development of a new "scientific theology" in hopes of saving our world from itself. A third sees science heading rapidly, and properly, down a path the mystics were traveling long ago.

The theologians welcomed the scientists to what they called a "shared quest for truth," noting, "In the face of worsening world conditions, the modern sciences and the living religions need each other as never before."

"It would go a long way to help improve current global conditions if mankind generally were to acquire a deep and powerful religious conviction that it is actually sacrilegious to pollute the world, to overpopulate... or in any way despoil, degrade or deteriorate for coming generations the quality of our biosphere."

— Roger Sperry
Nobel Prize-winning zoologist

The lecture series is sponsored by the Ihnhau Institute — a nonprofit study group — the Department of Psychiatry and the Division of Continuing Medical Education at the University of Texas Health Science Center here.

In what he called "the greatest scientific revolution since the Renaissance," Nobel laureate chemist Dya Prigogine said "a new dialogue between science and philosophy is becoming possible."

Prigogine, who teaches at the University of Texas at Austin, won the Nobel Prize in chemistry in 1977 for his work on "dissipative structures" — structures that move from disorder to order by dissipating energy, forms that arise spontaneously in states of chemical non-equilibrium. To Prigogine, it follows that life itself may also arise from a state of nonequilibrium, which the chemist called "the normal quality of the universe."

"In the classical view of physics, of science, structure formation is an exception, life is an exception. Classical physics takes a mechanical world view, seeing matter as essentially passive and life as an accident, an accident compatible with the laws of physics but outside nature," Prigogine said.

"Chemical physics believes that molecules do not communicate with each other. How then do you explain how molecules in the brain know what molecules in the feet are doing?" he asked.

"Now we can say that life is a beautiful expression of some very basic laws of nature. We are entering a new dialogue of man with nature. Life is not an exception."

Dya Prigogine sees a growing scientific interest in the concept of time as another major unifying factor in science. For a while, science was "a liberation from the temporal," the chemist suggested, an escape into the security of a sense of timelessness. As significant a modern scientist as Albert Einstein rejected time as an illusion.

"Our century is the century of the rediscovery of time," Prigogine predicted. In classical physics, the chemist went on to say, time separated man from nature. Dya Prigogine now believes — admitting that few physicists would yet agree — that "time has its roots in nature, in the very laws of complex systems. To negate the role of time, to negate history, to negate science itself."

Prigogine chastised educators who teach students that science is a rational, closed, deterministic system. Rather, "science is a flaw," he said, "as
at the Perkins School of Theology at SMU, agreed — with certain caveats.

"We need to keep exploring the known and the knowable, the knower and ways of knowing. But the level of spiritual giftedness has nothing to do with intelligence," he warned.

The physicist and the theologian compared answers to a fundamental question that often divides science from religion: How shall we tell illusion from reality? Scientifically, "by observation, examination and consensus," Josephson said. "But in religious contexts," said the theologian, "there may be a different answer." Outler concluded: "There is an intelligence behind the scenes.

"Good fruits are not normally produced by illusion," the theologian said. How far has the dialogue between science and religion progressed?

"At this point there is essentially zero overlap," Josephson claimed. "It's still difficult to get articles on the synthesis of science and religion published. At least they're publishing some articles on psychic phenomena."

Outler concluded on a more hopeful note. "Look at this meeting," he said. "A distinguished scientist prodiging for human values. A distinguished physicist prodiging for meditation. Talk of values as causal forces, of wholeness."

A psychiatrist in the audience rose to urge science and religion not to regress from our real common ground" by letting religion get too scientific or science too fuzzy.

Sir John Eccles, an Australian physiological, will be featured at the final Ithmus Institute lecture at the University of Texas Health Science Center on Jan. 29, Eccles, who shared the Nobel prize in medical neurophysiology for his discovery that nerve cell impulses are transmitted chemically rather than electrostatically, wrote "The Human Mystery" in 1979, based on his studies of natural theology at the University of Edinburgh.

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— Brian Josephson

Nobel Prize-winning physicist

spirits of all kinds," effectively eliminating much of the Judeo-Christian tradition. He also rejected the highly individual, experiential knowing of the mystics and many of the eastern religions, preferring what he called a naturalistic pantheism, equating God with the laws and forces of the universe.

"I would rather be governed by principles and values which have been proven to be little," Josephson remarked.

In that he differed dramatically from Brian Josephson, the British physicist whose work and personal exploration has taken him increasingly in the direction of mysticism and meditation.

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Physicist Frisol Capra's "The Tao of Physics" kicked the whole thing off, Josephson said, by drawing connections between the discoveries on the frontiers of quantum physics — where particles act in ways that can't be explained mechanically, sometimes acting differently under the same conditions, where separate regions of space appear to be connected in ways science can't readily understand or picture — and the universe generally.

Up to now, science has gotten along quite well without God because "science can't test a hypothesis very selectively," Josephson said. "Science likes to look at simple phenomena, assuming as a matter of faith that if we understand the simple phenomena, we will eventually understand the complex phenomena."

Josephson, like Sperry, clearly thinks that assumption is wrong.

He sketched out a new paradigm in which God plays a role in science.

"What kind of science might that be that would take God into account?"

"The closest aspect of God to science is intelligence." A synthesis of religion and science might view God as a "scaled-up human intelligence," not different, just bigger and more universal, Josephson suggested.

"There is an unsolved order," the physicist concluded. "There is an intelligence behind the scenes."