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http://www.nytimes.com/2006/11/21/science/21belief.html?_r=1&adxnnl=1&oref=slogin&adxnlnx=1164118009-LMEv/nSeg5EDyILNISKMRg

A Free-for-All on Science and Religion

By [GEORGE JOHNSON](#)

Maybe the pivotal moment came when Steven Weinberg, a [Nobel laureate](#) in physics, warned that “the world needs to wake up from its long nightmare of religious belief,” or when a Nobelist in chemistry, Sir Harold Kroto, called for the John Templeton Foundation to give its next \$1.5 million prize for “progress in spiritual discoveries” to an atheist — Richard Dawkins, the Oxford evolutionary biologist whose book “The God Delusion” is a national best-seller.

Or perhaps the turning point occurred at a more solemn moment, when [Neil deGrasse Tyson](#), director of the [Hayden Planetarium](#) in New York City and an adviser to the Bush administration on space exploration, hushed the audience with heartbreaking photographs of newborns misshapen by birth defects — testimony, he suggested, that blind nature, not an intelligent overseer, is in control.

Somewhere along the way, a forum this month at the Salk Institute for Biological Studies in La Jolla, Calif., which might have been one more polite dialogue between science and religion, began to resemble the founding convention for a political party built on a single plank: in a world dangerously charged with ideology, science needs to take on an evangelical role, vying with religion as teller of the greatest story ever told.

Carolyn Porco, a senior research scientist at the Space Science Institute in Boulder, Colo., called, half in jest, for the establishment of an alternative church, with Dr. Tyson, whose powerful celebration of scientific discovery had the force and cadence of a good sermon, as its first minister.

She was not entirely kidding. “We should let the success of the religious formula guide us,” Dr. Porco said. “Let’s teach our children from a very young age about the story of the universe and its incredible richness and beauty. It is already so much more glorious and awesome — and even comforting — than anything offered by any scripture or God concept I know.”

She displayed a picture taken by the Cassini spacecraft of Saturn and its glowing rings eclipsing the Sun, revealing in the shadow a barely noticeable speck called [Earth](#).

There has been no shortage of conferences in recent years, commonly organized by the Templeton Foundation, seeking to smooth over the differences between science

and religion and ending in a metaphysical draw. Sponsored instead by the Science Network, an educational organization based in California, and underwritten by a San Diego investor, Robert Zeps (who acknowledged his role as a kind of “anti-Templeton”), the La Jolla meeting, “Beyond Belief: Science, Religion, Reason and Survival,” rapidly escalated into an invigorating intellectual free-for-all. (Unedited video of the proceedings will be posted on the Web at tsntv.org.)

A presentation by Joan Roughgarden, a Stanford University biologist, on using biblical metaphor to ease her fellow Christians into accepting evolution (a mutation is “a mustard seed of DNA”) was dismissed by Dr. Dawkins as “bad poetry,” while his own take-no-prisoners approach (religious education is “brainwashing” and “child abuse”) was condemned by the anthropologist Melvin J. Konner, who said he had “not a flicker” of religious faith, as simplistic and uninformed.

After enduring two days of talks in which the Templeton Foundation came under the gun as smudging the line between science and faith, Charles L. Harper Jr., its senior vice president, lashed back, denouncing what he called “pop conflict books” like Dr. Dawkins’s “God Delusion,” as “commercialized ideological scientism” — promoting for profit the philosophy that science has a monopoly on truth.

That brought an angry rejoinder from Richard P. Sloan, a professor of behavioral medicine at Columbia University Medical Center, who said his own book, “Blind Faith: The Unholy Alliance of Religion and Medicine,” was written to counter “garbage research” financed by Templeton on, for example, the healing effects of prayer.

With atheists and agnostics outnumbering the faithful (a few believing scientists, like Francis S. Collins, author of “The Language of God: A Scientist Presents Evidence for Belief,” were invited but could not attend), one speaker after another called on their colleagues to be less timid in challenging teachings about nature based only on scripture and belief. “The core of science is not a mathematical model; it is intellectual honesty,” said Sam Harris, a doctoral student in neuroscience and the author of “The End of Faith: Religion, Terror and the Future of Reason” and “Letter to a Christian Nation.”

“Every religion is making claims about the way the world is,” he said. “These are claims about the divine origin of certain books, about the virgin birth of certain people, about the survival of the human personality after death. These claims purport to be about reality.”

By shying away from questioning people’s deeply felt beliefs, even the skeptics, Mr. Harris said, are providing safe harbor for ideas that are at best mistaken and at worst dangerous. “I don’t know how many more engineers and architects need to fly planes into our buildings before we realize that this is not merely a matter of lack of education or economic despair,” he said.

Dr. Weinberg, who famously wrote toward the end of his 1977 book on cosmology, “The First Three Minutes,” that “the more the universe seems comprehensible, the more it also seems pointless,” went a step further: “Anything that we scientists can do

to weaken the hold of religion should be done and may in the end be our greatest contribution to civilization.”

With a rough consensus that the grand stories of evolution by natural selection and the blossoming of the universe from the Big Bang are losing out in the intellectual marketplace, most of the discussion came down to strategy. How can science fight back without appearing to be just one more ideology?

“There are six billion people in the world,” said Francisco J. Ayala, an evolutionary biologist at the University of California, Irvine, and a former Roman Catholic priest. “If we think that we are going to persuade them to live a rational life based on scientific knowledge, we are not only dreaming — it is like believing in the fairy godmother.”

“People need to find meaning and purpose in life,” he said. “I don’t think we want to take that away from them.”

Lawrence M. Krauss, a physicist at Case Western Reserve University known for his staunch opposition to teaching creationism, found himself in the unfamiliar role of playing the moderate. “I think we need to respect people’s philosophical notions unless those notions are wrong,” he said.

“The Earth isn’t 6,000 years old,” he said. “The Kennewick man was not a Umatilla Indian.” But whether there really is some kind of supernatural being — Dr. Krauss said he was a nonbeliever — is a question unanswerable by theology, philosophy or even science. “Science does not make it impossible to believe in God,” Dr. Krauss insisted. “We should recognize that fact and live with it and stop being so pompous about it.”

That was just the kind of accommodating attitude that drove Dr. Dawkins up the wall. “I am utterly fed up with the respect that we — all of us, including the secular among us — are brainwashed into bestowing on religion,” he said. “Children are systematically taught that there is a higher kind of knowledge which comes from faith, which comes from revelation, which comes from scripture, which comes from tradition, and that it is the equal if not the superior of knowledge that comes from real evidence.”

By the third day, the arguments had become so heated that Dr. Konner was reminded of “a den of vipers.”

“With a few notable exceptions,” he said, “the viewpoints have run the gamut from A to B. Should we bash religion with a crowbar or only with a baseball bat?”

His response to Mr. Harris and Dr. Dawkins was scathing. “I think that you and Richard are remarkably apt mirror images of the extremists on the other side,” he said, “and that you generate more fear and hatred of science.”

Dr. Tyson put it more gently. “Persuasion isn’t always ‘Here are the facts — you’re an idiot or you are not,’ ” he said. “I worry that your methods” — he turned toward

Dr. Dawkins — “how articulately barbed you can be, end up simply being ineffective, when you have much more power of influence.”

Chastened for a millisecond, Dr. Dawkins replied, “I gratefully accept the rebuke.”

In the end it was Dr. Tyson’s celebration of discovery that stole the show. Scientists may scoff at people who fall back on explanations involving an intelligent designer, he said, but history shows that “the most brilliant people who ever walked this earth were doing the same thing.” When Isaac Newton’s “Principia Mathematica” failed to account for the stability of the solar system — why the planets tugging at one another’s orbits have not collapsed into the Sun — Newton proposed that propping up the mathematical mobile was “an intelligent and powerful being.”

It was left to Pierre Simon Laplace, a century later, to take the next step. Hautily telling Napoleon that he had no need for the God hypothesis, Laplace extended Newton’s mathematics and opened the way to a purely physical theory.

“What concerns me now is that even if you’re as brilliant as Newton, you reach a point where you start basking in the majesty of God and then your discovery stops — it just stops,” Dr. Tyson said. “You’re no good anymore for advancing that frontier, waiting for somebody else to come behind you who doesn’t have God on the brain and who says: ‘That’s a really cool problem. I want to solve it.’ ”

“Science is a philosophy of discovery; intelligent design is a philosophy of ignorance,” he said. “Something fundamental is going on in people’s minds when they confront things they don’t understand.”

He told of a time, more than a millennium ago, when Baghdad reigned as the intellectual center of the world, a history fossilized in the night sky. The names of the constellations are Greek and Roman, Dr. Tyson said, but two-thirds of the stars have Arabic names. The words “algebra” and “algorithm” are Arabic.

But sometime around 1100, a dark age descended. Mathematics became seen as the work of the devil, as Dr. Tyson put it. “Revelation replaced investigation,” he said, and the intellectual foundation collapsed.

He did not have to say so, but the implication was that maybe a century, maybe a millennium from now, the names of new planets, stars and galaxies might be Chinese. Or there may be no one to name them at all.

Before he left to fly back home to Austin, Dr. Weinberg seemed to soften for a moment, describing religion a bit fondly as a crazy old aunt.

“She tells lies, and she stirs up all sorts of mischief and she’s getting on, and she may not have that much life left in her, but she was beautiful once,” he lamented. “When she’s gone, we may miss her.”

Dr. Dawkins wasn’t buying it. “I won’t miss her at all,” he said. “Not a scrap. Not a smidgen.”