In Defense of God

Growing evidence points scientists beyond blind chance.

BY DAN LAZICH

HOW DID THE UNIVERSE BEGIN? HOW long will it last? It appears fine-tuned specifically to support life such as we have on earth. Why? How did that come to be?

The revolutionary advancement in cosmology and the most advanced theories now being explored and tested demand answers to these questions; and world-renowned experts in cosmology, quantum physics, and global general relativity are currently engaged in a serious and vigorous quest for answers. Without such answers, the entire scheme of knowledge about reality and about our segment of the universe would fail to satisfy the rigorous demands of logic.

In search of answers, scientists have been forced by their own theories to consider seriously the theological implications of quantum cosmology[1] and the anthropic cosmological principles[2] concerning a Creator-God. In the early stages of development of quantum cosmology, scientists did consider the teachings of non-Christian (polytheistic) religions. But after much debate and study, they've come to the shocking conclusion that the traditional claims of Judeo-Christian theology concerning God and the origin of our universe best fit the implications of quantum cosmology and the anthropic cosmological principles.

In his recent book on the physics of immortality, Frank J. Tipler makes the following confession: "When I began my career as a cosmologist some twenty years ago, I was a convinced atheist. I never in my wildest dreams imagined that one day I would be writing a book purporting to show that the central claims of Judeo-Christian theology are in fact true, that these claims are straightforward deductions of the laws of physics as we now understand them. I have been forced into these conclusions by the inexorable logic of my own special branch of physics."[3]

In June 1998 the world's leading experts in the field of cosmology and astronomy, including such giants as Stephen Hawking, attended a conference of scientists, theologians, and others at the University of California at Berkeley. The subject of the conference was the conflict and convergence between science and religion. Two questions attracted considerable attention among participants: 1. Is there enough evidence to warrant belief in God? 2. Is there something to the claims of anthropic cosmological principles that warrants an in-depth study? The answer to both questions was *yes*.

Writer W. Wayt Gibbs, reporting on the conference, posed this question: "Is there sufficient evidence to support a belief in a Judeo-Christian God?" Then he writes as follows: "Although many scientists working in the U.S. would doubtless agree with Sandage that 'you have to answer the question of what is "sufficient" for yourself,' recent polls suggest that most of them would nonetheless answer no. But the program for this conference . . . [included] some two dozen scientists, nearly all of them at the top of their fields, *who have arrived at a different conclusion*."[4]

By employing the most rigorous logic and the most advanced, sophisticated methods and experiments, cosmologists and astronomers are now painting an astonishingly interesting picture of God, a picture that stands in stark contrast with the limited picture of the Creator-God presented by some Christian theologians, religious publications, clergy, and lay Christians. Professor Tipler, currently one of the most

vocal supporters of Judeo-Christian theology (but who is not himself a churchgoing person), is genuinely concerned about the future of theology, so much so that he is publicly advocating its inclusion into physics. In his recent book he contends that "it is time scientists reconsider the God hypothesis." "I hope in this book to persuade them to do so," he says. "The time has come to absorb theology into physics, to make Heaven as real as an electron."[5]

Throughout the book Professor Tipler asserts again and again that religion is now part of science and that theology is physics. What prompted such a shocking change of mind concerning the central claims of Judeo-Christian theology?

Probing the Limits

Within the past 10 years the United States has launched into the earth's orbit an array of astronomical instruments that have collected more data about our universe than humans have done in the entire previous history of the world. When the knowledge obtained thus far is mathematically extrapolated into the distant past and the distant future, the implications about God the Creator are astonishing.

While the results of such extrapolation cannot be verified, either by observation or by experiment, they are nevertheless based on sound scientific methods and logic—not the result of philosophical musing or vague speculations, but of rigorous mathematical calculations based on the laws of particle physics, quantum mechanics, and the general theory of relativity. Results of two very advanced experiments performed in 1997 give a high degree of confidence that the logic employed in arriving at these conclusions is sound.

The intent here, however, is not to promote any scientific theory, but to point out that scientists in the field of quantum cosmology and astronomy, when studying about the origin and nature of the universe, are compelled to consider the traditional claims of Judeo-Christian theology concerning a Creator. The figures and the equation that accompany this article are an attempt to illustrate the areas of divergence between the implications of quantum cosmology and the claims of some Christian theologians concerning the nature of God the Creator and His actions.

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Current mathematical extrapolation of knowledge about our universe to its logical conclusion in the far future points to a possibility that there exists a domain that cosmologists now refer to as a "Multiverse" (Figure A). Thus far cosmology is unable to determine the specific properties of the Multiverse except that it must be exceptionally large.

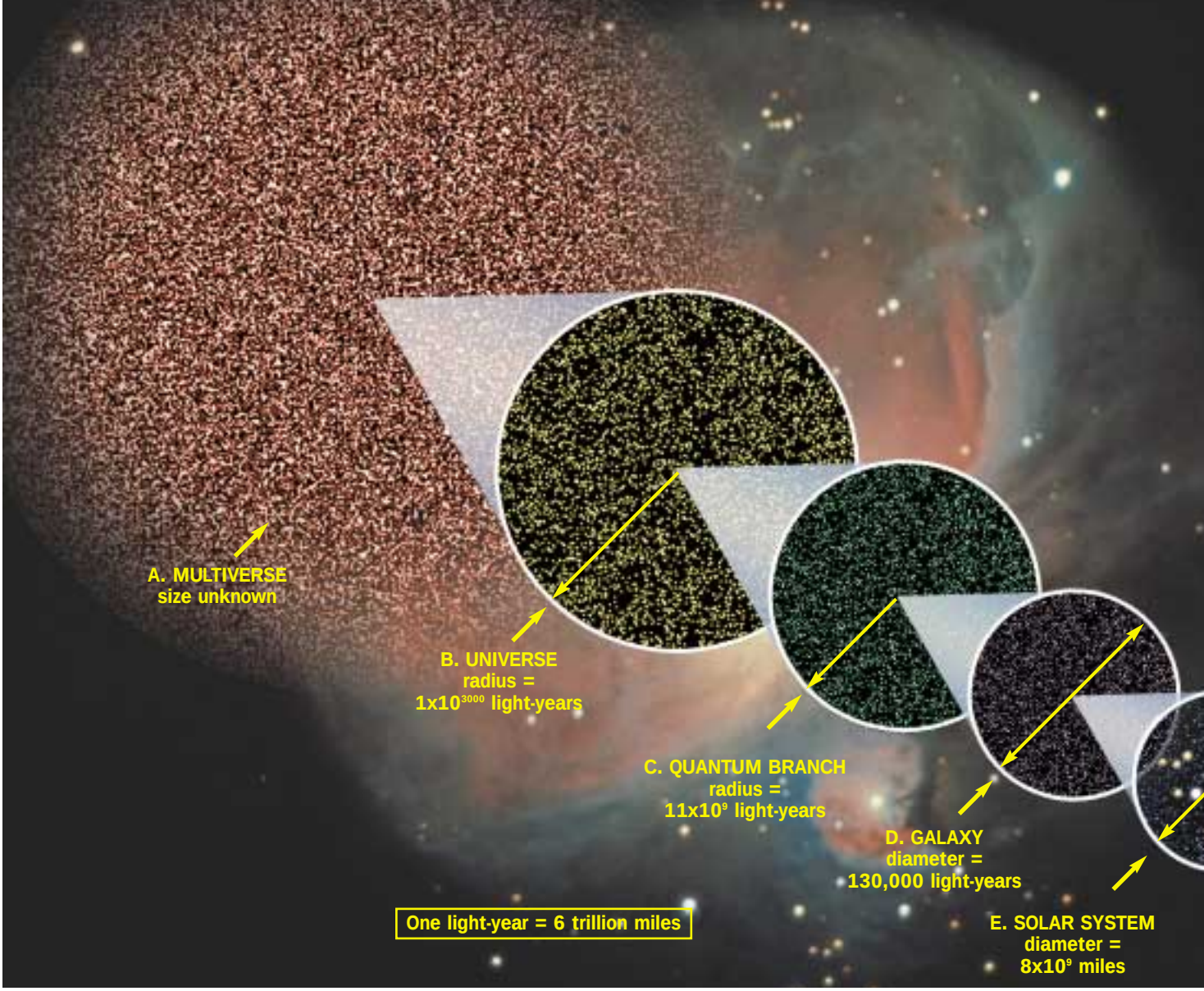
According to the *inflationary universe theory*, somewhere in the multiverse there exists a glimmer of light, undetectable by current technical means, which when magnified, is a Universe (with a capital U) approximately $1 \times 10^{3,000}$ light-years in diameter (Figure B). (That is the number "one" followed by 3,000 zeros). It's a very successful theory about the origin and nature of the universe. One light-year is the distance that light travels in one year, which is approximately 6 trillion miles.

Somewhere inside a Universe (Figure B) is a glimmer of light that, when magnified, is an ordinary bubble of space-time, which we call the universe (lowercase u) (Figure C). Technically, it would be more correct to call it the "quantum branch" of a universe. The most accurate measurements by the Hubble space telescope indicate that the age of the quantum branch is approximately 12 billion light-years.[6] Mathematical calculations also indicate that the physics of the quantum branch is inextricably tied to our existence, so much so that quantum cosmology is forced to assume that the Designer had us in mind when He created the quantum branch—the universe.

Continuing this regression in size, observation shows that somewhere in the quantum branch is an ordinary, 130,000 light-years-in-diameter galaxy, the Milky Way (Figure D). The Milky Way galaxy contains approximately 200 billion stars and, according to the general theory of relativity, it occupies neither a central nor a privileged place in the quantum branch of the universe, let alone the Universe.

And Here We Are

Approximately 32,000 light-years from the center of the Milky Way is an ordinary ensemble of heavenly bodies that we call the solar system. The diameter of the solar system is approximately 8 billion miles (8×10^9 miles) (Figure E). Approximately 94 million miles from the center of the solar system is a tiny green patch of real estate,



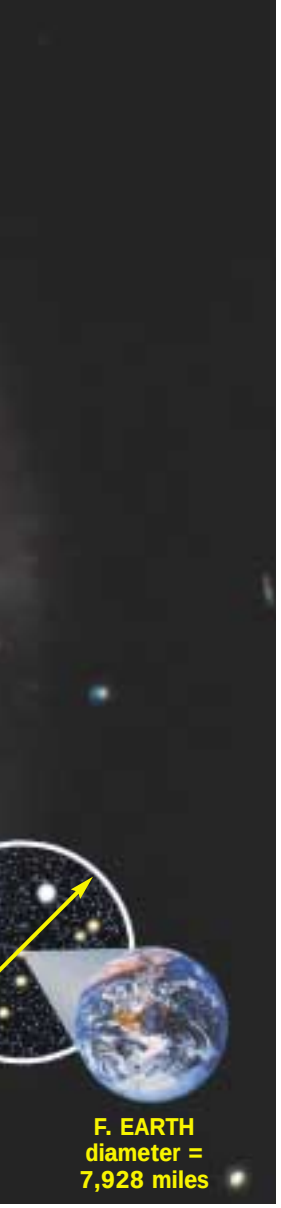
BACKGROUND PHOTO: NEBULAE IN ORION © PHOTODISC

Planet Earth, which is only 7,928 miles in diameter (Figure F). This minuscule celestial body is the place where we live, and a vantage point from where we are attempting to describe God and His creation.

There are several areas of divergence between quantum cosmology and Christian theology as understood in some circles. In particular, I find three areas significant and will comment on them here. The first point of divergence is the question of whether God is still creating other worlds. Surprisingly, the current theory concerning the origin and nature of the universe—the inflationary universe theory—claims the possibility that complexes such as that in Figure 1 are being created from nothing continuously. In contrast, some Christian publications, theologians, and preachers claim and teach that we are *God's last creation*. Those who hold to such a view base their conclusion on an assumption that once sin occurred, it would make no sense to continue creating. The logic behind such a claim, however, is self-defeating, because sin originated in heaven before the creation of the earth and humanity on it. God created us *after* Lucifer's rebellion.

The second point of divergence is the question of where God physically resides. Where is His throne? John D. Barrow and Frank J. Tipler, in their most erudite treatise on anthropic cosmological principles, employing rigorous logic and mathematics, were able to represent the quantum cosmological requirement for a series of intelligent observers mathematically. The equation they devised represents an infinite sequence in all possible universes. Their sequence of observations, however, does not include the final observation, "the Final Observer . . . who is not in the universe (Figure C) to which quantum law applies." Christians generally, however, write, teach, and preach that God is somewhere in a distant corner of the universe—the quantum branch. Quantum cosmology finds it improper to place the Ultimate Intelligence (Final Observer, Omega Point, God) in the universe of space, time, and matter. In other words, God is truly *above it all*.

The third, and the most disturbing, point of divergence concerns God's knowledge of the future. The astonishing assertion of the cosmological requirement for a series of intelligent



observers, represented in the above equation, runs as follows: "This joining sequence of observers continues—and even includes the observations made by different intelligent species elsewhere in the Universe—until all sequences of observations by all observers of intelligent species that ever existed and ever will exist, of all events that have ever occurred and ever will occur are finally joined together by the *final observation* by the Ultimate Observer."[7]

In other words, everything that ever has happened and ever will happen in God's entire kingdom is present to Him. To the Creator, there is no passage of time, there is neither past nor future, and there is no event or knowledge that is above or apart from Him. God, as described by quantum cosmology, *does not have to learn anything*. He is knowledge and, therefore, the source of all knowledge. All thoughts that have ever been thought, all thoughts that are now being thought, and all thoughts that ever will be thought—by all created orders of intelligence—have already passed through the mind of God. Additionally, when a possibility of eternal life is factored into cosmological calculations, the result is astonishing.

"But the really fascinating consequence of the eternal life assumption," contends Tipler, "is what it implies if life really does exercise its option to exist forever: there must exist in the future (but in two very precise mathematical senses, also in the present and past) a Person who is OMNIPOTENT, OMNISCIENT, OMNIPRESENT. Who is simultaneously transcendent and yet immanent in the physical universe of space, time and matter."[8]

In contrast to the assertions of quantum cosmology, a growing number of Christians, both lay members and clergy alike—under the influence of what's called process theology—believe and preach that God does not know the future. Those who so believe maintain that God is not ignorant of the future because He keeps learning. This, however, places knowledge above God and thus qualifies as idolatry. Many who subscribe to the idea that God does not know the future also believe in and preach about eternal life. Quantum cosmology, however, is specific on this point. If God does not know the future, then there is no eternal life.

God is the absolute, infinite, all-knowing Creator. There is neither limit nor end to His kingdom. We, limited human beings, cannot even begin to comprehend the greatness and the extent of God's kingdom, and the true nature of the infinite, absolute God. It is truly beyond our imagination.

Of course, theology and cosmology cannot always agree; but they can always learn and gain insight from each other. "Theology is not going to tell science how to do science. Science is not going to tell theology how to do theology," says astronomer Christopher J. Corbally. "But one can help the other ask deeper questions and find deeper answers."[9]

The claims of the quantum cosmology alone, concerning the greatness of God and His works, should be enough to convince us that we ought to talk about God with utmost reverence. But if not, then we ought to consider that the unimaginably great God emptied His infinite domain by sending His Son to this tiny speck of dust; united His divinity with our fallen, worthless humanity; redeemed us and made us sons and daughters of God, with a new history and with full rights as heirs in His vast domain.

The vocabularies of all the created orders of intelligence put together could not provide enough words to describe the God we serve. The reality of God's indescribable creative and redemptive power is enough to make us speechless. If the angels veil their faces when they speak God's name, can we do anything less?

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[1] Quantum cosmology is a branch of knowledge that combines quantum mechanics and the general theory of relativity. Quantum mechanics describes the universe at the subatomic level. The general theory of relativity, on the other hand, views the universe on the large scale. Recently scientists were able to merge these two fields mathematically. All matter and energy in our universe (the quantum branch) are made up of "packets" of energy called quanta—thus, "quantum mechanics."

[2] The anthropic cosmological principle describes a concept that ties our universe to us in a sort of order of intelligence. It runs as follows: We must exist in order for the universe to exist; and we must have this kind of universe and no other in order to exist. In other words, we and the universe are made for each other. For more on this subject, see Dan Lazich, "How Science Discovered God," *Ministry*, May 1989.

[3] Frank J. Tipler, *The Physics of Immortality*, Anchor Books (Doubleday, 1994), p. ix.

[4] W. Wayt Gibbs, "Beyond Physics," *Scientific American*, August 1998, pp. 20, 21. (Italics supplied.)

[5] Tipler, p. xv.

[6] Our galaxy, the Milky Way, is one of billions and billions of galaxies that comprise the quantum branch—our universe, our home, the reality in which we live.

[7] John D. Barrow and Frank J. Tipler, *The Anthropic Cosmological Principle* (New York: Oxford University Press, 1986), pp. 470, 471.

[8] Tipler, p. 12.

[9] In Tony Ortega, "High Priests of Astronomy," *Astronomy* (Kalmbach Pub. Co., 1998), p. 59.

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