

COMMENTARY: Introduction to Astro-Theology

Rudolph E. Schild, Harvard-Smithsonian Center for Astrophysics

Cosmology is the study of the nature and construction of the universe, and our civilization does not discuss cosmology entirely separate from questions about the origin and nature of the Creator, and speculation about the purpose of the universe. At the Journal of Cosmology we have noticed that some academic scholars wish to discuss these broader questions, and their scholarship has as much place in a scholarly journal as the technical reports ordinarily published.

For example, the contribution “Anthropic Reasoning about Fine-Tuning, and Neo-Classical Cosmology: Providence, Omnipotencem and Observation Selection Theory” by Theodore Walker Jr published in the Sept 2011 Volume 16 describes a scholarly approach to the question of how likely the universe is to being a simple accident of nature.

Moreover, scientists themselves, in their trade journal Physics Today, discuss topics in astro-theology as relevant to their lives and intellectual quest. See the following article, with relevant quotes from Einstein, and notice the ensuing discussion on the Physics Today home pages:

http://www.physicstoday.org/daily_edition/points_of_view/physics_and_spirituality_a_rapturous_a_mazement_at_the_harmony_of_natural_law

Thus whereas some scientists, including Einstein and Newton, have commented about spirituality being compatible with science, an even more significant development would be the conclusion from science that the workings of the universe prove the existence of a cosmic intelligence. Significantly, Sir Fred Hoyle concluded that such a cosmic intelligence was logically indicated from an understanding of the workings of the universe.

Today the evolution of such thought is focused on three pillars of modern science that support the acknowledgement of such a divine intelligence, namely:

- Pillar 1: Reductionism (Reductivism): It has been noticed that the universe seems to have been fine-tuned, in that the universe that we live in seems to be described by many numbers such as the speed of light c , the Newton gravitational constant G , Planck's constant h , the proton rest mass, the electron charge etc. But if any of these numbers were slightly different from their known values, the universe would not have worked as we see it. With different numbers, the expanding cloud of primordial gas would not have fractionated and developed into the structures we find – planets, stars, galaxies and their clusters, etc. This causes many scientists to ponder whether our universe could have emerged from laws of chance alone.
- Pillar 2: Universal Consciousness: It is becoming understood that the quantum description of reality requires a consciousness to collapse quantum wave functions of possibility to real matter obeying Newtonian forces. But following the Big Bang, what act of consciousness caused the quantum potential of an expanding primordial gas cloud to become manifest as physical particles obeying Newtonian forces before life had begun on solid body planets?
- Pillar 3: The Universe of Universes: Also called the multi-verse, latest ideas from black hole theory (MECO theory) show that our universe might be easily understood as a black hole in a universe of parallel black holes, whose real space-time do not interconnect but which are joined by a complex (imaginary number) spatial component that supports consciousness and is the medium of quantum waves. This medium can then be understood as connecting all black holes lacking a spatial connection. It is easy to understand this universe of universes as being but one level of black hole inside of more parallel such black holes, and all

interconnected by consciousness at all levels. There is evidence of this vast structuring in the Vacuum Zero Point Energy.

As we contemplate these and similar related questions, the Journal of Cosmology asks the academic theology community to view this as an opportunity to join the discussion, and comment upon how theological knowledge and understanding relate to these and other developments in the physical theory, as understood by the academic community. For conciseness, we repeat below the invitation extended directly to the process theology community with instructions and guidance for preparation and submission of scholarly articles and commentary to be published in Sept 2012 as a special astro-theology volume of Journal of Cosmology.

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June 2012 Letter of Invitation

To: philosophers, theologians, & ethicists, especially process-relational and neoclassical scholars

Re: renewed invitation to submit to the JOURNAL OF COSMOLOGY; Joseph A. Bracken, new guest special editor

From: Theodore Walker Jr., guest special editor, Journal of Cosmology

Cc: Joseph A. Bracken, guest special editor; Rudy Schild, editor-in-chief

Dear Colleagues,

Please consider accepting this renewed invitation to submit a commentary (up to 1000 words) or article (up to 3000 words) to the Journal of Cosmology for a special September 2012 issue concerning what philosophers, theologians, and ethicists say concerning scientific accounts of the universe. This invitation was first extended in February 2012. Since then, some of us have already submitted essays. Gracious. More submissions are expected and hereby solicited.

In addition to renewing this invitation to submit a commentary or article, the Journal of Cosmology is pleased to announce that Joseph A. Bracken, Emeritus Professor of Theology at Xavier University, has joined the editorial team for this special issue. Hence, the September 2012 editorial team now includes an astrophysicist, Rudy Schild, a theological ethicist, Theodore Walker Jr., and a theologian, Joseph A. Bracken.

Bracken's June 2012 contribution to the JOC "Whiteheadian Actualities and String Theory," (this volume) is a prime example of the kind of philosophical and theological engagement with scientific cosmology that will be featured in the September 2012 issue. Here Bracken offers a revised understanding of Whiteheadian metaphysics that supports extra-dimensional string theory (Michio Kaku, 1994).

Also, Walker's June 2012 contribution "The Liberating Role of Astronomy in an Old Farmer's Almanac, (this volume) reminds us that there is an old English tradition of exploring the theological implications of astronomical data called Astro-Theology (William Derham, 1715), and a colonial New England tradition of viewing astronomical data as ethically significant 'useful knowledge' (David Rittenhouse, 1775), a view of astronomy that inspired early U.S. struggles against colonialism and slavery (a Benjamin Banneker almanac for 1792).

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Dr. Rudy Schild, of the Harvard-Smithsonian Center for Astrophysics and Editor-in-Chief of the Journal of Cosmology, notes that many scientists are "nervous" because "the quantum nature of our Universe seems to require its having been carefully designed and structured for life to emerge and flourish." Schild identifies three main arguments that are being advanced within the science community to support this premise:

- 1.) Reductionism (reductivism) seems to show that our universe is so finely tuned, with numbers such as the speed of light, gravitational constant, Planck's constant, electron charge, proton mass, etc, have values which, if changed only slightly, would preclude the emergence of life as we know it. This has produced anthropic arguments and "multiple universe" arguments, but is nevertheless troubling to many scientists.
- 2.) The quantum origin of our universe "built out of nothing from quantum possibility" seems to require that some wave function describing all the particles requires a consciousness to collapse the quantum field of potential before the Newtonian forces we see in evidence from the inflationary beginning, to operate as the laws of physics. What Cosmic Intelligence caused the initial collapse of that quantum field?
- 3.) As we study the Universe of Universes, we see the entirety as having a common quantum field that describes both particles and consciousness, so that a divine consciousness can operate within all universes on all levels within the Universe of Universes. It seems as if a "subspace" (reference to Star Trek) pervades all universes as the supporting field that had previously been defined as the realm of the quantum potential, going back to Schroedinger.

As science now notices these attributes, it becomes increasingly possible for a rational informed citizen/scientist to simply conclude that the universe was designed and constructed with an intent that life should emerge within a framework of divine guidance.

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Thus, the online open access peer-reviewed journal for astronomers, astrophysicists, astrobiologists, and cosmologists, the Journal of Cosmology hereby invites philosophers, theologians, and ethicists to submit scholarly commentaries (up to 1000 words) or articles (up to 3000 words) for a special September 2012 issue concerning mutual implications among astronomy, astrophysics, astrobiology, cosmology, theology, and ethics.

The online Journal of Cosmology ordinarily publishes refereed scientific and mathematical works. Now, theologians and philosophers are invited to join the discussion. It may be helpful to begin with an exploration of recent issues of the Journal of Cosmology at the address given below. Because the refereed Journal of Cosmology is abstracted and indexed with traditional mathematical and highly technical literature, we require constraint in use of those terms laden with religious baggage, like "faith" and G**;

and we particularly request that such words be avoided in titles and abstracts, which will be indexed and reproduced alongside papers on scientific results from NASA programs, and mathematical formulations of black hole theory, etc. We hope you will see this as an opportunity to express ideas about connections between theology and scientific cosmology.

Instructions for submission, including listing of 5 potential reviewers, and information about style are available at the JOC website:

< <http://www.journalofcosmology.com> >.

Manuscripts should be submitted to: < Editor@journalofcosmology.com.

Commentaries (up to 1000 words) incur no processing or publication fees, and do not require a list of 5 potential peer reviewers.

Articles (1001-3000 words) normally require a processing fee (\$35.00) and, if accepted for publication, a publication fee (\$150.00).

JOC is online, open access, and averages over 800,000 hits a month. Other scientific journals with a fraction of this readership charge, on average, \$2,500.00 to publish an online article.

All articles will be peer reviewed and must be written to be understood by a broad range of scientists who are not experts in your field. From 30% to 50% of invited paper have been rejected in the past, so let me stress: all papers must be scientific or scholarly and contain citations to the literature which have been published in scholarly journals.

JOC is abstracted by Google Scholar, Open J-Gate, Polymer Library, ProQuest, ResearchGATE, adsabs.Harvard, arXiv, etc.

This is an excellent opportunity to present your work to a large community of scientists. You are welcome to borrow liberally from your previous work.

We need to receive your commentary or article by no later than 01 September 2012.

Finally, please extend this invitation to interested others.

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Guest Special Editor
Journal of Cosmology
